Maternal Newborn Health and the Urban Poor: Bangladesh Case Study

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AVERTING MATERNAL DEATH AND DISABILITY (AMDD)

Table of Contents

Abbreviations

ADB	Asian Development Bank
ANC	Antenatal Care
BAPSA	Bangladesh Association for Prevention of Septic Abortion
BEmONC	Basic Emergency Obstetric and Newborn Care
BMGF	Bill and Melinda Gates Foundation
CEmONC	Comprehensive Emergency Obstetric and Neonatal Care
CHO	Chief Health Officer
CHW	Community Health Worker
CHX	Chlorhexidine
DFID	UK Department of International Development
DMC	Dhaka Medical College
DP	Development Partners
ENC	Essential Newborn Care
EU	European Union
GBV	Gender Based Violence
GoB	Government of Bangladesh
HPNSDP	Health Population and Nutrition Sector Development Program
HRH	Human Resources for Health
icddr,b	International Centre for Diarrhoeal Disease Research, Bangladesh
IPV	Intimate Partner Violence
JPGSPH	James P Grant School of Public Health
KII	Key Informant Interview
KMC	Kangaroo Mother Care
MNH	Maternal and Newborn Health
MOHFW	Ministry of Health and Family Welfare
MOLGRD&C	Ministry of Local Government, Rural Development and Cooperatives
NHSDP	NGO Health Service Delivery Project
NGO	Non-Governmental Organization
PHC	Primary Health Care
PNC	Postnatal Care
RMC	Respectful Maternity Care
SBCC	Social and Behavior Change Communication
SIDA	Swedish International Development Cooperation Agency
SNL	Saving Newborn Lives
TBA	Traditional Birth Attendant
UHS	Urban Health Survey
UN	United Nations
UNPFA	United Nations Population Fund
UPHCSDP	Urban Primary Health Care Services Delivery Project
USAID	United States Agency for International Development

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I. Introduction

Since 1971, Bangladesh has been moving rapidly from a largely rural, village-based society to a bustling, increasingly urban nation. Of all of the transformations in the past forty-five years, perhaps none is more stunning than the rapid improvement in health and health services. In particular, Bangladesh has made substantial progress in outcomes related to maternal, child and to a lesser extend newborn health (MNCH). Maternal mortality has fallen from 574 deaths per 100,000 live births (in 1991) to 194 deaths per 100,000 live births (in 2010) (Chowdhury et al., 2013). The infant mortality rate has been reduced by more than half, decreasing from 88 per 1,000 live births (1993-94) to 31 per 1,000 live births (2015) (Chowdhury et al., 2013; The World Bank, 2016). In each measure, Bangladesh has achieved lower rates than its neighbors, including Pakistan, Nepal and India. Neonatal mortality has reduced as well with Bangladesh making more progress than most low-income countries (Rubayet et al., 2012). Aided by a strong non-governmental organization (NGO) presence, the country has pioneered the use of community health workers (CHWs) alongside pro-poor and gender equitable policies.

Despite these remarkable achievements, seemingly contradictory conditions persist. Home births remain prevalent, with only 25 % of women delivering in facilities between 2008 and 2011 ("Bangladesh QuickStats," 2015). The percentage of women married before the age of 18 dropped from 65 in 2011 to 59 % in 2014, and further improvement remains a challenge (DHS 2014). Finally, chronic malnutrition of women and children is widespread. These conditions led the *Lancet* Bangladesh series to highlight the 'Bangladesh paradox' in which remarkable health outcomes co-exist alongside poverty and poor use of MNH services. Looking forward, the authors of the series predict that non-communicable diseases, climate change, and urbanization will threaten Bangladesh's considerable progress (Chowdhury et al., 2013).

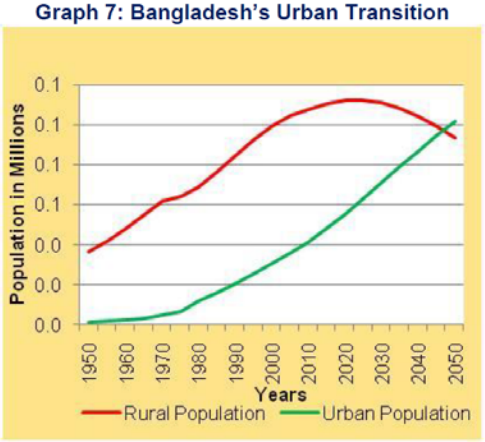
The movement of rural populations to urban slums has transformed Bangladesh. While 34 % of the population currently resides in urban areas, an annual rate of urbanization of 3.55 % is rapidly altering the country ("Bangladesh," 2015). This rate of urbanization surpasses that of both Nepal and India, which have urban populations growing at 3.08 % and 2.28 % respectively (United Nations Department of Economic and Social Affairs Population Division, 2015). It is estimated that the urban population of Bangladesh will surpass the rural population in 2039 (National Institute of Population Research and Training (NIPORT), International Centre for Diarrhoeal Disease Research Bangladesh (icddrb), & MEASURE Evaluation, 2015). Dhaka, the capital, is experiencing unprecedented growth, with an estimated 300,000 to 400,000 people moving to the city each year. The United Nations (UN) estimates that, since 1970, the city has grown by more than 5 % each year, a rare distinction among the world's cities (World Bank, 2007). While the city's estimated population was 17 million in 2014, it is projected to grow to 27.4 million inhabitants by 2030 (World Bank, 2007).

Today, regional and wealth-based inequalities within Bangladesh are worsening, and the common assumption that there exists an 'urban advantage' is in question (UHS 2013). In fact, it is increasingly recognized that there is a distinct disadvantage for the urban poor, which is often disguised by aggregated data that includes the indicators for the wealthiest (Kamal, Curtis, Hasan, & Jamil, 2015).

The World Bank's 2013 Bangladesh Poverty Assessment reported that 31.5 % of Bangladesh lives under the upper poverty line and 17.6 % lives under the lower poverty line; in Dhaka, 30.5 % and 15.6 % live

under the upper and lower poverty lines respectively (Jolliffe, Gimenez, Ahmed, & Sharif, 2013). Due to a myriad of factors, most migrants to a city initially settle in slums.[1] Typically, slum-dwellers live with poor-quality infrastructure, no access to piped water or a sewage line, limited access to schools or health clinics, and a constant fear of eviction. Crime is widespread in slums but rarely reported to the police, stemming from a deep distrust of the justice system.

Graph 7: Bangladesh's Urban Transition



Slum settings and urban inequality have serious consequences for maternal and newborn health (MNH). While the 2001 and 2010 Bangladesh Maternal Mortality Surveys found improvements in the use of MNH services on the national level, drastic differences based upon income remain. In 2010, 48 percentage points separated the poorest and richest wealth quintiles in urban areas in use of antenatal care (46 % vs. 94 %), and 58 percentage points differentiated the poorest and richest urban wealth quintiles in facility deliveries (14 % vs. 72 %) (Kamal et al., 2015). A community-based study within Dhaka slums recorded serious delivery-related morbidity among 36 % of the female population, with intrapartum bleeding, pre-eclampsia, and long active labor (> 6 hours) as the most common complications. Seventy-five % of the female slum dwellers in the study reported at least one form of postpartum morbidity (Fronczak, Antelman, Moran, Caulfield, & Baqui, 2005). Conversely, a separate study found considerable improvements in infant mortality; between 2002-2006 and 2009-2013, the infant mortality rate declined by 22 % in slum neighborhoods (National Institute of Population Research and Training (NIPORT) et al., 2015). In Bangladesh overall, there was a significant drop in infant mortality from 2006 to 2013 (National Institute of Population Research and Training (NIPORT) et al., 2015). However, the neonatal mortality has not experienced a similar decline, and children in slums remain more likely to be stunted and underweight, compared to children in non-slum urban neighborhoods (National Institute of Population Research and Training (NIPORT) et al., 2015).

The rapidly changing urban landscape of Bangladesh has led to increasingly unequal outcomes for mothers and their infants. In order to assist Save the Children's Saving Newborn Lives program in responding to this situation in an efficient and informed manner, an analysis of the slum population, urban health policies, existing MNH programs and key actors has been undertaken. This analysis describes the current urban environment in Bangladesh, the policy and donor context for program implementation and some specific initiatives Save the Children could consider to address growing MNH inequalities within Bangladeshi cities. As a country case study, it is part of a broader scoping of MNH for the urban poor globally.

[1] The term 'slum' is loosely used throughout the literature. The global scoping report will address the lack of standard definition and the challenges that arise when interpreting data across studies.

A. Deep Dive Rationale

The global urban MNH scoping report provides an overall picture of the urban MNH context, programs, policies and donors and informs general strategies for incorporating a focus on the urban poor into SNL's work. However, in order to understand how these general principles and approaches translate to the specific situation in any given country – and how the specifics of country experiences should inform global strategies – a case study was added to the methodology. The case study allowed for a "deep dive" giving a much better understanding of the complex interface of many sectors - issues such as land tenure, legal status, social networks, informality, water and sanitation, and health system governance - and how they impact the continuum of care at the service delivery level.

Bangladesh was particularly appropriate for a country case study. It is one of SNL's seven focus countries, and given the rapid urbanization taking place amidst a combination of phenomenal MNCH outcomes with growing inequity, it was agreed that much could be learned from the Bangladesh experience. Bangladesh is among the very few countries with a meaningful number of peer-reviewed studies on urban MNH, enabling us to draw on published literature to provide additional context for the case study. The case study results contributed to the global situation analysis by demonstrating some of the specific problems and problem-solving strategies faced on the ground, and the application of the principles and concepts put forward in the global landscaping.

II. Methodology

This research employed a case study design to explore the context within which urban MNH programs are currently being implemented in Bangladesh (Yin, 2003). The research sought to identify the uniquely urban contextual factors relevant to MNH programs, policy and advocacy. The aim of the research was to develop a general understanding of:

1) The health of the urban poor in Bangladesh, particularly with respect to MNH
2) Major MNH programs and donors working in slums in Bangladesh
3) Current Save/SNL MNH programs and strategies
4) Major challenges in adapting rural strategies to urban realities in Bangladesh
5) Potential variation across cities in Bangladesh on any key dimensions that emerge as relevant to meeting the MNH needs of the urban poor

The study was thus formed around the following central research question: *What unique contextual factors of slums (and slum-like settlements) significantly change the way maternal and newborn interventions are implemented in Bangladesh?*

Six Key Informant Interview (KII) guides were created for the following informant types: 1) SNL team members, 2) donors, 3) program representatives, 4) government representatives, 5) researchers/experts in urban MNH, 6) slum residents (to include health care providers working in slums). A total of 14 interviews were conducted in country in December 2015 (See Annex I for the list of people interviewed.). The initial results were shared with the SNL Bangladesh team following the week of interviews and the first draft of the report was sent in April 2016.

III. Limitations and Considerations

Consideration of findings should be made with the following limitations in mind:

- The term ‘slum’ was used loosely by informants and in the literature, often interchangeably with ‘urban poor’;
- The peri-urban areas and secondary cities were discussed, but not as a primary focus
- Informants did not necessarily represent the perspective of the entire organization, donor agency or government
- The case study tried to obtain a sample representing the main actors in urban MNH but a few may have been omitted due to timing of research, availability and interest.

IV. Findings

- A highly diverse and mobile population lives within urban slums in Bangladesh.
- A wide range of slums exist; in general, urban slums are characterized by a lack of planning and permanent infrastructure, small and cramped living quarters, no private sanitation facilities or garbage collection, informal exploitive power brokers, and violence.
- Women living in slums experience weakened social networks, gender based violence, early marriage, and the pressure of both paid and unpaid work responsibilities.
- Two Bangladeshi ministries have a long-standing debate over the responsibility for urban health, leading to an inadequate government response.
- A small group of international donors provide the majority of funds for urban MNH programs in Bangladesh.
- While government-NGO partnerships provide primary health care in urban areas, the programs struggle with inadequate human resources for health, poor quality of care, expanding numbers of private providers and slum residents' distrust.
- The majority of women living in slums deliver at home with a traditional birth attendant.
- Urban MNH programs are challenged by a lack of reliable and accurate data, poor quality of care in program facilities, inadequate human resources for health, poor communication channels to female slum dwellers, and the constantly-shifting, extremely diverse nature of urban slums.
- Despite these challenges, there are opportunities for Save the Children/Saving Newborn Lives to collaborate and contribute to urban health in Bangladesh.

A. Population

- It is estimated that Bangladesh will become a majority urban nation in 2039.
- Urban slum populations in Bangladesh are highly diverse and extremely mobile.
- Vulnerable populations are not limited to slums; individuals and families may live on the streets, on high-rise apartment building rooftops, or within peri-urban areas.
- Reliable data on the urban poor and slum populations are scarce. Household surveys and traditional surveillance tools will not capture vulnerable populations living in more transient settings.

Bangladesh is experiencing a fundamental transition from a largely rural country to a nation in which urban populations dominate. Urbanization has been an ongoing process since Bangladesh's independence in 1971. However, the rate of urbanization has increased in recent years; between 1990 and 2000, the urban population grew by 5.6% each year, the highest rate throughout South Asia (Islam & Azad, 2008). While 65.7% of the population currently lives in rural areas, the United Nations estimates that, by 2039, a majority of Bangladeshis will live in urban areas (National Institute of Population Research and Training (NIPORT) et al., 2015). Although many cities have experienced rapid expansions, Dhaka predominates. The capital, which is classified as a megacity, is experiencing an estimated 7% annual population growth and is responsible for a third of the urban population of Bangladesh (Islam & Azad, 2008; Mohit, 2012). By 2030, Dhaka's population is estimated to reach 27 million people (National Institute of Population Research and Training (NIPORT) et al., 2015). Rural-to-urban migrants are believed to be a major driver of urban growth. Dhaka receives an estimated 300,000 to 400,000 rural migrants each year (Mohit, 2012). The city has witnessed a concomitant growth in urban slums, the dwelling place for many migrants. From 1996 to 2005, the population of slum dwellers in Dhaka increased from 1.5 to 3.4 million, and the number of slum communities grew from 3,007 to 4,966 (Mohit, 2012). While Dhaka slums are estimated to only occupy 5.1% of the city's land, they hold 37.4% of the city's population (Mohit, 2012). Urban areas, and in particular urban slums, are becoming a feature of Bangladesh that cannot be ignored.

While donors and organizations have launched programs focused on MNH within urban slums, the **heterogeneity of slum populations** defies generalized approaches or simplistic statements. Many existing MNH programs, implemented in rural areas, were designed to work with relatively stable populations who shared a language, culture, and ethnicity[2]. In contrast, residents of Bangladeshi slums vary considerably in program-relevant ways, including place of birth, education level, female agency, occupation, and length of time living in the slum. This diversity limits the extent to which a 'typical female slum dweller' can be described within the country, within individual City Corporations, or even within a particular slum. For example, in one slum in Dhaka, 75 % of slum residents were born outside Dhaka city, while in Rajshahi, 75 % of slum residents were born inside the city limits (National Institute of Population Research and Training (NIPORT) et al., 2015).

The heterogeneity of slum areas is compounded by the perpetual **movement** of many urban populations. Slum populations are extremely mobile, moving from rural to urban areas, slum to slum, and even within slums. Some of the movement is due to forced evictions by the government of 'illegal' housing on government land. Furthermore, vulnerable populations in urban areas are not confined to slums; many partners spoke of Bangladeshi families living on the streets, on railways, on high rise apartment building rooftops, and within peri-urban areas. It is extremely difficult to locate these populations in order to better identify and understand their needs (BRAC, USAID, DFID).

Unfortunately, when data is collected to better understand slum populations, it is often incomplete and of poor quality. Standard surveillance and data collection techniques (namely, household surveys) may not accurately or effectively capture the population characteristics and needs of the urban poor; implementing partners used such data with caution. Extremely informal settlements (sidewalks, rooftops) may house the most vulnerable urban residents but simultaneously be excluded from traditional data collection exercises,

[2] These sentiments were shared across interviews with JPGSPH, DPs, donor agencies as well as in global interviews with program managers in Ghana and Kenya.

resulting in these populations' limited access to services. Most informants agreed that the limited understanding of even the most basic of data on slum dwellers was a significant impediment to understanding and meeting the needs of the poor. That said, a few NGOs were able to capture more reliable data, but for very specific areas within slums – for example, BRAC's use of Shasthya Shebikas (SS) and trained data collectors to go door-to-door within specific slum communities has produced good quality, but not comprehensive data.

B. Health Status

- Rates of infant and child mortality in Bangladeshi slums exceed national rates and non-slum urban rates.
- Women residing in slums have higher rates of teenage pregnancy and lower rates of facility deliveries.
- Additional data comparing slum and non-slum urban areas is needed to detect differences in maternal mortality rates and general mortality rates.

Despite the explosive growth of urban slums in Bangladesh, morbidity and mortality data is rarely disaggregated by urban status (slum vs. non-slum) and socioeconomic level. Data on maternal mortality and morbidity in slum neighborhoods was not readily available for this report. The 2010 Bangladesh Maternal Mortality survey did not provide data on maternal mortality in urban slums. The survey was conducted in urban, rural, and "other urban" areas. Maternal mortality was disaggregated by urban vs. rural and by wealth quintiles (for the entire country). There were no slum vs. non-slum or intra-urban figures for MMR. However, surveys and program data indicate the presence of risk factors. In a prospective study among pregnant women in Dhaka slums, 75% of the participants experienced postpartum morbidity, with 36% reporting serious delivery complications (Fronczak et al., 2005). In a separate study in 3 areas of Dhaka, the most common causes of maternal death were postpartum hemorrhage (37%), eclampsia (16%), and hepatic failure (11%) (Khatun et al., 2012). High rates of treatable conditions (hemorrhage and eclampsia) suggest a lack of appropriate medical care at delivery and postpartum. Surveys show that women in slums experience maternal mortality risk factors to a greater degree than non-slum urban residents. The Bangladesh Urban Health Survey reports that 21% of women ages 15-19 in slums have begun childbearing, compared to 13% of their non-slum counterparts. Non-slum women are also more likely to have a facility delivery (65%), than slum residents (37%) (National Institute of Population Research and Training (NIPORT) et al., 2015). Without additional data, these statistics provide the best evidence that women in urban slums face an elevated risk of maternal morbidity and mortality.

Existing data show that slum populations experience higher levels of infant and child mortality, compared to non-slum urban populations and, in some cases, rural populations. In Bangladeshi slums, one in eighteen children die before reaching their fifth birthday (National Institute of Population Research and Training (NIPORT) et al., 2015). The Bangladesh Urban Health Survey found higher rates of infant and under-five mortality in slums compared to both national and urban figures. There was a substantial gap in mortality between the urban areas in the 2011 Bangladesh Demographic and Health Survey (BDHS) and

the slum populations within the Urban Health Survey, with infant mortality rates of 42 vs. 49 deaths per 1,000 live births and under-five mortality rates of 50 vs. 57 deaths per 1,000 live births, respectively (National Institute of Population Research and Training (NIPORT) et al., 2015). . Between 2008 and 2009, an investigation using verbal autopsy of neonatal deaths in three slums in Dhaka found that of the 260 neonatal deaths identified, the majority were caused by birth asphyxia (42%), sepsis (20%), and birth trauma (7%), with low birth weight as the major underlying cause of death in 74% of cases (Khatun et al., 2012). However, there is no comprehensive study of causes of death of newborns among the urban poor in Bangladesh

Research investigating rural-urban migration reinforces the intra-urban differences in infant and under-five mortality. Using the 1999-2000 BDHS, researchers found that children of migrants experienced 1.6 times higher mortality than children of non-migrant urban dwellers (101 vs 62 deaths per 1,000 live births). This disparity was apparent for both recent and long-term migrants (urban residence for 10+ years) (Islam & Azad, 2008). Furthermore, poverty exacerbated the phenomenon; poor urban women had worse infant and under-five mortality rates than rural women, and poor migrant women had worse infant and child health outcomes than the average urban poor (Islam & Azad, 2008). While data suggests that, overall, infant and under-five mortality rates in Bangladesh are improving, progress is slower in urban areas than rural areas (Islam & Azad, 2008).

C. Coverage of MNH Interventions

- Women in slums face reduced access to health services due to inconvenient clinic hours, inaccessible facilities, and inadequate transportation.
- Private healthcare facilities have proliferated in slums, filling the gap left by the lack of government and NGO facilities.
- The majority of women in slums delivered at home with a traditional birth attendant.

1. Access and Care seeking

The **availability** and accessibility of health services, ranging from health clinics to hospitals, remains a significant challenge for women and children living in slums. The work **schedules of women** (both formal and informal), the physical location of facilities, the ever growing presence of the private sector, and inadequate transportation were noted as the main challenges to access.

The majority of key informants stated that one of the biggest challenges to improving access to health care was women's working schedules. Many spoke of the increased number of women working outside the home, making the daytime-only hours of clinics inconvenient for many women. Marie Stopes had adjusted several of their clinics' hours to meet the women when they were available, either early morning or later in the evening (with negligible results – especially with the challenges of staffing the facilities during these hours). Interestingly, many of the individuals interviewed from bilateral organizations and international NGOs referred to female slum residents' employment in the garment industry. However, this

was not found to be the case in the Urban Health Survey – as only 3 % of women who worked in the garment factories lived in slums – and of all women working in the slums, 87 % 'work within the home' – though what 'working within home' includes was not clear in the UHS2013 (National Institute of Population Research and Training (NIPORT) et al., 2015). The discrepancy between the Urban Health Survey data and the assumed reality by donors, development partners, and providers shows that the true labor patterns of women in slums is either misunderstood or wrongly assumed. If women are often absent from their homes, it could be due to informal employment (housekeeping, selling food/snacks on the street, beading, etc) rather than formal employment in garment factories. Thus, the oft-cited strategy of using travel clinics to serve the garment factories may be a good idea, but it will not meet the needs of many of the poorest in the slums. Many programs are struggling to come up with solutions to meet these specific needs.

Health Benefit Cards

- Health Benefit Cards ('red cards') are given out to the poor to ensure access to either free or subsidized rates for health services.
- Urban MNH programs have quotas for percentages of clients/women with red cards they serve.
- Yet, nearly 44% of poor women who delivered in facilities experienced catastrophic expenditures related to maternal care (Kamal et al., 2015).
- There was confusion among stakeholders as to how slum dwellers would register for these benefits, and many noted that women in the slums are not the ones benefiting from the cards and/or lack knowledge of the program to be able to benefit from the services.

a) Care-seeking

Though trends are changing nationally, the majority of women in slums continue to deliver at home with traditional birth attendants (TBAs) and several informants interviewed during the case study felt women had limited knowledge of danger signs and best practices for essential newborn care (ENC). Concerns about financial costs of facility based care, perceptions of poor quality and treatment by the health care system, the omnipresent private sector, and the belief that facilities are only for emergencies that ultimately result in caesarian sections, were some of the most frequently discussed barriers by both development partners and women.

Home births with TBAs were the most commonly mentioned location of delivery in interviews and in focus group discussions (including those conducted as part of this research and those done previously by SNL staff). Women described them as convenient, cheap and accessible. These findings align with other studies that have found that between 61 % -84 % of Bangladeshis use TBAs in urban areas (Choudhury et al., 2012; Olusanya, Inem, & Abosede, 2011). Given TBAs' poor knowledge of danger signs, these home births remain a challenge.

Despite relatively broad access to TVs and cell phones, knowledge and information of danger signs, entitlements to free services for the poorest (red cards), and the benefits of attending both antenatal care (ANC) and postnatal care (PNC) visits, remains limited (however, the number of MNH-related BCC

campaigns being implemented was not clear for the slum-specific population). Many implementing partners interviewed mentioned that best practices around early bathing, cord care, and breast feeding were not being implemented at the home level in most cases, though this was not a unanimous view. Even in communities where programs included group meetings, CHW visits and other outreach mechanisms, women were giving birth at home and the newborn outcomes were not necessarily improving. Bangladesh Association for Prevention of Septic Abortion (BAPSA) staff suggested there were significant challenges in simply getting women to plan for their births, let alone changing larger behaviors. And though some of the NGOs seemingly had more success than others at changing behaviors, there remains little, if any, research to understand why slum women do not change behaviors following exposure to such messages. Until this is understood, it will be hard to improve.

A few informants said that women were still going **home** to their villages to give birth and would stay for up to 3 months before returning. What was not clear was whether the decision was the parents'-in-law, the husband's, or the woman's. Though this practice was perceived to be waning, it was common enough to be mentioned by several informants. This practice posed challenges for tracking women and newborns following delivery and highlighted the uncertainty around the level of autonomy women have to decide when and where to deliver.

Maternal and Newborn Health

- Place of delivery for female slum dwellers:
  - 13% Public facility
  - 11% Private facility
  - 13% NGO facility
  - 3.5% BRAC center
  - **60% Home**
  - 0.1% Other
- **37%** of female slum dwellers had a medically trained professional at delivery
- **35%** of female slum dwellers had an untrained birth attendant at delivery
- **34%** of female slum dwellers received PNC checkups from a medically trained professional within 2 days of delivery

Source: Bangladesh Urban Health Survey 2013. Preliminary Results. NIPORT, MEASURE Evaluation, icddr,b.

All categories of informants noted that even if women did choose to go to facilities, the **quality of care** was described as poor, and the technical capacity of the providers, especially around ENC, was wholly inadequate. Donors and implementing partners discussed a myriad of issues that impact the ability to provide quality care, including high staff turnover, limited supervision, limited training, minimal supplies and equipment and poor sanitation in the surrounding areas. BRAC noted that they intended to increase their programs' focus on quality of care, while simultaneously acknowledging that it was going to be difficult to assess and uniformly improve.

b) Health Systems Environment

The slum environment prevents health facilities and systems from being created in the traditional model. The physical space is rarely available or legal in order to use to build or rent facilities for service provision; the road network and linkages of facilities for referral systems are weak, if existent; and the ubiquitous nature of the private sector (from private hospitals to traditional drug sellers) is highly utilized yet rarely regulated or mapped out by those outside of the slum.

Space is a premium in slums, and it is often illegally occupied or occupied without the protections of law. This makes building and maintaining permanent infrastructure to house clinics or health centers nearly

impossible for the government and NGOs. It also makes finding locations for meetings or group sessions (which would normally be held in a common space in rural areas) much more difficult and potentially costly. Several donors and implementing partners explained how hard it was to not have the ability to work within a pre-existing, clearly understood health infrastructure, as is the norm in rural areas. Thus, the unregulated private sector has emerged to fill gaps left by the near impossibility of legally and officially building any new structures. The overwhelming sentiment was that the presence of the private sector - ranging from pharmacies to health clinics and hospitals - came about very quickly. The private sector has taken the role of health care provider to those in the slums – even to those who cannot afford them or find the funds to pay for them despite the long term economic implications on the family.

Lastly, the issues of **transportation and referral** were mentioned as a different type of challenge being addressed within the urban slum context. The more traditional issues facing rural communities were long distances and limited transportation methods (access to cars, rickshaws, ambulances). In contrast, in the slums women from the community and implementing partners described challenges with lacking funds to pay for rickshaws, traffic preventing movement in times of emergencies, and the fact that slums have very narrow lanes that do not allow for the passage of cars or even rickshaws. This can mean it is effectively impossible for a woman to reach a facility during an emergency. Implementing partners described some projects that address this (the Manoshi project is one strong example – but one that created its own birthing centers for normal deliveries and then MOUs with rickshaws for emergency cases that would then be escorted through the process until care was received). Outside of Manoshi's specific referral system, getting to a referral center in an emergency, and receiving timely care (3rd delay), remained a challenge for the urban poor.

The **private sector** plays a crucial role in service provision within the slums. A constant challenge for the large primary health care programs was how to acknowledge the role and presence of the private sector while also continuing to improve the quality and availability of the public and NGO sectors. Several informants described families' catastrophic health spending, especially for MNH care. According to most informants, the perception among slum-dwellers is that private care is better care, despite the sometimes unqualified providers or deplorable conditions in private facilities. Although there is little systematic evidence in Bangladesh (or globally) of the health impact and quality of the unregulated private sector in urban slums, it is clear that such providers will remain a significant source of slum-based MNCH services in the near future and that it will be important to have a conscious strategy for addressing this reality in both policy and program. Research to generate a better understanding of the dynamics of private-sector provision and utilization and of the impact of privately-provided services for slum-dwellers could be a useful starting point.

D. Urban Exposures and Health Determinants

- Informal slum settlements often feature one-room, windowless homes and lack private latrines or garbage collection.
- Violence is pervasive in slums.
- Female slum dwellers' lives are often characterized by weak social networks, high rates of gender based violence, early marriage, exploitive local power brokers, and a fundamental distrust of government and NGO authorities.

1. Living conditions

Living conditions within Bangladeshi slums vary considerably. Overall, physical attributes (water safety, sanitation, housing, physical location) are almost always worse in slum than non-slum areas and have direct impacts on MNH. Above all, housing and infrastructure conditions arise from slums' identity as unplanned and informal settlements that, largely, do not receive government services or recognition. They have been described by government staff and development partners as crowded, dirty spaces with little privacy. A 2014 situation analysis in three Dhaka slums found that the majority of respondents resided in a one-room home, a windowless space with a corrugated tin roof and a floor made of bamboo, wooden planks, or mud. Without a separate kitchen, residents cooked outside the home or in a communal kitchen. Crowded neighborhoods increase the risk of fire spreading from home to home, and proximity to waterways increases the likelihood of flooding (Democracywatch, 2014).

Living Conditions

- Median living space per person in slums: **48 sq feet**
- **75%** of slum households live in 1 room
- **75%** of homes in slums are rented
- **98%** of slum households have electricity
- **51%** of slum households receive piped water to a dwelling/plot/yard
- **85%** of slum households share a toilet with other households
- **75%** of slum households are in the lowest two wealth quintiles

Source: UHS 2013

Acute lower respiratory infections, including pneumonia, are often discussed in relation to the use of biomass and exposure to biomass smoke. However, research in urban Bangladesh, particularly Dhaka, suggests a multitude of sources for air pollution and particulate matter. An analysis pointed to motorcycle, bus, and truck emissions, road dust, and city incinerators as sources of pollution (Guttikunda, 2009) The substantial number of brick kilns (more than 500) surrounding Dhaka are estimated to contribute 40% of the fine particulate matter pollution (Guttikunda, 2009). Given the association between particulate matter and acute lower respiratory infections, researchers estimate that air pollution in Dhaka contributes to 15,000 premature deaths and more than 1 million cases of neurological, respiratory, and pulmonary illness (Guttikunda, 2009). In addition to experiencing this city-wide air pollution, slum residents may face elevated risks. Cramped homes with few windows and doors restrict ventilation; research in urban Bangladesh found that poor ventilation and crowding in homes was associated with pneumonia in children under 5 (Ram et al., 2014). Furthermore, a study conducted in rural and urban locations found higher levels of carbon monoxide, dust particles, carbon dioxide, and major volatile

organic compounds (VOCs) in urban kitchens than rural kitchens. Levels of carbon monoxide, dust particles, and benzene exceeded allowable limits (Khalequzzaman et al., 2011). The authors hypothesize that this difference could be due to crowded urban neighborhoods, housing materials that prevent ventilation (tin, brick), and outdoor air pollution levels.

Private latrines and garbage collection in slums are not common; 43 % of households surveyed for the Urban Health Survey reported sharing sanitation facilities with 10 or more families. Approximately 48 % of respondents disposed of their trash in an open space near their home (National Institute of Population Research and Training (NIPORT) et al., 2015). In contrast, only 7 % and 25 % of City Corporation non-slum residents reported sharing sanitation facilities and disposing trash outside, respectively (National Institute of Population Research and Training (NIPORT) et al., 2015). Cultural norms in Bangladesh assign household and childcare responsibilities primarily to women, thus increasing their time spent at home and in the slum (Democracywatch, 2014). Additionally, infants and children not enrolled in school spend an inordinate amount of time at home and in the neighborhood (rates of school attendance have been reported as low as 18% for secondary attendance in slums (UNICEF & Bangladesh Bureau of Statistics, 2010). Therefore, women and children are often more susceptible to health hazards and adverse health outcomes associated with slum infrastructure.

Beyond infrastructure issues, human factors endanger slum residents. Crime is exceedingly common in slum areas, with 93 % of slum respondents in a World Bank survey reporting that they had been affected by crime and violence in the last 12 months (S. Rashid, 2011). Anthropological studies in Bangladeshi slums have documented the ubiquity of organized crime and gang violence. While men are the primary members of gangs, women and children are often impacted through their association and relationships with gang members (S. Rashid, 2011). General insecurity in the community and the fear of sexual violence, harassment, and rape motivates families to support child marriage for their daughters (S. Rashid, 2011).

Finally, the informal and illegal nature of many settlements contributes to an uncertain and impermanent atmosphere within slums. Between 1975 and 2005, an estimated 135 slums were demolished in Bangladesh.[3] Although a High Court order prohibits eviction without subsequent placement in a new location, the practice continues (S. F. Rashid, 2009). The lack of permanence within slums contributes to municipal authorities' and programs' unwillingness to work within slums and contributes to a sense that "lives are certain uncertainties", as one researcher from the JPGSPH explained.

a) Micro-dynamics of household and local community

Women living in slums experience high rates of intimate partner violence[4] and early marriage, and have to manage power hierarchies for their basic survival. Living in an urban slum can be extremely isolating, particularly for those who recently migrated from rural villages and left behind social networks and family. The importance of **social networks and relationships** for women has been established in Bangladesh (Adams, Nababan, & Manzoor Ahmed Hanifi, 2015). It was found that making reliable friends in an urban slum is challenging for women. Partly as a result of these reduced networks, more

[3] Estimates of the total number of slums in Bangladesh vary widely. Different or unspecified definitions of 'slum' complicate these efforts.
[4] Though much has been documented in Bangladesh about the prevalence of IPV, the results are inconclusive as to whether or not there is a difference in rates of IPV between urban and rural.

traditional approaches for increasing awareness of services and danger signs would not function as they do in the rural villages. In the FGD, many women explained that their lack of friendships made it more difficult to utilize health services. For example, one woman stated that she had to ask a health care provider to watch her 4-year old child if she wanted to attend a clinic visit. During labour and delivery, women did not have the same emotional and logistical support from family as they did in their home villages; some informants noted that this was probably a factor in TBA usage. BRAC has worked to strengthen social networks among women as part of the Manoshi project, but most other programs mentioned this isolation as a contextual challenge, rather than as a factor they attempted to address.

Gender based violence (GBV) is highly prevalent in slums, along with abandonment and divorce (S. Rashid, 2011). In an anthropologic study conducted with adolescents in a slum in Bangladesh, of the 153 adolescents interviewed, 89 had experienced 'regular to occasional' violence from their husbands (S. Rashid, 2011). Research reports suggest that the following factors are associated with GBV in slums: women's movement throughout the slum to access sanitation services or purchase water, lack of home tenure/security, lack of employment making it hard to leave abusive relationships, and the anonymity of slum communities (Chant, 2013). These factors were confirmed in our qualitative research. The prevalence of early marriages was also mentioned as a concern by several informants. The UHS reported that 37 % of teens in slums have ever been married (National Institute of Population Research and Training (NIPORT) et al., 2015). The reasons given for the persistently high rates of early marriage were crime, gang prevalence, and GBV; families, desperate to 'protect' their daughters, married them off (S. Rashid, 2011). Given that teen pregnancy is an important health risk factor, JPGSPH and BAPSA suggested this may be one of the biggest issues for the MNH community to start to focus on in the coming years.

Informal actors have enormous power in slums. Women must contend with exploitative mastaans ("musclemen" or thugs) and slum lords to access water, sanitation, electricity, and even health services. The lack of strong government officials and clear legitimate community leaders and the presence of informal power brokers make it hard for outside organizations to navigate the slums. BRAC and Marie Stopes representatives spoke of the importance of identifying the power brokers and working with them in order to successfully implement their programs. Other interviewees described how the lack of clarity around who is 'in charge' and the need to spend much more time earning the trust of women and communities made their work even more difficult. As has been seen in programs in other contexts, the amount of time needed to identify those key stakeholders and get their buy-in to the program is significantly longer and more challenging than in rural areas (Adongo et al., 2014). In addition to its impact on the ease of working in slums, the existing governance structure also shapes women's care seeking and their ability to access essential services.

Lastly, the fundamental issue of **trust** was mentioned by almost all informants who spent time working closely with women. There is an inherent distrust of government, NGOs, and other perceived 'outsiders' within slums. The precarious nature of slum living and women's concomitant vulnerability to eviction, exploitation by informal power brokers, catastrophic health expenses, and high levels of stress contribute to mistrust. Women lack the time to listen to or speak with CHWs or health program staff, and they may be unwilling to make time if they do not know them or trust them. While CHWs are generally known in rural areas, this is often not the case in slums. One researcher noted that these women feel the researchers and larger 'community' are dismissive of the urban poor and often hide their true feelings and actions,

making it even more difficult for researchers to assess and describe trust and health seeking behaviors among slum dwellers. Programs that have been based in slums for decades benefit from being seen as 'part of' the community.

E. Donors

- A limited number of donors focus on maternal and newborn health in urban Bangladesh.
- In recent years, these donors have included the Asian Development Bank, DFID, USAID, SIDA, the Gates Foundation, and the European Union.
- In the next fiscal year, the number of donors funding urban MNH will likely decrease, however the overall budgets are expected to increase.

A small group of donors provides the majority of funding for maternal and newborn health programs in urban Bangladesh. In recent years, major donors in urban Bangladesh have included the Asian Development Bank (ADB), the United Kingdom Department for International Development (DFID), the United States Agency for International Development (USAID), the Swedish International Development Cooperation Agency (SIDA), the Bill and Melinda Gates Foundation (BMGF), and the European Union (EU). Published strategies for urban programs often guide these investments in Bangladesh's development. However, some major donors lack published or clear guidelines for the specifically urban aspects of their investments.

F. Policy Environment

- There is a long-standing debate about whether the Ministry of Health and Family Welfare (MOHFW) or the Ministry of Local Government, Rural Development and Cooperatives (MOLGRD&C) should have the responsibility for urban health.
- MOLGRD&C, while currently mandated to manage the health care of the urban poor, lacks the financial and human resources and technical capacity to manage all that is included under the umbrella of 'urban health'.
- A revised urban health plan and operational strategy has been developed but has not yet been implemented.

The most commonly discussed and cited challenge to addressing poor MNH outcomes within slum populations is the current, dysfunctional policy environment. Specifically, key informants highlighted the lack of clear guidance as to which ministry is responsible for health services in urban areas. Urban health, a significant part of the overall Bangladeshi health system, falls somewhere between the Ministry of

Health and Family Welfare (MOHFW) and the Ministry of Local Government, Rural Development and Cooperatives (MOLGRD&C). It was often described as a 'no-man's land' that falls under the mandate of an under-funded MOLG (the common abbreviation for MOLGRD&C), which requires more technical and human resource capacity than is available. The MOHFW, given their role in managing health throughout the country, was seen by many stakeholders as the more natural Ministry to manage the needs of the urban poor. However, the MOHFW also lacked the technical, human and financial resources to manage the enormity of the urban poor health needs. Urban health was described as a pariah of sorts to the MOHFW, with several informants mentioning an open understanding of the MOHFW's lack of mandate, and potential interest, in taking on the responsibility of the urban poor. This disabling lack of clarity between ministries has been a part of the urban health dialogue for years. In a 2012 evaluation of one of the main urban MNH programs, Health Population and Nutrition Sector Development Program (HPNSDP), the authors stated:

"*The ongoing debate on urban health seems to be largely focused on supposed differences between the mandate, role and functions of both line Ministries involved in (public) health, i.e. the MOHFW and MOLGRD, rather than on the more longer-term conceptual, technical, organizational and funding issues related to the necessity to at least double the coverage at the first level of care. The MOHFW seems to be overloaded with micro management challenges, making it difficult to perform its 'enabling' role; hence the need for continued institutional and management development*."
(From HPNSDP Apr 2012 Evaluation)

Currently, the MOLG has responsibility for urban services generally. Though many agreed that the MOLG should therefore take on responsibility to provide the urban poor with the health care they deserve, respondents also described the limited, if not non-existent, capacity of the Ministry to do so. Many described MOLG as lacking the human resources, technical competencies and budgeting capacity. Given the complex, ever-shifting challenges of the urban setting, the MOLG has to manage a dizzying array of inter-related issues within slums: waste management, pollution, water safety and supply, transportation, infrastructure development, environmental protection, and health. The infrastructure for each of these sectors is lacking, and none of the informants saw the situation changing in the near future, especially in the illegal slum settlements.

In addition, several development partners shared that MOLG representation at urban health and technical working group meetings is usually quite junior, as was also mentioned in a 2012 icddr,b report (Roy S, Afrin S, Islam N, Hoque E, 2012). As a result, the coordination and decision making ability has been stalled or stopped entirely following these meetings: no decisions can be made until these junior level representatives have further consultations within their ministry. By this point, momentum is often lost. The lack of willingness to send senior-level ministry representatives to the meetings with development partners, implementing partners, and various other stakeholders was often viewed as a reflection of the low priority of and interest in urban health within the two ministries.

At the time of the research, Bangladesh's urban health strategy was supposedly completed, and the operational plan was out for review with several development partners. Given the fundamental health system challenges that remain unaddressed, none of the respondents were optimistic about the ability to implement the policy. The new strategy proposes the formation of 'high-powered National Coordination Councils,' as well as various technical advisory groups, and the creation of urban community clinics

modeled on clinics in rural areas (Operational Plan). It remains to be seen which components will come to fruition. But, it will be important for any implementing agency looking to work in the urban area to be aware of these proposed policy changes.

G. Programs

- Urban areas lack the kind of public, government-run hierarchical networks of health facilities that exist in rural areas.
- Government-NGO partnerships that provide primary health care to the urban poor include the Urban Primary Health Care Services Delivery Project, the NGO Health Service Delivery Project, Marie Stopes Clinics, and BRAC's Manoshi program.

Unlike the rural areas of Bangladesh, there is no public, government-run network of health facilities in the cities of Bangladesh. Urban areas within Bangladesh are characterized by an array of government and NGO partnerships that seek to provide primary health care to the urban poor. The four large-scale MNH programs in urban areas are the Urban Primary Health Care Services Delivery Project (UPHCSDP), the NGO Health Service Delivery Project (NHSDP), Marie Stopes Clinics in Bangladesh and BRAC's Manoshi program. Below is a brief description of each program as currently implemented, as well as comments about upcoming 2016 plans.

Urban Primary Health Care Service Delivery Project (UPHCSDP) is one of the largest public-private partnership programs delivering primary health care (PHC) in South Asia. The project seeks to improve access to and use of primary health care in urban areas, with a special focus on the urban poor. The first Urban Primary Health Care Project (UPHCP-I), ran from March 1998-June 2005 with ADB assisting the Government of Bangladesh in implementing the program, in which services were delivered by NGOs and private sector groups. The second round, UPHCP-II, supported by ADB and the Governments of the United Kingdom and Sweden, ran from July 2005 through December 2012. The current UPHCSDP program is supported by ADB, SIDA, and the United Nations Population Fund (UNFPA) ("Urban Primary Health Care Services Delivery Project Summary," 2015) and is scheduled to end in June 2017. The program's objectives include improving access to, quality, cost-effectiveness, efficacy and sustainability of urban primary health care services. UPHCSDP focuses on 11 city corporations and four municipalities in urban Bangladesh, covering an estimated 10 million people in 14 cities ("Bangladesh Urban Primary Health Care Services Delivery Project," 2016) The PHC network has 25 comprehensive reproductive health care centers, 112 primary health care centers and 224 satellite clinics at the community level (Government of the People's Republic of Bangladesh, 2016). The services, provided by the NGO partners in the program, cover the spectrum of maternal and child health services, including delivery care, post-abortion care, family planning, and child health.

➔ Looking to the future:
- ADB aims to dramatically increase its contributions (increase to around $150 million); SIDA reported that it will also contribute $20 million.
- The 'lowest bidder wins' approach will no longer be the predominant method of selecting NGOs to provide the necessary MNH services, allowing for more established NGOs to compete based on previous experience and technical capacity.
- Priorities in upcoming programs will include the creation of a system for common monitoring and evaluation frameworks among grantees.
- Given the past challenges of retaining highly skilled clinical providers, both SIDA and ADB welcomed conversations with SNL to work specifically on the ENC skills gaps.

NGO Health Services Delivery Project (NHSDP) brings local NGOs together in a network to provide primary health care, focusing specifically on services that will decrease maternal and child mortality country-wide. Like UPHCSDP, the NGO partnership program is building on previous iterations dating back to the 1990s. The initial Urban Family Health Project began in 1997 as a JSI implemented, USAID funded, NGO driven program. The NGO Service Delivery Project (2002-2007) followed, with Pathfinder International partnering with 30+ local NGOs whose 318 Smiling Sun clinics reached roughly 20 million people in 'disadvantaged rural areas and urban slums' (Pathfinder International, 2016). In 2007 the Bangladesh Smiling Sun Franchise program, funded from 2007-2011 and ultimately extended through 2012 with funding from USAID, was awarded and built on the Smiling Sun Franchise model. The most current iteration, NHSDP, is supported by USAID and DFID and administered by Pathfinder International working with Smiling Sun again. A nationwide network of 25 Bangladeshi NGOs provides services at more than 300 clinics, 8,800 satellite clinics, and 6,300 community service providers, covering an estimated 22.2 million clients ("NGO Health Service Delivery Project (NHSDP)," 2016). The program's objectives include increasing access to primary health care, improving care-seeking behavior, and strengthening local NGOs to deliver services.

➔ Looking to the future:
- According to donor agencies, 2016 funding plans have been set, with USAID ending its commitments to NHSDP in the coming year.
- DFID will fund 3 pilot programs related to health systems strengthening and look to scale them, depending on outcomes.
- In light of NHSDP's constant struggle to retain highly skilled providers (similar to above), DFID welcomed collaboration with SNL.

Marie Stopes Bangladesh is providing high quality and affordable, sexual and reproductive health (SRH) services to the urban, peri-urban and rural community through a number of innovative approaches. Its urban program is funded by DFID. It is committed to improving the SRH status of the poor, highly at-risk and vulnerable population in Bangladesh. MSB is one of the leading partners of Marie Stopes International (MSI), UK which supports programs in 42 countries. Marie Stopes was established in Bangladesh in 1988. Presently with more than 2000 staff, MS serves more than 1.7 million clients every year from 500 service delivery outlets (including 141 static clinics) spread over the 64 districts of Bangladesh.

➔ Looking to the future:
- According to donor agency, it is ending its commitments to MSB by May 2018.
- In light of MSB's constant struggle to retain highly skilled providers (similar to above), DFID and MSB welcomed collaboration with SNL to work to improve ENC skills in particular.

BRAC's Manoshi is a program within urban slums that seeks to reduce maternal and child mortality through targeted antenatal, delivery, postnatal, and newborn services, behavior change communication, and improved referral services. Established in 2007 with initial funding from the Gates Foundation (ending in 2013), the Manoshi program now operates in nine city corporations, reaching an estimated 6.9 million slum residents (Roy, Marcil, Chowdhury, Afsana, & Perry, 2014). At its core, the program is based upon community health workers (*Shasthya Shebikas/Shasthya Kormis*) who provide care, deliver educational messages, and collect data during home visits. BRAC Delivery Centres in slum neighborhoods provide routine delivery services; complications are transferred through a referral system(BRAC, 2016). An m-health (mobile health) initiative was recently integrated into the program to accelerate referrals and modernize the monitoring and reporting system. Components of the BRAC Manoshi program also include community engagement, mapping, and a slum census.

➔ Looking to the future:
- Recognizing the overlapping coverage of NGOs in slum areas, BRAC is considering moving to more vulnerable urban populations, including pavement dwellers and those living on roofs.
- In a similar vein, Manoshi anticipates moving to outskirt areas and secondary cities, rather than the major cities being covered by most international NGOs.
- Based on lessons from its early model using slum-based, TBA-attended "birthing huts"/delivery centers combined with referral to hospitals, in the next 5 years, Manoshi expects to build additional maternity centers (upgraded version of delivery centers), fewer delivery centers, and create midwifery centers, in the expectation that they will be able to manage more deliveries without referral and better meet clients' evolving preferences and expectations for delivery care.
- Manoshi is currently processing the lessons learned from their failed health insurance models. However, they are in the midst of a pilot program with Aarong (employment based insurance model) and will continue to adapt that for scale, based on a continuous evaluation and learning.

H. Implementation challenges

- Without accurate, inclusive, and disaggregated data, programs struggle to track participants and show impact, thus influencing their ability to attract donor funds.
- Programs rarely share data, leading to repetitive data collection and greater demands on participants' time.
- Existing MNH programs face difficulties ensuring that staff have appropriate clinical skills, that clinic spaces are clean, and that client-provider interactions are respectful.
- Women may self-refer to hospitals for delivery complications (and for normal deliveries) but retain deep-seated fear and mistrust of the institutions.
- NGO programs face significant human resource challenges; shortages of health staff are exacerbated by the lack of career advancement opportunities and the inability of local NGO staff to join the national health system structures.
- While most women in slums have access to cell phones and televisions, awareness of health topics remains very low, and programs struggle to identify effective communication channels.
- In order to be effective, urban MNH programs must acknowledge the diversity of slum populations, the numerous factors shaping women's lives and the limits of the government's financial and technical contributions

Given the above-mentioned realities of the Bangladeshi urban slum for women, their families, providers, implementing agencies, and local government, several challenges specific to addressing MNH needs were identified during the case study. These specific challenges fall under 5 categories: 1) lack of accurate data and coordination, 2) challenges in maintaining or establishing quality of care, 3) inadequate human resource capacity and availability, 4) difficulties in communication and outreach, and, 5) a general lack of understanding of women, the texture of their lives, and the context of the slum.

1. Lack of accurate data and coordination

The very limited amount of qualitative and quantitative data regarding slums was often mentioned. Those who tried to collect information noted that they were unable to collect accurate, inclusive, and disaggregated data, in part given the dynamism of the population. Lack of reliable basic information and the inability to track women and children and their health outcomes means that it is difficult for program implementers to track implementation fidelity and demonstrate impact. As a result, donor investments are more difficult to secure. This phenomenon was also confirmed by donors. For example, a representative from SIDA mentioned that there was a 'love of frequency tables,' yet very little data that can be used for more in-depth analysis. Nuanced information around care seeking, understanding of death, gender and power dynamics, and informal working conditions were all mentioned as gaps in understanding that could help program planning and implementation in the future.

Further compounding limited data was an acknowledged lack of a formal coordination mechanism for all development partners (a term used to be inclusive of donors and implementing partners) working in the slums. Thus, data that were collected by one organization were not available to others. Moreover, there may be several partners overlapping in the more 'popular' or big city slums, while other slums were without any development partner. There seemed to be enthusiasm (especially among the donor agencies) for creating a collaborative platform to better share data/knowledge and prevent duplication, but when this research was conducted, no such platform existed.

Moreover, at times, the multiplicity of data collection efforts related to different programs in one slum caused tensions. In one instance, several water and sanitation, nutrition, infrastructure, and GBV prevention programs were being run by various organizations, and all asked for women's limited time. One JPGSPH researcher warned of the stress this causes women when being asked for their time, or their infants' time, for each of these programs. The goal for many donors and implementing partners should be to collect and share nuanced data to inform program implementation, but it will require a significant amount of planning, organizing, and funding in light of the non-existent government support.

2. Challenges in maintaining or establishing quality of care

Most of the development partners, especially those implementing programs or overseeing NGOs providing services, mentioned how hard it was to establish high quality care and maintain it throughout the course of the project. Quality was spoken of in terms of basic infrastructure, providers' clinical skills, and interpersonal interactions between patient and provider. Maintaining the basic cleanliness of facilities, especially those set up in slums (when possible, in rented space), amidst the unsanitary and unhygienic conditions of the surroundings, is a constant struggle. The clinical skills of the providers (including doctors, nurses, birth attendants and informal providers), especially those related to newborn care, were described as 'abysmal' or 'entirely lacking' by a few informants. Several reasons were given for the limited capacity; in particular, lack of training and oversight was mentioned when referring to ENC. NGO services were largely considered better than those provided by the government because they were seen as having 'more accountable systems.' This was because staff were evaluated clinically, provided some training, and were at least minimally supervised. During the conversation with UPHCSDP, an interesting finding emerged regarding how an effort to boost incomes ultimately harmed quality of care. UPHCSDP awarded bids to NGOs that intended to implement income-generating activities for providers. However, original program plans to generate adequate income from their basic services failed, and, to replace the 'lost income' there was a concomitant increase in caesarean sections, which generate higher fees. It is not clear if remedial actions were taken to bring seemingly medically unnecessary caesarean section rates down to their previous levels.

The terms 'mistrust' and 'intimidation' were used to explain why women do not deliver in public facilities. The notions that the facilities are 'intimidating and scary' and that women preferred to deliver at home unless there was an emergency were mentioned by many informants. There was a sense that women and their families genuinely feared facilities, but if/when a complication occurred with the mother or newborn, they would then self-refer to Dhaka Medical College (DMC). A representative from the City Corporation Dhaka South noted that these emergency referrals were putting a real burden on DMC. He argued that this burden would decrease if women trusted lower level health facilities to manage their complications. While many current urban MNH programs sought to inform women of the facilities and services available to them and encouraged them to seek care at the appropriate level of facility, home births and self-referrals to the hospital remain a challenge.

However, the experience of the Manoshi program adds some nuance to this dynamic. When BRAC facilitated access to DMC and other referral facilities (via its referral programme officers, transport and financial assistance) many women chose to by-pass the slum-based BRAC delivery centres and go directly to the hospital, even for routine deliveries with no complications. Possibly this indicates that, despite the knowledge that they may receive poor quality care (or at least be treated disrespectfully) in the referral hospital, women aspire to use what they perceive to be modern health facilities. Research in Pakistan has documented the "social signaling" entailed in these decisions around childbirth (Mumtaz et al., 2013). Understanding analogous dynamics among women in Bangladeshi slums would be a potentially important element of developing a programme strategy to influence care-seeking for newborn health as well.

3. Inadequate human resource capacity and availability

Human resource shortages were mentioned in almost every interview conducted. The lack of qualified staff to work in the facilities providing services to slums is a significant challenge, compounded by the high turnover and structure that prevented NGO staff from being included in the national health system structures (making them ineligible for government benefits). The lack of career progression for the NGO and public sector staff was a significant obstacle to keeping qualified staff at the city corporation level. While NGOs recognized the need to adjust hours to meet the needs of women and families, many providers do not want to be in the slums late into the evening or early in the morning. Figuring out how to integrate the doctors and nurses into the MOHFW structure was mentioned by several as a solution to keeping the providers within the programs, but the ministry's weak technical capacity was one issue that continued to challenge the development partners.

4. Difficulties in communication and outreach

Women in slums have access to multiple methods of communication, and yet the overall poor awareness about programs available to the poor (red cards), danger signs, and best practices for mothers and newborns continued to surprise many of the informants. Mobile phones and TV were the most commonly owned 'durable goods.' The UHS 2013 found that 53% of women in the slums had cell phones, 63% had televisions, and only 1% had radios (a decrease from 13% in 2006 data) (National Institute of Population Research and Training (NIPORT) et al., 2015). Some of the Save the Children staff working in the education sector in slums said that they were genuinely surprised at the low awareness levels given the seemingly good and regular access to information.

Effective strategies for communicating messages and conducting outreach activities that result in behavior change were difficult to identify. It is not clear how to best access women who are often not in their homes (to watch TV) and how to find outside space when there is limited physical space to congregate (to conduct group meetings for educational purposes). The spaces used for meetings and social interactions in rural areas were non-existent in the slum context (Ahmed et al., 2010; Choudhury et al., 2012). So, despite the seemingly better 'access' to information/news/messaging, the ability to reach women remains elusive.

5. Acknowledging the reality: a diverse, heterogeneous and constantly changing population

It will take time, effort, and new perspective to fully understand and address the multiple competing priorities that influence women's care seeking, as well as the gaps in the health system (both public and private) as it is accessed by the urban poor. The development community cannot afford to ignore

providers that they do not approve of or can't monitor (drug sellers, TBAs, homeopaths), as they play a central role in delivering services in slums. MNH programs also cannot ignore the ever-pertinent water and sanitation issues that women face on a daily basis. The level of poverty of many of the slum dwellers has many implications and yet, the reasons many do not access the red cards is not fully understood. Conducting a few FGDs in a slum with thousands of residents does not give a full picture or respect the diversity of these communities. Time is necessary, building trust is crucial, and the fact that the government system probably will not have the capacity to implement all the programs that are necessary to meet the needs of the slum populations must be approached as a reality from the beginning of any program planning. Slum populations are diverse, ever-changing and require flexible programs to ensure that the data informing the programs is constantly updated.

V. Current collaboration/implementation environment in urban MNH

- Donors mentioned several emerging issues in urban MNH health, including demand generation, service delivery, and unique adaptations to the slum environment.
- Additional attention will be given to challenges surrounding human resources for health, including quality of care and frequent staff turnovers.
- While some donors stated their expected end dates for supporting existing urban MNH programs, there was an openness to 'look at the urban health situation differently' – and potential for future collaboration.
- A unique moment exists for Save the Children/Saving Newborn Lives to become involved in MNH health in urban Bangladesh.

"Save has never approached us" - DFID

"Welcome to urban health" - ADB

The overwhelming sentiment among informants was that 2016 will be the year when urban MNH programs will be re-structured, funding will increase, and national-level policy and implementation plans will be put in place. Most of the donors discussed a shifting mindset for how to address the unique challenges presented by the urban poor, based on their evaluations and reflections on what 'didn't work' over the last few years. SIDA, ADB, USAID and BRAC all said that they were looking for innovation and new thinking around service delivery, demand generation and adapting to the ever-changing dynamics of the slums. DFID suggested they were going to pay particular attention to the human resources for health (HRH) challenges they continue to face, including high turnover, and poorly trained and overburdened NGO-hired providers.

The funding amounts being discussed for the upcoming years will significantly increase. ADB is expected to triple its investment and SIDA will be adding $20 million to complement ADB's portfolio. With UPHCSDP's movement away from the 'lowest bidder wins' approach, the opportunities for iNGOs and

organizations like Save the Children to play a role in providing technical assistance increases. SIDA suggested that if Save/SNL wants to be at the table around planning for the next round of funding, 2016 is the year to be involved.

The draft implementation plan for the newly proposed urban health policy was out for comment during the time the case study was being conducted. Several donors and implementing partners suggested that SNL provide feedback on the plan in hopes that they can bring a new perspective focusing on newborn health challenges. The quality or comprehensiveness of the plan was not universally agreed upon, but the mere existence of the policy and implementation plan was seen by most of those interviewed as a positive step.

VI. Discussion and Recommendations

SNL's effort to understand the landscape of MNH for the urban poor comes at an opportune moment, when the SDGs, Habitat III, and a rising awareness of the realities of urbanization are stimulating calls for more coherent and inclusive urban planning. These general trends will no doubt find expression and resonance in Bangladesh among those concerned with the future role of Bangladesh's cities and the changing nature of life within them. In the public health field alone, there are several movements or initiatives in Bangladesh that provide potential openings for the SNL team to expand their thinking and learning on urban health issues and to contribute their expertise on the conditions essential for newborns to survive and thrive:

- Universal Health Coverage: 2016-2020 piloting. The piloting process for implementing UHC will challenge much of the health system and infrastructure. Issues of quality of care (QoC), provider knowledge and capacity will emerge.
- Urban Health Policy: the push to complete the Urban Health Policy and Operational Plan were discussed by nearly all donors and the majority of implementing partners. SNL/SC has been invited to the table to provide feedback and to get into the larger conversation about how to implement the policy.
- Development partners are planning a mapping (geographical): DFID representatives mentioned that the development community in Bangladesh was beginning to take stock of the various partners, programs and initiatives that are currently working in the slums (and with those most vulnerable not captured within the slum localities). SNL could benefit from attending the meetings related to this mapping in order to better understand the changing landscape – especially given the new urban MNCH programs that will be starting in 2017.
- OPTIONS is piloting a 'local level coordination committee' (LLCC): not much was known about this pilot, however, the SNL team should meet with the OPTIONS teams to learn more about what they are doing, the progress of the LLCC, and how, if at all, SNL can contribute to its planning and operation.
- The Urban Immunization Strategy is considered something that most donors, implementers and Ministry stakeholders can support. SNL could benefit from following the learning that comes from implementing this strategy.

In this Bangladesh case study, virtually all informants from both the donor and program implementation communities expressed the view that newborn health was largely missing from the urban health conversations and from urban health programs themselves. As described in more conceptual detail in the

global scoping of which this Bangladesh case study is a part, SNL is well placed to strengthen newborn health among the urban poor by working simultaneously in the three domains of its current general strategy: advocacy, technical assistance and research.

A. Advocacy:

The immediate goal of advocacy would still need to be the basic recognition of newborn health as a key element in the overall urban health agenda that is emerging gradually in Bangladesh, as well as recognition of uniquely urban challenges in the country's existing newborn agenda. By "agenda" we mean not only formal policy, but also the perception within the broader development community and general public about the increasing importance of a focus on the urban poor and on their experience of childbirth and newborn survival. As work in the other SNL domains (research studies and technical assistance to service delivery programs) begins to generate better evidence about the unique challenges that the urban environment presents for newborns in poor and marginalized populations and about promising program and intervention approaches, the advocacy can be refined and given greater specificity. In the meantime, immediate steps in the advocacy arena might include:

- Link with GoB, development partners, NGOs and civil society to advocate for explicit inclusion of newborns into all upcoming urban MNH programs, and continue to advocate for the linking of maternal care and newborn care as important for the mother-baby dyad.
- Provide input into the GoB urban health operational plan.
- Identify potential champions for urban newborn health (SNL may have to serve as the primary champion at first).
- Participate in the monthly development partner forums to address the urban MNH situation.
- Influence public awareness and discourse through both conventional and new media.

B. Technical Assistance to service delivery:

This case study showed that there is a significant gap in skills needed to provide newborn care in existing urban health programs. In FGDs, the providers said that they did not have sufficient training in newborn care. The job aides available are on maternal danger signs and nutrition, but nothing for newborns. Therefore training in clinical skills that different levels of workers need to deliver newborn care would be welcome. As new urban health programs are designed and implemented there is likely to remain a clear need to strengthen clinical skills in newborn care.

The expertise that SNL has in designing programs that incorporate newborn care will certainly be valuable in supporting urban service delivery programs to incorporate newborn health. But it is precisely the adaptation to the urban environment that requires new program learning. If SNL is able to collaborate with service providers on program design and implementation, then this is an area where carefully designed implementation research will be particularly useful. Here we use the term "implementation research" (rather than "operations research") because implementation research methodologies (including, for example, realist evaluation or developmental evaluation) explicitly acknowledge, document and learn from the ways in which programs interact with key elements of context. In the case of urban slums or other settings where the ultra-poor live (rooftops and pavements), understanding how the social and physical environment interacts with the program to influence its implementation and effectiveness is crucial.

In the urban work (as in the rural), there remains an important opportunity to link more closely (to integrate?) with maternal health. We highlight for further consideration by SNL, the current emphasis within maternal health on quality of care. The pertinent frameworks, such as the WHO vision for quality of care for pregnant women and newborns (Tuncalp et al. 2015), highlight both the provision of care and the experience of care. And while newborns obviously cannot articulate their feelings of the experience of care as adults can, there is still a meaningful, newborn-specific case to be made about the importance of the "respectful care" discourse and its practical implications for the care and treatment of newborns.

C. Research

Very little data and very few research studies exist on the unique issues of urban newborn health, especially among poor and marginalized populations specifically. The research gaps are enormous and there is substantial room for creative thinking about specific research questions and how to address them. Priority issues that emerge from our scoping study include the following:

1. Basic demographic profile

In addition to developing a clearer picture of the number of births and deaths in slums or among the urban poor, there is a particular, program-relevant need to understand migration patterns and movement within cities. Other demographic data such as number of adolescents, and age of marriage will also be important in advocating for effective policies and designing effective programs for urban MNH.

It will be especially useful to document trends and estimate the numbers in the future as urbanization possibly accelerates and as cities certainly grow in size.

Without these data, the risk of invisibility grows. The fact that such large percentages of the urban poor live in informal settlements and work in informal employment makes their entitlements in law and policy uncertain, and their importance to political dynamics (such as voting) unclear. It certainly makes it easier for the health and wellbeing of the urban poor to be ignored by development partners and overlooked or disregarded by policymakers and others who wield power in Bangladeshi society.

2. Descriptive epidemiology

The "who, when and where" of newborn mortality in urban slums across the country is unknown. The causes of newborn mortality and morbidity in slums in Bangladesh are still largely undocumented and unanalyzed, apart from small studies done by one program (Manoshi) in a few of its catchment slums. In particular, distal determinants such as occupation exposures of both fathers and mothers; environmental exposures caused by air pollution and poor water and sanitation; and worsening living conditions caused by climate change may be particularly important for newborn health among the urban poor. Social determinants of maternal and newborn health in urban slums should also be assessed.

3. Social science research

In fact, we know pitifully little about the texture of the lives of the urban poor. This includes everything from how they spend their time and whom they rely on for information, protection, and access to resources, to their changing aspirations, perceptions of exclusion and discrimination, and their feelings of entitlement (or lack thereof). Particularly understudied and under-appreciated is the impact of informality in all aspects of life of the urban poor. Formal law and policy; formal allocation of political responsibility and power; formal rules about entitlement and access to services simply do not apply nor do they describe the lived reality of the urban poor.

To achieve effective coverage of health services for MNH, we know it will ultimately be important to understand how social networks and social capital are formed and expended. We will need to understand how family and community dynamics change with urbanization; how social norms – including, importantly, gender norms – evolve in these fragile settings; and ultimately how social change happens.

4. Health policy and systems research

The case study revealed that, in addition to the demographic, epidemiological and basic social science research areas briefly described above, there are large research gaps concerning the operation of health services for the urban poor. Of particular relevance to newborn health, we need to understand:

- Place of delivery: how do women and families decide where to deliver, and what realistic options do they currently have? What newborn services are available in each setting? How are emergencies handled?
- Care-seeking for sick newborns: Where and why? Who are the day-to-day caretakers for newborns, given the employment patterns of parents? What are the knowledge, attitudes and practices concerning danger signs and treatment? What are the financial barriers to care-seeking?
- Informal and/or unregulated private-sector services: How and why are they used? What is the quality? What is the cost?

5. Implementation and effectiveness research

Where there are new policies and programs being developed and implemented, SNL could make productive use of new methods of implementation research to draw practical lessons and practice-based lessons from strategies being considered and implemented in the near future for MNH in urban Bangladesh.

VII. Conclusion

SNL is well-positioned to lead the effort to put newborn health on the larger national level urban agenda, and to ensure through strategic use of evidence from multiple kinds of research studies, as well as from program-based learning, that policies and programs are well-designed and effectively implemented. The environment seems ripe for collaboration and partnerships with donors and implementing agencies already working in the urban MNH field throughout the country.

By creatively and meaningfully engaging with urban poor communities, strategically engaging in policy debates, and collaboratively entering program spaces, SNL can generate new learning for a broader global community, and a new level of health and wellbeing for the mothers and newborns of Bangladesh.

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Appendix I: Key Informant Interviews_Bangladesh

Bangladesh Case Study Key Informants	
Informant Name	**Current Position/Affiliation**
Mohammad Hussain Choudhury	Director-Programme, Marie Stopes
Ishtiaq Mannan	Chief of Party, Save the Children
Kamrun Naher	Integrated Child Development Programme Manager, Save the Children
Kazi Asadur Rahman	Senior Manager, Save the Children
Malabika Sarker	Director of Research, James P. Grant School of Public Health, BRAC University
Dhiraj Kumar Nath	Urban Health Specialist, Asian Development Bank
Nurul Islam	Urban Primary Health Carey Specialist, Asian Development Bank & Local Government Division
Purabi Ahmed	Project Manager, Bangladesh Association for Prevention of Septic Abortion (BAPSA); UPHCSDP
Shafiqul Islam	Health Advisor, DFID Bangladesh
Miranda Beckman	DLI Foreign Service Officer, USAID
Kaosar Afsana	Director, Health, Nutrition and Population, BRAC
Mohammad Zahirul Islam	Programme Officer, Health, SIDA
Brig Gen Mahbubur Rahman	Chief Health Officer of Dhaka South City Corporation
Women and service providers	Nari Maitree