

Maternal Newborn Health and the Urban Poor: A Global Scoping

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Abbreviations

AMDD	Averting Maternal Death and Disability
ANC	Antenatal care
APHRC	African Population and Health Research Center
ART	Antiretroviral therapy
BCC	Behavior change communication
BMGF	Bill and Melinda Gates Foundation
CHPS	Community-Based Health Planning and Services
CHW	Community health worker
CIDA	Canadian International Development Agency
CINH	City Initiative for Newborn Health
DANIDA	Danish International Development Agency
DBRHCP	Demand-Based Reproductive Health Commodity Project
DFID	UK Department for International Development
DOT	Directly observed treatment
HDSS	Health and demographic surveillance system
ICDDR,B	International Centre for Diarrhoeal Disease Research, Bangladesh
IPV	Intimate partner violence
KII	Key informant interviews
JPGSPH	James P. Grant School of Public Health
JSY	Janani Suraksha Yojana
MAMA	Mobile Alliance for Maternal Action
MMR	Maternal mortality ratio
MNCH	Maternal, newborn, and child health
MNH	Maternal and newborn health
MOHFW	Ministry of Health and Family Welfare
MOLGRD&C	Ministry of Local Government, Rural Development and Cooperatives
NGOs	Non-governmental organizations
NMR	Neonatal mortality rate
NUHDSS	Nairobi Urban Health and Demographic Surveillance
PAMANECH	Partnership for Maternal, Newborn and Child Health
PNC	Postnatal care
PPP	Public-private partnership
RCT	Randomized controlled trial
SDGs	Sustainable Development Goals
SNL	Saving Newborn Lives
SSA	Sub-Saharan Africa
TB	Tuberculosis
TBA	Traditional birth attendant
UN	United Nations

UNFPA	United Nations Population Fund
UNOCAL	Union Oil Company of California
USAID	United States Agency for International Development
WASH	Water, sanitation and hygiene
WHO	World Health Organization
YLL	Years of life lost

I. Executive Summary

Urbanization is changing the face of poverty and marginalization, and so the nature of preventable maternal and newborn mortality and morbidity in the 21st century. This report describes the findings from a global scoping of maternal and newborn health (MNH) for the urban poor that was designed to review the state of policy, programs, and research in the field. An accompanying case study of MNH for the urban poor in Bangladesh is described in a separate report. The scoping is designed to complement – not duplicate – two recent reports of Save the Children (SC) that describe the health status of mothers and newborns in urban areas of low- and middle-income countries (LMICs) (Crane, 2012; Save the Children, 2015).

The scoping entailed reviews of the published literature; 36 interviews of SC staff in headquarters and in county offices of the seven Saving Newborn Lives (SNL) focus countries, urban experts, and representatives of donor agencies; as well as a scan of grey literature, donor websites, and policy documents. It shows that urban MNH is a wide-open field. There is very little coordinated work at policy level globally or at the national level in SNL countries. Considering that the number of people living in slums globally is now approaching one billion, there are surprisingly few service delivery programs of any reach or scale. No global MNH donors have taken up urban MNH specifically as a priority issue in their strategy.

Research on urban MNH is scant and most studies in the literature focus on small segments of individual slums, making generalizability questionable. Data from urban areas are rarely disaggregated by wealth quintile, living conditions (by slum/non-slum or neighborhood), or other lines of social disadvantage, making it difficult to get a nuanced picture of health status and its determinants for poor and marginalized populations. We know little about how the unique dynamics of urban life in these settings affect the health of mothers and newborns.

But we do know that when people migrate to cities, as millions do every year, they face a profoundly different environment from what they left in rural areas. This is especially true for the many millions who live in slums or other informal or illegal settings (on pavements or rooftops, at construction or factory sites, under bridges or on undeveloped land). Their family and community structures have changed; their social networks and relationships of dependency and obligation have changed; their access to and relationships with political powers, social institutions, and the basic resources needed for survival have changed; and their aspirations for their own lives have changed as well.

Meanwhile, most existing work in MNH is based on a rural mindset, on a set of implicit assumptions about how communities operate, how the health system functions, and how access to services is facilitated and constrained. The mismatch between our conventional approaches to MNH and the lived realities of the urban poor frames the challenge for SNL. Building on its 15 years of leadership and experience that has put newborn survival on the global agenda and identified effective clinical interventions that could alleviate a huge portion of mortality and morbidity if there were universal effective coverage, SNL now has the opportunity to think in new and creative ways about addressing the massive unmet needs of the urban poor.

To do so, we recommend that SNL shift from the standard public health strategy that focuses on and builds from discrete clinical interventions to an ecology-of-implementation approach. This will entail working simultaneously at policy/advocacy, program/implementation, and research levels, with a premium put on learning and adaptation.

There are few ready-made platforms for initiating new work on urban MNH in any of these three domains. Creating new platforms for advocacy will require new partnerships, both within health and across sectors. In advocacy, SNL will need to make a sharp case for the imperative of focused attention to MNH within urban initiatives and to urban issues within MNH initiatives. To do so, it will need to think creatively about how an MNH focus potentially advances broader governance, service delivery, and development goals.

In program/implementation, the lack of a clear hierarchical primary-to-tertiary tiered government health system in most cities presents a basic challenge. It also opens new opportunities for creatively matching service delivery to the unique dynamics of urban settings, including the mobility of urban poor populations. This points to a research agenda that centrally includes implementation research, as well as research on many basic characteristics of urban poor populations assessed through multiple research methods.

Finally, our recommendations acknowledge that the pivot to urban MNH using an ecology-of-implementation approach will require well organized, expert assistance from SC and partners. This expertise may not yet exist in SC, or in any other organization. To address the emerging challenges to good health presented by dynamic, complex 21st century urban systems, such expertise will likely need to be built through experience, learning, and cross-country exchange.

II. Introduction

A new reality will shape maternal and newborn health (MNH) in the 21st century. The world is rapidly urbanizing, as people move to cities and as cities expand to include more and more people (Brenner & Schmid, 2015). As a result, the environment in which people live, love, labor, and reproduce is changing and MNH must change with it.

This requires a fundamental shift in the mindset that structures MNH strategies. It entails questioning old assumptions that undergird rural health programs, including assumptions about how communities and families work; how traditional and political leadership functions; what women want and how they access information and services; and how change happens – or is resisted.

It also requires fresh thinking about cities themselves, and their role in economic and social development. Do we support urbanization and invest in making cities efficient and productive drivers of the economy, the culture, and the society? Or do we shun urbanization, seeking ways to stop the wild growth of cities that is so obviously outpacing their capacity to meet the population's needs? The revival of the discourse of the "right to the city" – first articulated in the student demonstrations in Paris in 1968, but now a core principle of the "urban agenda" promoted globally by the United Nations (UN) – reminds us that every resident has the right to both benefit from and contribute to the life of his or her city. We must think anew about the nature of equity and inclusion, of obligation and entitlement, especially in urban settings where every aspect of life is increasingly characterized by informality. When formal law and policy no longer actually govern or account for key social and economic transactions, then we must find other ways to promote equity and mobilize for change.

Finally, our thinking about urban MNH should also reflect broader trends affecting global health and development, including the move from a primary focus on effective technical interventions to an agenda that also centrally includes implementation challenges. Specifically, urban MNH strategies should recognize the need to engage with the broader context of people's lives and to shift the power to frame and solve problems from the exclusive hold of technical experts and centralized political leaders to the people and providers whose interactions define the ultimate impact of health inventions on women and newborns.

Making these shifts will be a long process that will demand open minds, better collaboration, and critical – even self-critical – thinking from all of us. This landscaping of urban health and the current MNH environment attempts to make a modest contribution to that process.

III. Objectives and Scope of Research

A. Objectives

The research has the following overarching objectives, as set out in the Scope of Work:

1. Review the literature and status of MNH in urban settings;
2. Document successful and sustainable approaches to address MNH in urban settings;
3. Understand the influencing factors and gaps in MNH services in urban settings;
4. Identify key stakeholders and potential partners to address the inequity in MNH services in urban settings; and
5. Provide recommendations and direction for future programming and resource investments targeting the urban poor, focusing on sustainable mechanisms to reach effective coverage of MNH interventions.

B. Geographic Scope

The landscaping draws on both global and regionally specific searches. For the overall conceptual understanding of the context of the urban slum, we searched relevant literature from a global perspective and from fields outside of health such as housing, governance, water and sanitation, and urban planning. For the more targeted and detailed components – MNH status, policies, programs, and donors/stakeholders – the focus is on the seven countries where Saving Newborn Lives (SNL) is currently implementing programs (Bangladesh, Nepal, India, Nigeria, Ethiopia, Uganda, and Malawi).

C. Focus on the Urban Poor

A primary aim of the situation analysis is to identify the characteristics unique to urban settings that must be considered in policy, program, and advocacy strategies to improve MNH for the urban poor. Therefore a major focus of the report is on understanding urban slums and informal settlements, particularly in South Asia and Sub-Saharan Africa where a large proportion – in some countries, the vast majority – of urban poor live. However, we recognize that not all urban poor live in slums and not everyone who lives in slums is poor. Much of the data that we report in the following sections comes from slum settings or compares slum areas with non-slum areas. Ultimately, it will be important to assess whether a policy/programmatic focus on slums is a strategic way to address MNH of the urban poor, and what the implications of such a focus would be, including an assessment of which vulnerable groups might thereby be excluded. In any specific policy setting, it will also be important to consider whether an exclusive focus on slums stigmatizes and ultimately weakens urban health programs.

D. Focus on MNH Services

The situation assessment will necessarily explore the potential of cross-sectoral and integrated health programs, and will be alert to the importance of the social determinants of health for mothers and newborns. However, the focus of the assessment is on the delivery and coverage of specific MNH services.

IV. Methodology

A multi-tiered approach was used to conduct the global scoping and to accommodate the complexity of the urban situation. Averting Maternal Death and Disability (AMDD) conducted literature reviews, interviewed 36 key informants, and completed a case study of the urban MNH situation in Bangladesh. The methodologies are described in summary form below, with the details provided in Annex I.

A. Literature Reviews

Literature reviews were conducted using PubMed, Google, and Google Scholar to identify basic urban MNH background information, recent urban research conducted, program evaluations, policy papers, and other relevant contextual information. Websites of donors, large MNH programs, urban-focused initiatives, and the grey literature were also searched. Using the extraction tools shared in Annex I, the results were compiled and synthesized for the various sections of the report.

B. Key Informant Interviews (KII)

Following the completion of the initial literature review, four KII guides were drafted for use with informants from various sectors: SNL and SC headquarters (HQ) staff and representatives from SNL's 7 country offices, global MNH experts, urban experts, and donors. The tools addressed issues of context, policies, urban MNH status and programs, donors, and personal experiences working in the urban slums. The four main guides were adapted according to informant type, as necessary. As findings or themes began to clearly emerge, questions were added to the tools to illicit feedback on specific issues. A total of 22 KIIs were conducted for the global scoping, 14 for the Bangladesh case study, and several informal conversations with colleagues known to be working in the urban MNH field. Annex II lists key informants with whom we conducted oral interviews. (Additional briefer exchanges by email with potential informants to assess suitability or availability for oral interviews are not listed.)

C. Bangladesh Case Study

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 following research question guided the research: *What unique contextual factors of slums (and slum-like settlements) significantly change the way maternal and newborn interventions are implemented in Bangladesh?*

A two-phased approach was used. The first phase included a desk review of the published and grey literature (including SNL and SC program documents) and informal interviews with SNL and SC headquarters staff to develop a general understanding of the health of the urban poor, major MNH programs working in slums, current SC/SNL programs, and strategies and major challenges in adapting rural strategies to urban realities. A total of 14 KIIs were conducted in-country as well as several more informal meetings and interviews with SNL Bangladesh staff. The full Bangladesh case study report is a separate document although some of its findings are referenced here.

V. Glossary

- The lack of uniform or consensus definitions of terms such as ‘urban’, ‘slum’, or ‘urban poor’ causes confusion in the literature, uncertainty in the data, misdiagnosis of problems and an inability to document trends or compare across different settings.

As we conducted the literature review, we compiled a glossary of the terms urban, slum, urban population, urban poor, city, town, slum-like settlement, slum household, informal settlement, informal sector, informal work, informality, and squatter settlement. It rapidly became apparent that there are no consistently-used, consensus definitions of key terms, even within UN documents. Indeed, often the key terms – such as what counts as “urban” or who are considered “poor” – are not defined at all. This makes most comparisons across cities and countries and most trends over time impossible to state with certainty. In fact, it makes most of the quantitative data in the literature unreliable (Satterthwaite, 2010). In Annex III we have organized illustrative examples of definitions for the terms searched to highlight the range of definitions used and the lack of clarity around the urban data.

The range of definitions for “slums” is perhaps the most vexing problem for those concerned with poor and marginalized populations or with health equity. UN Habitat articulated a definition in its 2006/7 State of the World’s Cities report (now probably the definition most often used in UN documents): A “slum household” is “a group of individuals living under the same roof in an urban area who lack one or more of the following:

1. Durable housing of a permanent nature that protects against extreme climate conditions.
2. Sufficient living space which means not more than three people sharing the same room.
3. Easy access to safe water in sufficient amounts at an affordable price.
4. Access to adequate sanitation in the form of a private or public toilet shared by a reasonable number of people.
5. Security of tenure that prevents forced evictions.”

But many countries have devised their own definitions. In Uganda, for example, applying the UN definition would mean that 93% of the population in Ugandan cities lives in slums. Instead, a Ugandan policy for slum upgrading defines a slum as an area with one or more of the following characteristics:

- “1. Attracting a high density of low income earners and/or unemployed persons with low levels of literacy,
2. An area with high rates/levels of noise, crime, drug abuse, immorality (pornography and prostitution) and alcoholism and high HIV/AIDS prevalence, or

3. An area where houses are in environmentally fragile lands, e.g. wetlands.” (Nolan, 2015)

In many cities, slums are synonymous with “informal settlements,” although in India, for example, there is a difference between a “notified” slum which is legally recognized and therefore theoretically able to access some protections and resources, and a “non-notified” slum, with no formal legal protection (Subbaraman et al., 2012). A recent paper by demographer Laura Nolan examining four separate definitions of “slums” used in India demonstrates just how important these definitions can be in identifying the population of interest. The Venn diagram she developed, reproduced below in Figure 1, shows the dramatic variance in the populations captured by application of the different definitions (Nolan, 2015).

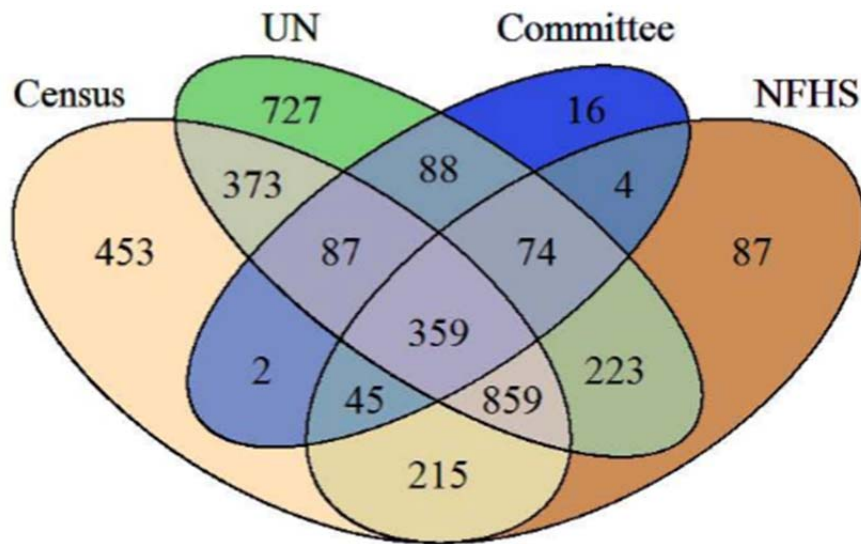


Figure 1. Venn Diagram detailing overlap of number of children identified as slum-dwelling, by slum definition in eight Indian cities.

We do not try to resolve these inconsistencies for this report, although we recognize that the characterization of “place” – the attributes of the community and geographic area in which one lives – is increasingly recognized as an important factor for understanding determinants of population health and addressing them through “place-based” interventions (Smedley & Amaro, 2016). Hence, being alert to definitional issues will ultimately be important in any strategy for urban MNH. For purposes of this report, no paper or other evidence was excluded from consideration because of its failure to meet a particular definition of “slum” or of “urban poor.” In the text, we use “slum” and “informal settlement” interchangeably, and use “slum” and “urban poor” in a somewhat interchangeable or overlapping way depending on whether we are talking about the place or the people, thereby reflecting the way that these terms are usually used by the literature and by our informants. In this report, when referring specifically to the urban poor living outside of slums (homeless, rooftop, or pavement dwellers) it is explicitly stated. When referring in an exclusive way to those living in slums, we use the term “slum dweller.”

We did not focus specifically on 'peri-urban' areas, which, in some countries, may have unique features relevant to the development trajectory of cities (Brenner & Schmid, 2015; Saunders, 2011) and possibly to MNH as well, although we know of no studies explicitly comparing MNH status of peri-urban to urban or rural areas. In some of the literature, 'peri-urban' is included in the larger term 'urban'.

VI. Urban Poor Populations: Demographic and Health Status

- Urban poor populations are continuously growing and evolving; the diversity and movement within any one slum, let alone city, challenge easy generalizations about who these populations are and their health-seeking behavior.
- Although disaggregated city-level data are scarce, there is evidence of poor health status among the urban poor, sometimes worse than the rural poor.
- The few studies on NMR in slums suggest higher mortality than in non-slum areas.

Generalizations concerning the men, women, and children who reside in slums should be made with extreme caution. Significant differences in slum populations have been observed between regions, countries, cities, and individual slums. Assuming that all slum residents are living in poverty is incorrect and can lead to substantial problems (Masse Bateman, personal interview, March 7, 2016) (Blessing Mberu, personal interview, March 2, 2016). Studies within Indian cities found that 76% of Hyderabad's poorest citizens and 63% of Chennai's poorest are not in "notified" or legally recognized slums, but rather are living as squatters, on pavements and under bridges, and in "unlisted poverty clusters" (non-notified slums) (Siddharth Agarwal, 2011). In certain contexts, targeting the poor through slum interventions will therefore miss a significant portion of the poor population.

Keeping the diversity of these areas in mind, it is important to note several near-universal features of slums. A multitude of factors – physical isolation, stigma, and employment schedules – contribute to making slum populations difficult to reach (Fotso, Ezeh, Madise, Ziraba, & Ogollah, 2009) (Blessing Mberu, personal interview, March 2, 2016). Slums are witnessing population increases and are sites of constant movement. Individuals with diverse ethnicities, economic backgrounds, and religions populate slums. In these areas, the informal sector often predominates. Finally, municipal governments, rather than national or state systems, generally have responsibility for slums, and municipal public health authorities rarely meet (or even consider) the needs of slum residents.

A. Demographic Characteristics

1. Growth in Urban and Slum Population

Increases in slum populations mirror global trends in urbanization. As of 2015, an estimated 54% of the world's population lived in urban areas, and the trend of increasing urbanization is expected to continue into the future (Rosenberg, Kano, Ludford, & Prasad, 2016). In some areas, notably sub-Saharan Africa (SSA), the majority of urban residents live in informal settlements (State of the World's Cities, 2013). This connects the trend of urbanization with increasing slum populations, with one researcher stating that "unless there are remarkable shifts in governance and economic growth, a large proportion of the urban population in SSA will live in dire poverty" (Mberu, Mumah, Kabiru, & Brinton, 2013). More than

880 million – sometimes a billion – people are estimated to live in slums in the world today. Three interrelated factors have been hypothesized to account for this growth of slum populations: internal migration from rural to urban areas, higher fertility rates among the urban poor compared to the middle and upper classes, and expanding city boundaries, which create new slum neighborhoods (Agarwal & Sangar, 2005; Ezeh, Kodzi, & Emina, 2010). Of particular importance for MNH programs: growing numbers of adolescents in urban areas pose specific challenges for programs initially developed for rural areas (Adongo et al., 2014).

2. Diversity

The heterogeneity of slum populations undermines generalized conclusions or simplistic statements. Within one slum, residents may differ on economic status, place of birth, language, religion, ethnicity, or length of residence in the current slum (Sabina Faiz Rashid, personal interview, January 23, 2016; Jim Phillips, personal interview, January 12, 2016; Taffa, Chepngeno, & Amuyunzu-Nyamongo, 2005). This diversity limits the extent to which a ‘typical slum dweller’ can be described globally, nationally, or locally; there is “not one model, not one condition, not one way to think of the urban poor” (Masse Bateman, personal interview, March 7, 2016). Key informants spoke persuasively of the need to respect and understand the heterogeneity of slum residents, particularly women, and how these individual differences would impact health care access and seeking as well as health outcomes.

Levels of diversity and social interaction were often attributed to individual slum characteristics. In ‘ethnolinguistic settlements’ of Accra, incoming populations settled according to cultural groups, creating a sense of brotherhood and organizational opportunities (Jim Phillips, personal interview, January 12, 2016). In contrast, residence patterns in slums of Lagos were not dictated by tribe or language, leading to a more diffuse environment and fewer cultural ties between residents (Jim Phillips, personal interview, January 12, 2016). The chaotic and unmoored nature of slums often disrupt traditional ethnic divisions that predominate in rural areas. The transitory, impermanent nature of the Kibera slum in Nairobi prevents families from settling according to tribal affiliation. While the caste system of India still holds sway, it has been reported to be less influential in slum areas where different castes live together. While the benefits of diversity in urban areas are often heralded, key informants also stated that diffuse settings lead to a loss of connections, weaker social networks, and disconnect between slum residents (Shah More et al., 2012; Masse Bateman, personal interview, March 7, 2016).

3. Movement

The heterogeneity of slums is compounded by the highly mobile nature of urban populations. Slum residents move from rural to urban areas, slum neighborhood to neighborhood, and from home to home within slums. Constant movement impacts the formation of social networks, social cohesion, community knowledge, and program and research participant tracking. BRAC staff associated with the Manoshi program in Bangladeshi slums estimated that, within a year, 20-40% of the slum population had moved (Marcil, Afsana, & Perry, 2016). While conducting a stillbirth study in Mumbai slums, researchers recorded a 25% turnover in study households (Bapat et al., 2012). In a study in the Kibera slum of Nairobi, the median length of residence was six years (Marston et al., 2007). Furthermore, both men and women in the slums are extremely mobile on a daily basis, often leaving the slum early in the

morning for work and returning late at night (Blessing Mberu, personal interview, March 2, 2016; Bangladesh Case Study). This absence constrains programs' access to slum residents.

Adding to the challenge of reaching mobile populations living in slums are the issues around reaching those who are homeless (have no residence and do not pay rent) or live on pavements, pathways, or rooftops. In many urban settings, the poorest may not live in slums and are often unable to access the health and assistance programs that target the urban poor through the slums. There is a lack of systematic data on the scope of homelessness in urban areas in relation to their particular MNH needs. However, during the case study in Bangladesh, the importance of identifying and addressing the unique needs of these populations was reinforced – especially when attempting to address the MNH needs of *all* urban poor (Kaosar Afsana, personal interview, December 9, 2015). ICDDR,B has conducted research on issues surrounding the poorest populations and those living outside of slums and has found that homeless populations face particular vulnerabilities, barriers to health services, and heightened morbidity (ICDDR,B, 2011). The street dweller populations 'lag behind' in terms of indicators such as immunization, ANC, and skilled birth attendance (ICDDR B, 2011). Reaching these populations has been a challenge and one that donors have been reluctant to fund, given the various difficulties of identifying, reaching, and ultimately working with these populations (Justin Mortensen, personal interview, February 9, 2016).

B. Health Status

Overall comparisons between urban and rural residents generally report (or assume) superior health outcomes for city dwellers. The assumption of an "urban advantage" in much of the popular literature, and even the health literature, disguises growing health inequities in cities (Matthews et al., 2010; Save the Children, 2015). Increasingly, when surveillance statistics and studies have stratified health outcomes by income levels or urban dwelling place, stark disparities emerge (Agarwal, 2011; Kyobutungi, Ziraba, Ezeh, & Yé, 2008; Sharma, Singh, & Sharma, 2015). Compared to non-slum residents, those living in slums often face worse health outcomes in overall mortality, maternal and newborn morbidity and mortality, and child mortality (Bakibinga et al., 2014; Nankabirwa, Tumwine, Tylleskär, Nankunda, & Sommerfelt, 2011a; Soura, Lankoande, Millogo, & Bangha, 2014). In a direct repudiation of the urban advantage argument, slum residents have also been observed with worse health outcomes than comparably poor rural residents (Ezeh et al., 2010; Nankabirwa et al., 2011a; Okafor, Dolapo, Onigbogi, & Iloabuchi, 2014).

1. General Morbidity and Mortality

Slum settlements are often characterized by high overall morbidity and mortality levels that surpass the surrounding city's levels. A comparison of causes of mortality in formal and informal neighborhoods in Burkina Faso found higher overall crude mortality in informal neighborhoods. When standardized for age divisions, the mortality rate in informal neighborhoods (4.6 per 1,000 person-years) remained higher than that of formal neighborhoods (3.9 per 1,000 person-years). Furthermore, the age-adjusted mortality rate for communicable diseases was higher in informal than formal neighborhoods (2.11 per 1,000 person-years vs. 1.22 per 1,000 person-years). Communicable diseases accounted for 45% of all deaths in informal areas, compared to 27% in formal neighborhoods (Soura et al., 2014). Disease surveillance in two Nairobi slums reported a mortality burden per capita of 205 years of life lost (YLL)

per 1,000 person years and children under five experienced four times the mortality burden of the remainder of the slum population (Kyobutungi et al., 2008). A cross-sectional survey in Delhi and Chennai compared slum settlement to resettlement colonies, which were areas to which slum dwellers had been relocated. Compared to resettlement areas, the prevalence rate for illnesses was higher in slum settlements, with 109 episodes per 1,000 persons in the Delhi slums, compared to 86 per 1,000 in Delhi resettlement areas (Sundar & Sharma, 2002). Malnutrition was reported to be a significant issue during interviews with key informants in Ethiopia, Nigeria, and Bangladesh (Yunis Musema, personal interview, January 25, 2016; Abimbola Williams, personal interview, February 26, 2016; Bangladesh Case Study). Direct observations of poorer health outcomes in slums is bolstered by an extensive body of literature showing an association between adverse neighborhood characteristics (widespread poverty, limited land ownership, poor access to services) and poor health outcomes (Fotso, Cleland, Mberu, Mutua, & Elungata, 2013; Kimani-Murage et al., 2014; Montgomery & Hewett, 2005; Sampson, Morenoff, & Gannon-Rowley, 2002; Weeks, Hill, Getis, & Stow, 2006).

2. Maternal Mortality and Morbidity

Trends of higher morbidity and mortality levels in slums, compared to other urban areas, are also reflected in maternal and newborn health. As reported by Bakibinga et al., the maternal mortality ratio (MMR) within the Viwandani and Korogocho slums of Nairobi was measured at 706 deaths per 100,000 live births, while the national MMR within Kenya was 488 deaths per 100,000 live births (Bakibinga et al., 2014). A prospective study among pregnant women in Dhaka slums recorded 75% of participants experiencing postpartum morbidity, with 36% reporting serious delivery complications (Fronczak, Arifeen, Moran, Caulfield, & Baqui, 2007). Within Myanmar, unsafe abortions are estimated to account for 10% of maternal deaths. A study in peri-urban settlements of Yangon reported that unsafe abortions are common, performed by untrained traditional birth attendants and with varying methods and degrees of safety (Sheehy, Aung, & Foster, 2015).

3. Stillbirths

Across much of the world, stillbirth remains a topic unspoken by communities and unmeasured by researchers. Recently, the 2016 Lancet Ending Preventable Stillbirths Series called for greater transparency, research, and action to address the annual 2.6 million stillbirths around the world. While the series focused largely on rural and isolated areas, the data suggest that stillbirths are also a major concern in urban slums. Globally, 98% of stillbirths occur in low- and middle-income countries, and 40% of global stillbirths take place in urban settings. Within Eastern Asia, Latin America, Northern Africa, and Western Asia, the majority of stillbirths occur in urban areas (Lawn et al., 2016). Furthermore, of the ten nations contributing two-thirds of the world's stillbirths, many are known to have substantial urban slum populations (including India, Nigeria, Ethiopia, and Bangladesh) (Horton & Samarasekera, 2016). Finally, globally, those marginalized by structural inequalities are at greater risk for stillbirths (The Lancet, 2016). Although there are a handful of studies measuring stillbirth rates in individual slums or project facilities (Bapat et al., 2012; Rahman, Nahar, & E-Nasreen, 2011), the limited research on stillbirths in slums makes it difficult to draw any firm conclusions on either the prevalence or the causes.

4. Newborn Mortality

Factors associated with maternal health in informal urban settlements, including access to health facilities, skilled birth attendants, and postnatal care, are closely tied to newborn health as well. While neonatal health has gained greater prominence on the global stage, a specific focus on neonatal health in urban slums has not followed. The 2014 Lancet Every Newborn Series made only brief mention of urban inequalities, recommending that programs focused on the equity gap include the urban poor (Bhutta et al., 2014). Despite this omission, studies suggest that newborns born in urban slums fare worse than other urban newborns and, in some cases, rural newborns. However, as with many other indicators, newborn mortality within one slum is not generalizable to all slums.

Within eastern Uganda, a cohort study comprising both urban informal settlements and rural areas found that women in urban areas had a 2.7 times higher risk of an infant death in the perinatal period, compared to women in rural areas. Compared to a rural perinatal mortality of 33 deaths per 1,000 pregnancies, women in urban areas experienced 68 deaths per 1,000 pregnancies (Nankabirwa, Tumwine, Tylleskär, Nankunda, & Sommerfelt, 2011b). Within India, nationwide surveys detected a neonatal mortality rate (NMR) of 34.9 deaths per 1,000 live births within slums, which was greater than the non-poor, urban NMR (25.5 deaths per 1,000 live births) and the average urban NMR (28.7 deaths per 1,000 live births) (Agarwal, 2009). Additionally, between 30 and 54% of newborns born in select Indian slums (in Mumbai, Indore, Nagpur, and Hyderabad) were classified as low birth weight (Agarwal, 2009). A separate study within Mumbai slums identified 210 neonatal deaths within two years, corresponding to a NMR of 18.6 deaths per 1,000 live births. Of these deaths, 34% took place within one day of birth and 10% within two days (Bapat et al., 2012). These results support arguments that, globally, immediate postnatal care is lacking in informal urban areas (Crane, 2012) where it has been assumed to be present. Finally, a study in three slums within Dhaka city recorded 260 neonatal deaths within a two-year timeframe (identified through existing program management information system), with birth asphyxia (42%), neonatal sepsis and pneumonia (27%), and birth trauma (7%) as the most common causes of death (Khatun et al., 2012).

5. Child Mortality and Morbidity

There is a more substantial body of literature on child outcomes, as compared to maternal and newborn; and this literature suggests that children in slums have worse health outcomes than other urban children or, in some cases, rural children. This difference is often demonstrated through markedly different urban health outcomes according to socioeconomic status. The 2015 State of the World's Mothers Report finds that where child survival gaps are largest (Bangladesh, Cambodia, Ghana, India, Kenya, Madagascar, Nigeria, Peru, Rwanda, Vietnam, and Zimbabwe), poor urban children are 3-5 times as likely to die as their affluent peers (Save the Children, 2015). Across India, the under-five mortality rate among the poorest urban quintile was 73 per 1,000 live births, compared to 42 per 1,000 for the remaining urban population (Agarwal, 2011). The African Population and Health Research Centre reports that, in 2012, the under-five mortality rate among children in Nairobi slums also exceeded the Kenyan national average (79.8 per 1,000 in slums and 73 per 1,000 nationally) (African Population and Health Research Center (APHRC), 2014). Contrary to commonly-cited patterns, a cross-sectional study in Nigeria did not record higher child mortality in rural areas; the authors stated that "children growing up

in poor urban settings face significant health risks, and in some cases, these risks exceed those prevalent in rural areas” (Okafor et al., 2014). Additionally, in one Kenyan study, slums appear to have an almost immediate impact on child mortality. Comparing the mother’s migration patterns and infant’s place of birth, researchers determined that children born to mothers who recently migrated to slums had a 1.8 higher mortality risk compared to other children. Overall, children born in Kenya in slums had higher mortality than those born outside slums (Bocquier et al., 2011).

6. Disease-Specific: Communicable and Non-Communicable

Finally, studies have reported elevated rates of communicable and non-communicable diseases in slum neighborhoods. Communicable diseases are aided by crowded and cramped settlements, poor infrastructure, and weak or non-existent water and sanitation systems. Within a large slum of Rio de Janeiro, tuberculosis rates were measured at 3.5 times that of the city rate (Cavalcante, Soares, Pacheco, Chaisson, & Durovni, 2007). In a separate study, living in a Brazilian favela was observed to be a major risk factor for Leptospirosis, a rare infection transmitted through rat urine. Researchers related this risk to the open sewers present in slums (Riley, Ko, Unger, & Reis, 2007). While malaria is often thought of in rural areas, within a slum in Kampala (Uganda), 19% of the children under ten years were found to be parasitaemic (Davis et al., 2006). And the most recent Ebola epidemic saw urban slums in Sierra Leone and Liberia become the flashpoints for the outbreak, highlighting the capacity of infectious diseases to spread given the slums’ close quarters, highly mobile populations, ‘invisible’ nature of the populations, and use of informal and make-shift facilities (Gostin, 2014; Fowler et al., 2014).

The reported signs of non-communicable diseases are also cause for concern, given their wide-ranging health impacts and complex control mechanisms. A survey of risk factors for non-communicable diseases in an Indian slum identified high levels of smoking and alcohol consumption among men, high levels of physical inactivity among women, and hypertension, low fruit and vegetable consumption, and excessive body weight among both men and women (Anand et al., 2007). The *Global Report on Urban Health*, published by the World Health Organization (WHO) and UN Habitat in 2016, also calls attention to the growing threat of non-communicable diseases in urban areas. In particular, it cites the growing rates of obesity among urban women (increasingly for the urban poor) and the disparities in global smoking rates, with the poorest quintile of urban men almost twice as likely to smoke as the richest urban quintile (Rosenberg et al., 2016). Over a ten-year period, the Nairobi Urban Health and Demographic Surveillance System (NUHDSS) recorded tuberculosis, injuries, and HIV/AIDS as the most common causes of death within two large slums. Within this period, the proportion of deaths from cardiovascular disease increased, growing from 1.6% in 2003 to 8.1% in 2012. Taken in its entirety, the surveillance data suggests the slums under study are undergoing the epidemiologic transition, as deaths from communicable diseases decrease and those from non-communicable diseases increase (Mberu, Wamukoya, Oti, & Kyobutungi, 2015). As the burden of non-communicable diseases increases globally, they will certainly impact slum populations.

VII. Coverage of MNH Interventions

“Though there are facilities, there is no access.” -Abimbola Williams

“Access is an assumption.” -Jim Phillips

- We found no examples of functioning public-sector health systems able to address the MNH needs of the urban poor.
- Service provision by NGOs was spotty, but often relied upon by municipalities.
- In the absence of public sector and strong NGOs, unregulated for-profit private providers, often untrained and of poor quality, have filled the space.
- Access is often wrongly assumed to be easier in urban areas because of geographic proximity. But substantial barriers to care are created by social dynamics in slums, such as working long hours outside of the home and fear of violence deterring night-time use of services.
- Very little is actually known about why and when women seek care. Several small-scale studies show issues such as mobility, increased adolescent population, limited autonomy and access to accurate information, and perceived poor quality of care can challenge existing programs’ ability to impact health outcomes.

Although Countdown to 2015 tracks coverage for selected interventions in priority countries by rural/urban residence and, separately, by wealth quintile, we have found no comprehensive or systematically collected data from which to estimate coverage rates of specific MNH interventions in urban slums or among the urban poor. Nevertheless, the literature and our informants provide a grim picture of the availability, accessibility, and quality of MNH services in urban slums. This, in turn, influences care-seeking practices. We draw on this picture to frame the implementation challenges in Section XI and the recommendations in Section XII.

A. Availability

1. Public Sector

We did not find any examples of a functioning public sector health system with facilities located in the slums and responsive to clearly defined catchment populations. Although large, public tertiary hospitals typically exist in big cities, there is often no hierarchy of public, lower level clinics and dispensaries to serve the urban areas. In our interviews, the public sector was often described as ‘non-existent’, of poor quality, inconsistently available, or only used in emergencies. The physical existence and location of public sector facilities was discussed with each of the informants during the KIIs. When asked whether or not the slums had facilities based within them, the responses ranged from absolutely not to yes and others described public land being rented out by non-governmental organizations (NGOs).

Despite this diversity in context, it was clear that in many countries the national governments conflate their service provision with that provided by NGOs or through public-private partnerships. The Chief Health Officer of City Corporation Dhaka South explained that the public sector in Dhaka is desperately understaffed (only six of 11 City Corporation Chief Medical Officer posts are filled), overcrowded, and overburdened; tertiary hospitals are overwhelmed by self-referrals, and the system lacks any formal organograms or structures to guide the primary health care system (Mahbubur Rahman, City Corporation, CHO, personal interview, December 9, 2016). Though not representative of all public sectors, these findings did resonate with many of the implementing partners. In some cities in India, the Urban Health Centers (UHC) exist, but may not have the necessary range of functioning services, forcing women to travel to multiple UHCs to get the necessary ANC services, for example. One SNL informant noted that it can take a woman up to three days just to get her blood work done and receive the results if the UHC she visits does not have a laboratory (Benazir Patil, personal interview, June 8, 2016).

In sum, unlike rural areas virtually everywhere, in most cities (and certainly in most slums, especially informal slums that are not recognized in law or policy) there is rarely an existing network or hierarchy of public sector health facilities to use as a platform for introducing or strengthening newborn interventions at community or primary care level.

2. Private For-Profit Sector

The limited availability and accessibility of public sector services in slums leaves a vacuum that has been quickly filled by the private sector. The private sector includes registered healthcare providers (both for-profit and not-for-profit), unregistered healthcare providers, traditional healers, “quacks”, and drug sellers. These private providers often enter slum markets without the necessary organization or expertise to tackle the challenges at hand (Masse Bateman, personal interview, March 7, 2016). In addition to a lack of organization, the private sector often operates outside of the formal regulatory structure, and thus, with little accountability. Slum populations are reportedly spending an increasing percentage of their incomes on out-of-pocket medical costs, raising the possibility of catastrophic health expenditures among this vulnerable population (Yunis Musema, personal interview, January 25, 2016; Khan, 2005).

A study on health care in urban slums of Mumbai found that private facilities and hospitals were used more often than government facilities (Shah More et al., 2011). Similarly, a study in urban Uttar Pradesh, India, found that infants from poorer families were less likely to visit a government – as opposed to a private – healthcare provider (Srivastava, Awasthi, & Agarwal, 2009). An SNL India team member confirmed this point, adding that the limited availability of services within the public sector and the time wasted forces many slum dwellers to use the private sector (Benazir Patil, personal interview, June 8, 2016). In a surveillance study in the Kibera slum, of those who sought care for an illness, 34-44% first visited an unlicensed provider (Breiman et al., 2011).

Drug vendors also play a significant role in slums and often serve as first point-of-contact with the ‘health system.’ In Nairobi, drug vendors were frequently consulted first for children’s illnesses due to availability, affordability, close location, and similar social status to the person seeking care (Amuyunzu-Nyamongo & Nyamongo, 2006). A study in Indore City, India, found that medical stores near Indore

slums are often the first place residents approach for medicines to relieve distressing health symptoms (Agarwal, Satyavada, Patra, & Kumar, 2008).

Studies of private sector facilities in urban areas have often found poor quality care, including unqualified or untrained staff who function without any supervision, lack equipment, drugs, and infrastructure, and ultimately are not able to provide basic life-saving services for mothers and newborns (Das & Hammer, 2007; Das et al., 2012; Fotso, Ezeh, & Essendi, 2009).

Hence, a challenge commonly cited by donors, NGOs, and research institutions working in slums was figuring out how to acknowledge the role and presence of the private sector while also continuing to improve the quality and availability of the public sector. The overwhelming sentiment among key informants was that the private sector must be engaged in a meaningful way if the health outcomes in slums are to improve (Mebratu Bejiga, personal interview, March 10, 2016; Blessing Mberu, personal interview, March 2, 2016). This sentiment aligns with a recent *Lancet* series on universal health coverage (UHC) and the private sector, which acknowledged the fundamental role of the private sector in the provision of care for millions of people, and proposed metrics to assist in understanding and engaging private providers as part of the overall mixed health systems through which UHC – including provision of care for the urban poor – will be accomplished (Mackintosh et al., 2016).

3. NGO and Non-Profit Sector

Space is at a premium in slums and it is often illegally occupied, occupied without the protection of the law, or controlled by informal networks of powerbrokers (Hossain, 2012). This makes building and maintaining permanent infrastructure to house clinics or health centers extremely difficult 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 in Bangladesh explained how hard it was not to have the ability to work within a pre-existing, clearly understood health infrastructure, as is the norm in rural areas. Some informants noted they had facilities in slums (Nigeria) while others said the norm was to have the facilities used by slum residents be physically located outside the boundaries of the slum (Kenya) (Abimbola Williams, personal interview, February 26, 2016; Blessing Mberu, personal interview, March 2, 2016).

B. Accessibility

Many women in slums work outside of the home during the day, in both the formal and informal sectors. In the Bangladesh case study, nearly all informants noted that women's work schedules were an impediment to access. The wider relevance of this finding was confirmed by interviews with experts on urban issues in Nairobi, Ethiopia, and India. If clinics remain open only from 8am-5pm, very few women will be able to attend the clinics. Some NGO providers in Bangladesh reported extending their opening hours to be available for women early in the morning or later at night (Marie Stopes), with varying success. Although several programs sought to accommodate women with flexible hours, facilities being open later did not mean women went to them in the evening; their reproductive health needs often competed with their family responsibilities, and some women felt unsafe walking to a clinic

at night, so the adjusted hours had no effect on their care-seeking (Mohammad Hussain Choudhury, personal interview, December 6, 2016; Blessing Mberu, personal interview, March 2, 2016).

It was also difficult to get clinicians to stay late or arrive early, especially when the facilities were located in the slums (Mohammad Hussain Choudhury, personal interview, December 6, 2016; Blessing Mberu, personal interview, March 2, 2016). In Ethiopia, the Urban Health Extension Workers have voiced frustration that they cannot find women in their homes during the day, making their roles more challenging and less fulfilling (Yunis Musema, personal interview, January 25, 2016) – and this sentiment was shared by informants in Bangladesh. A study in the urban slums of Lucknow District, India showed that the most common reason given for low immunization rates for children was the unavailability of both parents (17.2%), as they were focused on income-generation activities and needed more flexible and clear outreach times (Nath et al., 2007). Families are forced to choose between needed employment and their child's health needs. Often, immunizations or follow-up visits are sacrificed to maintain employment (Nath et al., 2007; Blessing Mberu, personal interview, March 2, 2016). One informant described how in Nairobi, high unemployment rates undercut job security. So, if a mother is working as a cleaner, a job with a high replacement rate, she cannot risk missing work to take herself or her child to the doctor (Nath et al., 2007; Blessing Mberu, personal interview, March 2, 2016).

The issues of transportation and referral were also described as distinct in the urban slum context. The challenges facing rural communities are usually long distances and limited transportation options (access to cars, rickshaws, ambulances). In contrast, in the slums, despite 'faster' methods of transportation, women are often unable to afford the more expensive options. They also face 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. In Kenya, at night the only options are taxis or car-hire services which raise their prices at night (Essendi, Mills, & Fotso, 2011). 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 regardless, getting to a referral center in an emergency and receiving timely care (third delay), remained a challenge for the urban poor.

C. Quality

The recent WHO Vision of Quality of Care for pregnant women and newborns includes both the provision of clinical care and the experience of care as key elements of quality (Tunçalp et al., 2015). Although no studies systematically assess the clinical quality of the care actually available to the urban poor or in urban slums, there is reason to believe it is often very poor (Das & Hammer, 2007; Das et al., 2012) and, particularly given the chaotic nature of the private sector where much of MNH care is obtained, that there is no simple policy lever to remedy it (Montagu & Goodman, 2016). The poor interpersonal care often experienced by the urban poor is a violation in and of itself. But it also has broader ramifications for care-seeking and utilization, as discussed below, and for more fundamental dynamics of trust between the urban poor and the health system as a whole.

D. Care-Seeking

“Our sense is that the most significant constraints to care-seeking can be traced to deficiencies in the health system and to the poverty and marginalization of these slum communities.”

-De Zoysa, 1998

Although this quote is nearly two decades old, the point continues to resonate. While on the global level, facility delivery is increasing, significant challenges remain in slum communities due to numerous factors: failure to recognize severity of condition (linked to education level), actual and perceived cost of care, lack of decision making power, continued preference for home birth with traditional birth attendants (TBAs), fear of harmful and disrespectful treatment, poor availability of and access to public facilities, and extremely high utilization rates of unregulated private providers. Several interviewees also mentioned that slum communities continue to view care-seeking as a ‘luxury’; the perceived opportunity cost of obtaining care during childbirth is too high. This continues to add to health care inequities in the cities.

At the same time, there is evidence from projects such as Manoshi in Bangladesh that, when access to facility-based delivery care is facilitated (physically, financially, and socially) by an MNH program, facility utilization rates can increase quickly and dramatically. This suggests that programs can effectively tap women’s aspirations to deliver in a facility – perhaps as an indication of changing aspirations to be “modern” (Afsana, 2003; Mumtaz, Levay, Bhatti, & Salway, 2013; Saunders, 2011) – in order to support effective care-seeking behaviors.

1. Care-Seeking: Reasons Given by Slum Dwellers for Delays Seeking Care from Facilities

Several studies have been conducted to better understand care-seeking delays amongst women living in slums. The majority of findings fall within traditional first delay (of the “three delays”) categories: failure to recognize severity of condition and financial concerns and the inability to make the final decision to seek care. The reasons and dynamics surrounding the delay make these finding particular to the slum setting.

a) Failure to Recognize Severity of Complications

One of the main factors contributing to delay in seeking care, found across multiple country studies, was women’s (and their husbands’) failure to recognize symptoms or severity of complications. This lack of recognition was often associated with a lower level of maternal education and/or non-attendance of antenatal care (ANC) appointments, where links with the system would have been established. In verbal autopsies conducted to investigate causes of 187 stillbirths and neonatal deaths in an urban slum in Mumbai, 65% of the birth narratives described delays in seeking and obtaining healthcare for newborns, due in part to the failure to recognize symptoms or severity, attempting to treat the newborn at home, and time required for referrals, largely from private to public facilities (Bapat et al., 2012). A cross-sectional study conducted in Bangladeshi slums found that the inability to judge maternal condition was a reason for an initial delay in seeking medical care (Nahar, Banu, & Nasreen, 2011). Two studies conducted with women in Ethiopia found that two risk factors for urban women giving birth at home – despite saying they would deliver in facility – were: having had no formal education (seven times more

likely to deliver at home) and not having attended an ANC clinic (Abeje, Azage, & Setegn, 2014; Bayu, Fisseha, Mulat, Yitayih, & Wolday, 2015). Qualitative research with women and men in Nairobi slums found a preference for skilled birth attendance. However, women were challenged in accessing skilled attendance in emergencies due to “the inability to identify danger signs in time, poor health decision making, among other issues” (Essendi et al., 2011). In a study of the Manoshi referral system, Banu found: “The main reason for delaying the decision to transfer women was the fear of medical interventions, complications arising at mid-night, traditional thinking, lack of money and inability to recognize the severity of illnesses irrespective of place of referral.” The first delay was the longest, and husbands were the primary decision makers (Banu, Nahar, & Hashima-E-Nasreen, 2010).

b) Financial and Transportation

Even when women expressed the desire for skilled attendance, they and their husbands reportedly feared the costs involved with seeking care – both the transportation costs to get to a facility and fees to receive care upon arrival (Essendi et al., 2011; Tann et al., 2007). One study in Kenya found that poor women utilized TBAs not because they thought they provided better care, but because they cost less (Essendi et al., 2011). In the Bangladesh case study, the use of TBAs during delivery in the home was a common practice. Women described them as convenient, cheap, and accessible. These findings align with other studies that have found that between 61% and 84% of Bangladeshis use TBAs in urban areas (Choudhury et al., 2012; Olusanya, Inem, & Abosedo, 2011). Home birth clearly persists in part because TBAs are an alternative to more expensive care elsewhere, and have flexible modes of payment that are more suitable to the financial capacity of many families in slums (Essendi et al., 2011).

Reports coming from Kenya of women being detained in facilities for months for failure to pay for services are not uncommon (Rice & Rice, 2009), and instill a deep sense of fear and mistrust within the poorest and most marginalized in slums. With the lack of a clear health system hierarchy of facilities and referral systems, women have reportedly been more likely to go to higher level facilities to seek care. A recent AMDD review of informal payments for maternal health care found that demands for payments were more frequent and for more money in higher level facilities – further compounding the fear of non-payment (Dasgupta, Sandhya, Lobis, Verma, & Schaaf, 2015).

c) Decision Making

Women in slums are often not able to make decisions about when and where to go for care. Many assume that urban women will be more capable of making decisions for themselves and have the autonomy to decide if/when they are ready to go to a facility. However, studies from Ethiopia, Bangladesh, and Kenya show that women’s ability to make their own decisions remains elusive – except

One Kenyan TBA explained, “These women do not come to us because they really want to but because of their financial problems. When they think that they will be admitted, given delivery services, then retained at the hospital because they cannot pay the bill, they choose to come to us. It is not their wish really. We do understand and there are some cases, in fact many of them, we do for free [give free services] since they do not have any money.” (Essendi et al., 2011)

perhaps among those who are employed or have a higher sense of ‘autonomy’ and may be more likely to seek care at a facility (Banu & Nasreen, 2011; Bayu et al., 2015; Fotso et al., 2009). In Bangladesh, women also spoke of religious beliefs and fatalism as reasons for not preparing for birth, passing the responsibility to God and his will (Choudhury et al., 2012). There are possible ways to address these challenges; an evaluation of a voucher program in Kenya found that if women were successfully convinced to deliver their first child in a facility, they were more likely to deliver a subsequent child in a facility (Amendah, Mutua, Kyobutungi, Buliva, & Bellows, 2013). However, better understanding the complex dynamics of informality and how labor market decisions are made within slum households may also bring better clarity to when, why, and under what circumstances women are able to truly make their own decisions (Sudarshan & Bhattacharya, 2009).

2. Care-Seeking: Home Births with Traditional Birth Attendants

Women living in slums in some countries continue to have high rates of home delivery with TBAs. Within select slums of Indore, India, 56% of interviewed women delivered at home, and 73% of those women were assisted by a TBA (Agarwal, Sethi, Srivastava, Jha, & Baqui, 2010). Within six Manoshi program slum areas in Dhaka, at baseline assessment before the intervention, 84% of women delivered at home with a TBA (Choudhury et al., 2012). In Myanmar, a mixed methods study found that TBAs provided needed social and instrumental support; the TBAs would stay in the home, cook, care for the baby, and offer social support (Sheehy, 2016). This was in stark contrast to how one informant described post-delivery care in urban facilities. She explained that care was “terrible;” women are “practically expelled from the facility,” which has direct health implications for the women and their newborns (Jim Phillips, personal interview, January 12, 2016). Nigeria’s TBAs reportedly deliver women in facilities outside of the women’s home, reaffirming the diversity of slum settlements. They have even formed unions to lobby for labor rights (Abimbola Williams, personal interview, February 26, 2016); these institutions were not found elsewhere. The fact that TBAs often make a living from their delivery assistance was noted as an obstacle to increasing skilled birth attendance.

The quality of care provided by TBAs is variable. Some studies found harmful practices being used by TBAs, and determined that their skill sets were inadequate (Singh, Chhabra, & Sujoy, 2012). On the other hand, BRAC’s Manoshi program integrated TBAs into the birth process (renaming them “UBAs” or Urban Birth Attendants), providing training and supervision, partly to prevent alienating them and partly to engage them in delivery care. UBAs attended deliveries at the slum-based delivery centers; however, the program provided significant support for referral (under a protocol that yielded high rates of referral) and even support for bypassing its own TBA-attended facilities. Moreover, partly in response to the high bypassing and referral rates from its birthing centers, BRAC has begun gradually replacing its TBA-attended, slum-based birthing centers with upgraded facilities staffed by paramedics with midwifery skills and, ultimately, professional midwives (Khan & Ahmed, 2009; Roy, Marcil, Chowdhury, Afsana, & Perry, n.d.).

3. Care-Seeking: Quality of Care

Women in slums fear and experience disrespectful treatment at facilities. Though this is a topic being discussed and addressed globally, the distinct fear women have of going to a facility only to be treated poorly, given 'tongue lashings', or cared for without any regard to privacy emerged in the literature, and was confirmed during interviews with global experts and SNL program staff. A meta-synthesis of qualitative studies on ANC service utilization found that one of the most common reasons given for delaying or restricting ANC visits was the poor attitude of staff at facilities (Finlayson & Downe, 2013). Findings from countries in Africa, Asia, and South America (both rural and urban) highlight insensitivity, rudeness, humiliation, neglect, abuse, and even physical violence by health center staff as key factors limiting women's accessing of antenatal care (Finlayson & Downe, 2013). Even if women went to ANC meetings and were committed to going to a facility for delivery, their fear of the poor attitudes of providers and disrespectful treatment during childbirth prevented them from going to facilities for delivery (Essendi et al., 2011; Mirkuzie, 2014; Abimbola Williams, personal interview, February 26, 2016). Though largely unexplored, the problem of disrespectful treatment may be more acute in urban settings, where large, anonymous facilities lack the personal networks that exist in some smaller, rural areas.

VIII. Urban Exposures and Health Determinants

- Slums often lack access to clean water and sanitation systems; the specific impact on MNH is not fully documented, but sepsis and other complications have been attributed to these unsanitary conditions.
- Congestion, constant migration, and high crime rates within slums impact all aspects of life for slum dwellers, but have direct impact on care-seeking, access, and ultimately health outcomes for women and newborns.
- Social dynamics within slums are fundamentally different from rural communities: social support and networks function differently, IPV rates are high, and there is a lack of autonomy and trust in the system and 'community'. These factors all contribute to creating a different reality for women in slums.
- Municipal governments often have the mandate and authority, but not the staffing, resources, capacity, or political will to address the complex range of issues facing slums. So they don't.

Much has been written about the determinants of population health at the city level. However, less is understood about the unique determinants for the most marginalized within cities of low- and middle-income countries – often those living within slums or informal settlements – and even less about how those determinants influence their maternal and newborn health. A comprehensive framework of social, political, and environmental determinants of urban health generally has been developed by Vlahov et al. (Vlahov et al., 2007) and modified by the World Health Organization (WHO). A diagram depicting the full framework is shown in Figure 2 below.

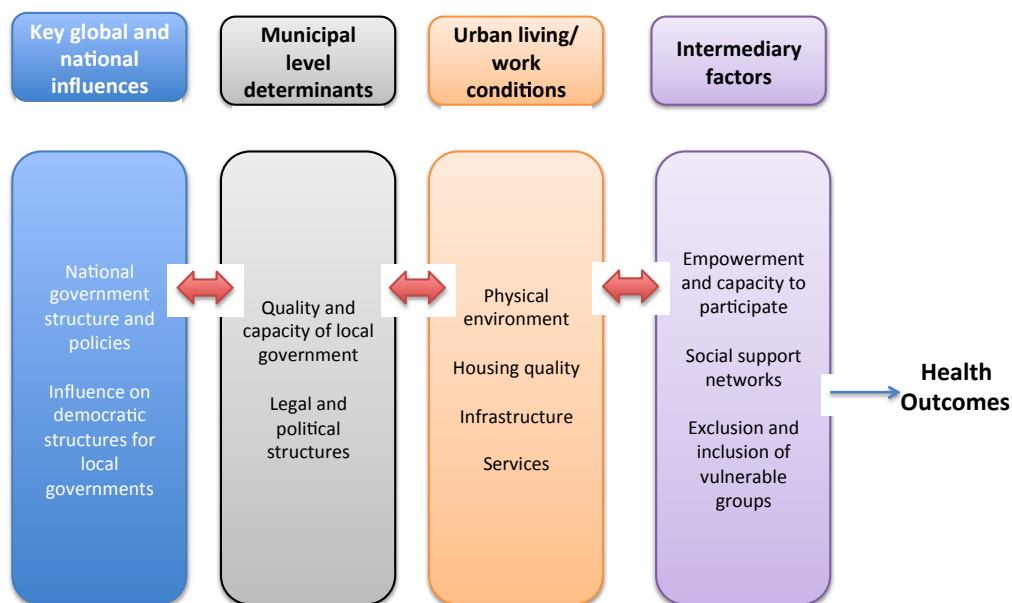


Figure 2. WHO Conceptual Framework: Interventions

Adapting this framework to address MNH-specific challenges that seem particularly relevant for SNL, the findings below are structured to highlight the living conditions of slums as they impact MNH status, access to MNH services (both formal and informal), and the micro-dynamics of families and communities in slums. Acknowledging the most immediate upstream influences, the role of municipal government is also discussed.

A. Living Conditions

Slums lack access to clean water, safe toilets, and functioning waste management systems. A recent meta-analysis found that at an individual level, poor water and sanitation access was associated with higher levels of maternal mortality, and a separate study found that “clean birth practices” in homes and facilities were associated with ‘reduced all-cause, sepsis, and tetanus neonatal deaths’ (Benova, Cumming, & Campbell, 2014; Blencowe et al., 2011). The link between poor water, sanitation, and hygiene (WASH) and maternal and newborn health is strong, reinforcing the fact that hygienic conditions are important for safe childbirth and newborn survival. Therefore WASH issues need to be addressed in any comprehensive slum-based MNH program.

1. Water

Given the often illegal nature of slums, government-managed water lines generally do not exist within slum boundaries. This lack of access forces families to procure water for everyday cooking and washing either outside of the slums or through illegal means (for example, tapped water lines). In India, a 2006 study found that 81.5% of the poorest quintile did not have access to piped water at home. In contrast, 62% of the top four quintiles had access to piped water (Agarwal, 2011). Because they do not have access at home, slum dwellers often buy water elsewhere – frequently at very high costs. In Nairobi, it is estimated that 75% of slum dwellers purchased their water from re-sellers at water kiosks (Candiracci & Syrjanen, 2007). The Indian NGO, Pukar, estimated that in Mumbai slums, families spend 10-25% of their monthly income on water (Anita Patil-Deshmukh, personal interview, February 25, 2016). The high costs and difficulty associated with obtaining water mean that some families transport and use water in ways that are incompatible with cleanliness and hygiene. For example, some people illegally tap water and pump it to hoses that lay above ground that is dirtied with feces and mud (Anita Patil-Deshmukh, personal interview, February 25, 2016). The implications for diarrhea and infant mortality are significant (Gladstone et al., 2010; Ndugwa & Zulu, 2008).

A large proportion of slums are located adjacent to large open drains, dumping grounds, or railway lines. Slum families thus live amidst heaps of garbage, with feces strewn in the lanes or around the slum. Drains are often clogged with stagnant slushy water. Such adversities in the physical environment lead to contamination of water and proliferation of flies, rodents, and mosquitoes, which carry various diseases. Consequently, slum families are prone to diseases associated with exposure to excreta such as diarrhoea, typhoid, and jaundice, as well as to vector-related diseases such as dengue, chikungunya, and leptospirosis (Agarwal, 2011).

2. Toilets

The vast majority of slum dwellers do not have access to either flush toilets or pit latrines. In some countries, less than 30% of the slum population has access to toilets. The barefoot researchers of Pukar found that in one slum in Mumbai, there were more than 500 people for one toilet (Anita Patil-Deshmukh, personal interview, February 25, 2016). Having no or severely limited access to toilet facilities has also been shown to have considerable health and social impacts on women and children, particularly adolescent girls (Nallari, 2015). In a cross-sectional study in Nairobi slums, researchers found that “apart from the child’s age, the only factors which had a significant effect on child morbidity were ethnicity and toilet facility” (Ndugwa & Zulu, 2008). The unique implications of not having access to clean, safe toilets for adolescent girls has been shown in a few very targeted, in-depth studies in India (Nallari, 2015). Inadequate toilet facilities meant that adolescent girls risk harassment, sexual assault, and anxiety when using available facilities (often open land). Lack of sanitation services has also been linked to health conditions, including reproductive tract infections and urinary infections (Nallari, 2015), and some women in the Nallari study suggested it was a contributing factor for their rush to marry off their daughters.

3. Waste Management

The organization and provision of waste management in cities is generally the responsibility of municipal government. However, the informal/illegal nature of many slum settlements may make the government’s formal obligation under local law (as compared to the obligation under human rights norms) to provide these services less clear. Regardless of legal obligation, the depth and breadth of the problem can overwhelm local municipalities and infrastructure. During the case study in Bangladesh, nearly all informants noted that waste management was one of the most difficult issues to address in slums. They explained that municipal governments were incapable of managing waste due to limited funding, space, infrastructure, and technical know-how. In many coastal African cities, the increasing adverse weather events associated with climate change threaten to exacerbate the unhygienic nature of slums. For example, in Lagos, where almost 70% of the city is slum, regular floods sweep raw sewage and refuse inside homes on a consistent basis (Adelekan, 2010). These problems are expected to worsen in the years to come.

4. Air Pollution

The health hazards associated with exposure to air pollution in cities of low- and middle-income countries are magnified for those living in slums or informal settlements. Ubiquitous outdoor pollutants include hydrocarbons from incomplete combustion of fossil fuels and lead from exhaust and other unregulated chemical emissions (Bruce, Perez-Padilla, & Albalak, 2000). Residential exposures from cookstoves in poorly ventilated dwellings, where women and young children are most likely to gather, include carbon monoxide, smoke, and fine soot particles from the combustion of solid fuels (coal, wood, and animal dung) (Smith, Mehta, & Maeusezahl-Feuz, 2004). Cookstove smoke alone contributes to a range of chronic illnesses and acute health impacts such as preterm birth, low birth weight, and acute pneumonia in children under 5, leading to nearly 900,000 deaths annually (World Health Organization, 2005). Exposures for pregnant women are of particular concern because of the heightened susceptibility of the fetus and the developing brain to toxic chemicals – exposures that are known to

cross the placenta (Grandjean & Landrigan, 2014). The magnitude of intellectual disability associated with early exposures to air pollutants is staggering, and disproportionately affects pregnant women and children living in slum conditions in low-income countries, with costly long-term societal consequences (Trasande et al., 2011). Indeed, strong evidence exists that toxic exposures concentrated in the environments of many low-income countries are important contributors to what has been called the global, silent pandemic of neurodevelopmental toxicity.

5. Housing Type and Location

The physical location of slums varies across cities. However, as noted, many are located near unsafe, unsanitary land near open drains, or dumping grounds with heaps of garbage, feces, and stagnant slushy water (Agarwal, 2011; Rashid, 2009). Houses are constructed close together, often sharing walls, cooking spaces, and toilets (if available). Some slums have an average of five or more people living in one room, with women forced to take turns or even alternate days to access basic amenities.

These living conditions have been shown to have negative health implications, especially for pregnant women and children under five. Overcrowding and cramped living quarters could increase exposure to biomass fuel. In a cross-sectional study in an Addis Ababa slum, the odds of acute respiratory infection was 2.96 times greater for children under five whose families used biomass fuel and kerosene, compared to families whose families used cleaner fuel (Sanbata, Asfaw, & Kumie, 2014). In the case of Nairobi, Ye et al. argued that 'poor housing and overcrowding' and 'indoor air pollution' could be causes of the high mortality rate from pneumonia for children under five (Ye et al., 2009).

On the other hand, the tight living quarters may also be a factor pushing women to deliver in facilities. In describing why she went to a BRAC birthing center, one Bangladeshi informant stated "Polluted blood and water will spoil the room after delivery as we have no separate space; we all live in one room with in-laws. We cook and eat in the same place." (Banu & Nasreen, 2011)

6. Crime and Insecurity

A review of the literature and interviews indicate that crime and violence are ubiquitous in some slums, while less relevant in others. Failure of authorities and of technical and program experts to acknowledge violence may stem from lack of knowledge. Some experts interviewed in Nigeria and India suggested that slums were safe for women, as there were 'always people around' – despite the extensive literature stating otherwise. For many slum residents, exposure to organized crime, drugs, and gang violence begins

"Like my neighbour last year...she started having labour pains at about 3 p.m. and she did not seem to have prepared anything.... So at about 12 a.m. I was called and found the woman had already given birth and the blood was trickling like water. This problem took me a long time to look for help because at that time Korogocho was very dangerous and you could not even walk at night. We did all we could and we found a certain health worker who finally helped this lady. Then the next day we took her to a major referral hospital in the city because she had lost so much blood." -Male Discussant (Essendi et al., 2011)

at an early age. A World Bank report on crime and violence in four slums in Dhaka found that 93% of slum residents reported they had been affected by crime and violence in the 12 months prior to the survey, with 33 different types of crime reported (Rashid, 2011). A study of crime in four Nairobi slums found that four out of ten people reported being victims of crime in the last year (Teresia, 2011). For those slums where crime was a part of daily life, the inability to move freely had an impact on quality of life as well as on the ability to seek care when necessary.

Studies from Nairobi, Bangladesh, and India refer to the impact of violence on women's willingness to leave their homes at night during labor or if they felt their newborns were sick (Agarwal & Sangar, 2005; van de Vijver et al., 2015; Blessing Mberu, personal interview, March 2, 2016; Bangladesh Case Study).

B. Micro-Dynamics of Household and Local Community

The household and community dynamics in slums are difficult to discern and arguably more complex and rapidly changing than those in more stable rural areas. The different power structures, support systems, social networks, and changing notions of power and agency among women make understanding the community difficult, but fundamental.

1. Social Support

Much work has been done to show the value of 'diverse social networks' for women (Adams, Nababan, & Manzoor Ahmed Hanifi, 2015). The positive outcomes associated with strong social networks include increased likelihood of delivering with a skilled birth attendant and attending postnatal care (PNC) meetings. The literature on social support systems in slums most relevant to MNH are those associated with the role of friendship between mothers and peer educators, health workers, and/or community health workers (CHWs). A qualitative study of peer educators in a Mumbai slum found that peer educator conceptions of their roles were based upon friendship with the target population (women in slums). Peer educators identified friendship as a necessary prerequisite for women to trust the information provided (Alcock et al., 2009). A positive deviance study in Mumbai slums around child nutrition found that, in addition to ideal feeding practices and information-seeking, mothers of healthy children emphasized the importance of social support. Social support included assistance from family, friends, and neighbors; women perceived a lack of social support when they had distant, busy, or non-existent family (D'Alimonte, Deshmukh, Jayaraman, Chanani, & Humphries, 2015). Within the Manoshi program, women who included Manoshi CHWs in their self-described support network were more likely to deliver with a trained birth attendant, access postnatal care, and give colostrum to their newborn (Adams et al., 2015).

“Strong epidemiological evidence suggests that individuals with diversified social networks who interact with family members, friends, neighbors and fellow workers, are married, or belong to social and religious groups, live longer and healthier lives than those who are less socially embedded and involved.” (Adams et al., 2015)

2. Limited or Different Types of Networks

Despite the positive association found between strong social networks and care-seeking described above, the majority of the literature shows that women in slums often have weak and unreliable networks. The existing networks are often described as fragile, non-existent, and incubators of misconceptions and poor practices – especially around newborn health and family planning (Agarwal, 2009). In a study of newborn care practices in Bangladesh, researchers found that women generally lacked social support in slums. While a traditional birth attendant may be seen as an important source of support, especially to young, first time mothers, they depart soon after delivery, leaving the woman alone with the infant (Moran et al., 2009). A study on the Manoshi program found that women often seek information and advice from landlords, who may also play a role in the case of an emergency (Choudhury et al., 2012). Global experts confirmed these concerns that women in urban slums are vulnerable in ways that they are not when surrounded by family and community in rural areas. They are more easily victimized, and as the population ages, the supposed resulting lack of ‘cultural grounding’ has left younger women without a sense of community, friendship, and support (Jim Phillips, personal interview, January 12, 2016; Blessing Mberu, personal interview, March 2, 2016).

3. Adolescent Girls

Adolescent girls face unique opportunities and barriers in urban slums. Compared to rural areas, urban areas may offer greater mobility, autonomy, and employment opportunities for young women (Matthews, Brookes, Stones, & Hossain, 2005). However, young women in urban slums may be required to balance outside employment, housework, and childcare with little help from extended family. The lack of private sanitation facilities in slums is a particular challenge for women who are menstruating. Young women’s mobility in slums may be constrained by social expectations and fear of violence. High levels of crime, gang feuds, and fears of rape and sexual harassment in Bangladeshi slums can lead families to marry their daughters at young ages; one study found an average age of marriage of 13.5 years (Rashid, 2011). Researchers in Nairobi observed earlier sexual initiation in slums compared to other urban areas and rural areas (Ndugwa, Cleland, Madise, Fotso, & Zulu, 2011).

4. Intimate Partner Violence

Intimate partner violence (IPV) is highly prevalent in slums. In Ethiopia, IPV was described as ‘rampant’; in Bangladesh, of the 153 adolescents interviewed, 89 had experienced ‘regular to occasional’ violence from their husbands (Rashid, 2011); and in Mumbai, a study found that one in seven women experienced IPV during or within six weeks of pregnancy (Das et al., 2013). A small qualitative study of IPV in urban slums of Nepal found violence to be more likely if young women “refused to have sex, gave birth to a girl, or if their husband had alcohol use disorder” (Deuba, Mainali, Alvesson, & Karki, 2016). Identifying a fetus as a female could also lead to violence (Deuba et al., 2016). A report by the Center on Housing Rights and Evictions found that “violence against women in slums is rampant. It is this single issue which emerged as perhaps the strongest cross-cutting theme in COHRE’s study” (Centre on Housing Rights and Evictions (COHRE) Women and Housing Rights Programme, 2008). It also found that during evictions, which in many countries happen frequently, ‘women are also routinely exposed to increased violence within the home, as family tensions rise, and resources become more scarce’ (COHRE Women and Housing Rights Programme, 2013). The lack of home security and unstable or informal

employment makes it difficult for women to leave abusive relationships; additionally, the anonymity of slum communities makes women even more vulnerable to violence (Chant, 2013). Our informants confirmed the struggle to understand and address the well-known reality of IPV within communities that were already suspicious and closed off to outsiders.

5. Power/Agency

Power structures within slums are difficult to navigate. At the slum level, very few slum dwellers have the option to organize and advocate for change; informal and fluid leadership takes the place of more traditional hierarchies; and power dynamics between slum dwellers can dictate issues of access, information, and inclusion. Several studies have shown that slum dwellers have very few options to advocate for change, demand services, or be engaged with local and national level government (Adongo et al., 2014; Rice & Rice, 2009). Often they are economically and politically isolated from the larger city, but even more challenging is the sense of disconnect and limited sense of community from within (Rice & Rice, 2009). Agarwal argues that “slum dwellers are unable to demand services owing to weak community organization and low collective confidence that is known to increase utilization of health services” (Agarwal, Bhanot, & Goindi, 2005). The purported ‘weaker’ sense of community has prevented many slum dwellers from having the confidence to demand better quality of services, improved infrastructure, and inclusion.

Traditional leadership structures are rarely found in slums and informal actors have tremendous power. The traditional chain of command found in rural areas is turned upside down within the slum. In the Bangladesh case study, we found that women must contend with exploitative mastaans (“musclemen” or thugs) to access water, sanitation, electricity, and even health services. The lack of strong government officials or 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 in Bangladesh 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 than in rural areas (Adongo et al., 2014). However, nearly all informants interviewed agreed that taking the time to identify the sources of power and influence was fundamental to any work in slums (Jim Phillips, personal interview, January 12, 2016; Blessing Mberu, personal interview, March 2, 2016).

Within the sub-communities in slums, power dynamics are also at play. In India, the power dynamics between newer migrants and older, more established migrants fostered a furthering of the inequity within the slums (Anita Patil-Deshmukh, personal interview, February 25, 2016). In Mumbai, one informant from Pukar explained that recent migrants are poorer, come from minority groups, have language barriers and are often renters. Whereas – in stark contrast – the older, more established migrants are the landlords, know how to ‘play the game’, and take what they can. Pukar has seen the devastating impact of these dynamics in the physical spaces the new migrants occupy: they are more vulnerable, near flood zones, and thus, they are often the first ones to be bulldozed and lose everything.

There is a growing sense that these uncertainties and constant stresses are leading to mental health issues that often go unaddressed.

As will be discussed later in the report, a trial of a participatory learning and action (PLA) intervention with women's groups in Mumbai slums failed to show a reduction in either neonatal or maternal mortality (contrary to results from a trial of the same intervention in rural India), finding that the women were not willing to strategize collectively to address problems and attributing this to social conditions in slums (Shah More et al., 2012). This finding aligns with literature from the Middle East and other parts of South Asia describing the individualized, non-collective survival strategies used by slum dwellers and those living and working in informal circumstances in cities (Bayat, 2004; Hackenbroch & Hossain, 2012). If, as this literature suggests, the social and economic dynamics of a slum create conditions more likely to support quiet, individualized strategizing for survival than mass, community mobilization to demand/create improved access to resources, then assumptions underlying MNH program strategies will need to be re-thought for these urban settings.

6. Trust

The fundamental issue of trust was discussed in almost every interview with those working closely with women in communities. There is an inherent distrust of government, NGOs, and other perceived 'outsiders' within slums. The precarious nature of slum living and women's attendant vulnerability to eviction, exploitation by informal power brokers, catastrophic health expenses, and high levels of stress contribute to mistrust. As one global expert noted, the women are not the only ones who don't trust; the community and government at large don't trust outsiders – so it takes a lot of time to get them to trust anything being said/done (Robert Clay, personal interview, February 19, 2016; Anita Patil-Deshmukh, personal interview, February 25, 2016). An interesting article documenting lessons learned through conducting vaccine trials in Kolkata confirmed the need to take time to create trusting and respectful relationships with communities – a move that added a significant amount of time to the study, but contributed to the success of the intervention (Mahapatra et al., 2016).

7. Role of Municipal Government

The role of municipalities in managing slum health and development is an important upstream determinant. In most cities, slum health falls under the authority of municipal government. However, for many slums, the lack of legal recognition has resulted in an absence of basic services (Vlahov et al., 2007). An overwhelming sentiment that came through in the interviews with our key informants was that the vast majority of municipal governments are not capable of managing the diverse needs of the slum populations – both health and non-health related issues.

The case study in Bangladesh provided a very clear example of the challenges of dysfunctional and ill-equipped government managing slum wellbeing. In Bangladesh urban health falls between two separate ministries: the Ministry of Health and Family Welfare (MOHFW) and the Ministry of Local Government, Rural Development and Cooperatives (MOLGRD&C). Slums are often described as a 'no-man's land' that falls under the mandate of an under-funded MOLGRD&C lacking the necessary technical capacity and physical manpower. The MOHFW appears to have a clear advantage in potential capacity to manage urban health, given their responsibility for the health of the remainder of the

country. However, urban health was described as a pariah of sorts to the MOHFW, who do not want the obligation. Several informants during the case study mentioned that it was an open understanding that the MOHFW does not have any interest in taking on urban health. This lack of clarity between ministries has been a part of the urban health dialogue for years and has resulted in stalled progress.

The Bangladesh example seems extreme, but the notion of being a ‘pariah’ and ‘unwanted problem’ came up in many interviews, indicating that the complex and inter-connected nature of slum health is not a problem governments want or are equipped to handle. India may be an exception in terms of political recognition of urban health, as the National Rural Health Mission (the flagship health program of the central government) established in 2005 was converted in 2013 to the National Health Mission, with a sub-mission for urban health (National Urban Health Mission or NUHM) dedicated to the following vision:

“NUHM envisages to meet health care needs of the urban population with the focus on urban poor, by making available to them essential primary health care services and reducing their out of pocket expenses for treatment. This will be achieved by strengthening the existing health care service delivery system, targeting the people living in slums and converging with various schemes relating to wider determinants of health like drinking water, sanitation, school education, etc. implemented by the Ministries of Urban Development, Housing & Urban Poverty Alleviation, Human Resource Development and Women & Child Development.”
(<http://nrhm.gov.in/nhm/nuhm.html>)

IX. The MNH Funding, Policy, and Program Landscape

A. Donors

International funding for MNH programs in urban slums is scattered among a variety of donors and complicated by the lack of clear urban funding strategies, either within donor agencies or within a country's health sector. A review of the literature identified major donors of recent MNH programs and investigated whether these organizations followed specific objectives when working in urban development and urban health. Overall, major international organizations funding MNH programs or trials in urban slums include the Canadian International Development Agency (CIDA), Comic Relief, the Danish International Development Agency (DANIDA), the Bill and Melinda Gates Foundation (BMGF), the United Nations Population Fund (UNFPA), the United States Agency for International Development (USAID), the Wellcome Trust, and the World Bank. In addition, national governments and local non-profits often contribute substantially to urban programs. For example, the Indian non-profit ICICI Foundation for Inclusive Growth was a major donor of the City Initiative for Newborn Health program (Fernandez & Osrin, 2006). Understanding international donors' broader objectives and strategic vision in urban development and urban health is aided by published documents describing urban funding guidelines and strategies. When these documents were not available, it was more difficult to situate current funding activities within a larger framework and to anticipate future funding priorities.

International donors may be divided into three categories: those with published urban strategies, those with structured urban initiatives (but no strategies), and those lacking an identifiable urban policy. While urban policies are becoming more common, they differ in levels of complexity and the degree to which they include slum areas.

- No one donor has clearly prioritized urban health or urban MNH. However, the in-country donor offices are more likely to see the need for investing in the health of the urban poor.
- In six of the seven SNL countries, we found no urban health policy that was actively being implemented (the exception being India, where the National Health Mission now explicitly includes urban settings).
- There is no coordinated advocacy effort at global level or within the SNL countries to comprehensively address urban MNH – or urban health generally – at the policy or program level.

USAID: *Sustainable Service Delivery in an Increasingly Urbanized World* (2013) outlines USAID's recent guidelines for implementing urban programs. Stated principles include "ensuring political and financial sustainability, advancing accountable, pro-poor service delivery models, fostering market orientation and public-private collaboration, and supporting municipal resilience" (Donovan & Dobberstein, 2013). Prior to this publication, USAID funded the Indore Urban Health Programme (India), the Health of the Urban Poor Project (India), and a community-based tuberculosis treatment program in a Brazilian slum

(Agarwal et al., 2008; Cavalcante et al., 2007; Gopinath & Raichowdhury, 2012). However, interviews with MNH specialists based in Washington, DC and informal communication with USAID staff made clear that, at a global level, USAID is not thinking about urban-specific MNH issues. organize

World Bank: In 2013, the World Bank launched the Inclusive Cities approach. An approach paper for Bank staff emphasizes interventions that target spatial inclusion (land, infrastructure), social inclusion (rights, discrimination), and economic inclusion (employment opportunities) (The World Bank, 2015). Along with the state government, the World Bank supported the Andhra Pradesh Urban Slum Health Care Project, which intended to improve health care access and health systems within slums. As with USAID, the World Bank's global urban approach is quite recent and follows over a decade of scattered urban-focused projects in different countries, but not driven by any coherent agency-wide policy.

UNFPA: In its *Strategic Plan 2014-2017*, UNFPA highlights as an emerging focus for the organization the impact of urbanization and migration on the sexual and reproductive health needs of women, adolescents, and youth (United Nations Population Fund, n.d.). Recently, UNFPA supported the Demand-Based Reproductive Health Commodity Project (DBRHCP) explicitly targeting both rural and urban Bangladesh, which sought to increase adolescents' sexual and reproductive health knowledge and health-seeking behavior (Kabir, Saha, & Gazi, 2015).

WHO: Most recently, the WHO and UN Habitat published the *Global Report on Urban Health*, bringing attention to inequities within urban areas, opportunities for action, and cities' roles in pursuing the Sustainable Development Goals (SDGs) (Rosenberg et al., 2016).

Comic Relief: While lacking a strategic policy, Comic Relief includes "Slum dwellers have an improved quality of life" as one of their organization's goals, making it one of the few donors to include a permanent objective about slums (Comic Relief, 2016). Comic Relief funds the Partnership for Maternal, Newborn and Child Health (PAMANECH) program in two Nairobi slums, which engages private, non-profit providers in slums to increase healthcare access and decrease financial barriers to care (Bakibinga et al., 2014).

Gates Foundation: While maternal, newborn, and child health is a stated priority of the Bill and Melinda Gates Foundation, the organization's MNH funding has not focused on urban areas. Beginning in 2007, the Gates Foundation provided substantial funding to design, launch, and scale the Manoshi program, a BRAC-administered program in Bangladesh slums integrating birthing centers, a strengthened referral system, and local community health workers (Roy et al., n.d.). However, Gates funding to Manoshi has ended, and Gates has consolidated funding in its focus geographies (which does not include Bangladesh). Going forward, the organization plans to continue their geographic focus for MNH funding in Ethiopia, northern Nigeria, and the Indian states of Bihar and Uttar Pradesh. Outside of MNH, Gates has funded innovative urban initiatives. In 2007, an Urban Poverty Special Initiative was launched. In 2010, the Gates Foundation announced a five-year, \$27.2 million special focus on urban poverty in five African cities: Cairo (Egypt), Luanda (Angola), Lilongwe (Malawi), Monrovia (Liberia), and Harare (Zimbabwe). The 2010 grants emphasized an innovative approach by encouraging collaboration

between local governments and civil society organizations. Despite this foray into urban programming, the Gates Foundation does not appear to be guided by a specific urban policy.

Organizations seeking funding for MNH programs in urban areas, specifically slums, may be frustrated by the lack of dedicated institutional focus for this issue. As demonstrated above, several donors have recently placed greater emphasis upon urban areas and urban populations and highlighted the inequities that exist within cities. However, with the exception of UNFPA, few donors or UN agencies draw attention to the intersection between urban spaces and MNH. Instead, ‘urban populations’ and ‘maternal newborn health’ are generally presented independently of each other. This pattern is also visible in the SDGs. While they include maternal, newborn and child mortality (SDG 3), and urban areas (SDG 11), the topics are not integrated into, for example, maternal mortality *within* urban areas. Ignoring this intersection also ignores the unique urban characteristics that impact maternal and newborn health. Furthermore, the focus on reducing inequalities (SDG 10) does not highlight intra-urban inequality. The absence of a unified focus on MNH health in urban slums means that organizations must frame proposals more creatively to convince donors to work across these currently disconnected objectives.

Beyond individual donor priorities, several global features of the donor landscape are important to note. In recent years, public-private partnerships (PPPs) have increased in popularity and acceptance, including their mention in SDG 17 (“Revitalize the global partnership for sustainable development”, which includes reference to PPPs). Examples of public-private partnerships for health include the sponsorship of Smiling Sun clinics in Bangladesh by American Tobacco, Union Oil Company of California (UNOCAL), and Standard Chartered Bank, industries with a significant presence in the country (Ahmed et al., 2006). As described above, the PAMANECH in Kenya focuses on strengthening private non-profit providers within slums (Bakibinga et al., 2014).

Secondly, coordination of governmental, non-governmental, and private donors in urban areas is rare, leading to repetition and gaps in services (Agarwal & Sangar, 2005). Finally, the literature review suggested that the majority of recent funding for urban MNH programs focuses on a select group of countries, favoring Bangladesh, Kenya, and India.

B. Policy Environment

Urban health policies varied across the seven SNL countries examined in this paper. Bangladesh, India, Ethiopia, and most recently Nepal each have some degree of explicit urban policies or strategies in place to address the needs of the urban poor. Conversely, Malawi, Uganda, and Nigeria are all lacking explicitly stated policies or strategies to recognize and address the needs of the urban poor. For the four countries with policies, the approaches were often ambitious and varied from improving quality of care to increasing access to services and establishing implementing urban authorities, though the execution of these policies was often limited or questionable, according to informants.

India has a unique and specifically identified National Urban Health Mission (NUHM) that was established to improve the health status of the urban population, particularly the poor and other disadvantaged urban populations. The Mission seeks to address the specific health needs of urban poor

living in listed and unlisted slums, including vulnerable urban populations (homeless, rag-pickers, street children, rickshaw pullers, construction workers, sex workers, and other temporary migrants) (Government of India Ministry of Health and Family Welfare, 2013). This entails collaboration and coordination with existing health actors, namely the National Rural Health Mission (to prevent duplication), non-governmental organizations (who provide a wide-range of community-based health services), and the private sector (which provides a significant portion of primary care services in urban areas). Though the funding is channeled through state health societies, the impact of the NUHM varies from city to city, in part due to implementation variations.

Bangladesh The Strategic Plan for Health, Population and Nutrition Sector Development Program (HPNSDP) 2011-2016 was developed by the Planning Wing of the Ministry of Health and Family Welfare of the Government of the People's Republic of Bangladesh. The Plan recognizes that urban health coverage is inadequate and insufficient, and that there remains a debate regarding which ministry could and should take on the responsibility of implementation (Government of the People's Republic of Bangladesh Ministry of Health and Family Welfare Planning Wing, 2011).

Ethiopia The Ethiopian Health Sector Development Programme IV (HSDP IV) (2010/11-2014/15) does not include an urban health policy per se, but the Federal Ministry of Health does have an urban health initiative: the Urban Health Extension Programme. The HSDP IV was designed to increase access to primary care services for all Ethiopians. Universal health care is the government's central approach to poverty eradication, and the Health Service Extension Programme (HSEP) is the mechanism for achieving that goal. Though the national health policy does not include an urban health policy, it does recognize the urban poor (as well as pastoralists) among vulnerable populations needing special attention.

Nepal currently has a National Urban Health Policy 2015 – though how to operationalize and finance the policy is unclear. The goals are ambitious, including providing free healthcare for all, preparing a workforce for the provision of said free health care, and developing management systems at policy and implementation levels. The National Health Strategy 2017 (unofficial English translation of the original posted on the Government of Nepal, Ministry of Health and Population website) indicates that urban health problems have been inadequately prioritized. The strategy also recognizes that there is an urgent need to address the geographic imbalance in achieving health indicators.

Malawi does not have an urban health or an urban MNH policy. The three main MNH strategies of the National Sexual and Reproductive Health and Rights Policy of 2009 are: 1) to improve availability of and access to maternal and neonatal care to increase utilization of services; 2) to improve quality of skilled maternal and neonatal care at all levels of care to reduce case fatality rates, and 3) to integrate newborn care as a standard component of basic emergency obstetric care, which all staff providing obstetric care shall be empowered to provide (Republic of Malawi Ministry of Health, n.d.). Institutional arrangements for the implementation of the policy include collaboration with the Ministry of Local Government and Rural Development, but not with the Ministry of Lands, Housing and Urban Development, which focuses mainly on structural urban development. The Malawi Growth and Development Strategy II (2016-2020) includes urban development with the goal of creating “a sustainable, economically and socially

integrated urbanizing system” (Government of Malawi, n.d.). It provides no strategy or initiative for addressing the growing problems of urbanization visible through poverty in slums.

Nigeria The 2014 National Report of the Federal Ministry of Lands, Housing and Urban Development speaks to health but only through wellbeing: “the goal of the National Urban Development Policy is to promote a dynamic system of urban settlements, which fosters sustainable economic growth, promotes efficient urban and regional planning and development, as well as ensures improved standard of living and wellbeing of all Nigerians” (Federal Republic of Nigeria Federal Ministry of Lands, Housing and Urban Development, 2014). Women’s health in urban centers is therefore not an explicit goal of the urban development agenda, as expressed by that ministry.

Uganda lacks policy and in place has established campaigns. The government launched a National Development Plan that included a National Urban Campaign. It is not clear what year this initiative was launched or what it includes, but with 60% of Kampala’s poor living in slums, it would be an important document to obtain and review (Brown, 2014). The 2013 National Urban Policy recognizes land tenure and lack of financial resources as impediments to urban development. To address this, the policy proposes to create housing funds for the urban poor, identify land for housing programs, and attract private sector investments (“Uganda National Urban Policy: Draft 1,” n.d.).

C. Programs

For this scoping, we conducted a review of ongoing MNH programs working in urban slums. There are many small-scale pilot projects funded by individuals, or addressing only specific technical components of an MNH program, or small-scale social entrepreneur initiatives that were not included in our analysis. A listing of the primary programs we have identified is available in Annex V. Perhaps the most notable finding is how few programs of any significant scale there are, given the global slum population of nearly one billion people. Below we describe briefly some features of the programs identified, with a box devoted to BRAC’s Manoshi project, an MNH program in slums of seven cities in Bangladesh covering 2.7 million people, which is by far the best documented MNH urban slum program in the peer-reviewed literature.

Several key patterns may be highlighted. First, among the 11 identified programs, ten are based in Bangladesh, India, or Kenya. Only one program (the Mobile Alliance for Maternal Action, or MAMA) also carried out its initiative in South Africa and Nigeria. The preponderance of contextual research on urban slums also emerged from Bangladesh, India, and Kenya.

Most of the MNH programs in urban slums focus on either direct health services or health systems strengthening. While health services have been incorporated into almost all programs, health clinics and urban health centers are the main focus of the Andhra Pradesh Urban Slum Health Care Project in India, the Gonoshasthya Kendra Urban Community Health Programme in Bangladesh, Care for Kenya, and the Reproductive and Sexual Health Program of the Bangladesh Women’s Health Coalition. It appears that both local governments and non-profit organizations have established new health centers to serve slum populations, a phenomenon that adds to the complexity of the web of health providers in urban settings. In contrast, other programs focused on building stronger referral systems (e.g.,

Manoshi, which also created its own network of slum-based delivery centers), adapting existing rural community health worker cadres to an urban setting (India's Accredited Social Health Activists (ASHAs) and Manoshi's urban Sasthya Shebika (SS) and Shasthya Kormi (SK)), and training private not-for-profit health providers (Partnership for Maternal, Newborn and Child Health Project). The MAMA program was unique in focusing on health education by delivering mobile text and voice messages to expectant and new mothers.

Programs also differed in their duration. In general, programs funded by large international donors (DFID, Gates Foundation, etc.) were time-limited, with an average length of four years. In contrast, programs implemented by local governments or non-profits did not have a stated end date. These differences are not surprising, as they reflect the current reality of short-term donor funding. An exception to this pattern is Care for Kenya, a seemingly permanent health center in the Kibera slum financed by private donations.

Two MNH programs strongly relied upon mobile technology. The MAMA program used SMS and voice messaging to deliver health messages to mothers' mobile phones. The Manoshi program has harnessed mobile phones for referrals, record keeping, and monitoring. Multiple evaluations of this approach are available for the MAMA program. Research is forthcoming for the mobile component of Manoshi.

One concern raised by several of our informants is that very few MNH programs addressed the specific needs of adolescent girls, despite the fact that roughly 16 million girls aged 15 to 19 give birth in LMICs each year, and complications during pregnancy and childbirth remain the second cause of death for adolescent girls globally (World Health Organization, 2014). The heightened vulnerability of their newborns has also been found in studies in both HICs and LMICs. Adolescent girls are at an increased risk of preterm birth compared with women aged 20 to 35 (Ekwo & Moawad, 2000; Hediger, Scholl, Schall, & Krueger, 1997; Khashan, Baker, & Kenny, 2010).

Our further search for adolescent-specific programming showed that attempts to address the unique challenges facing pregnant adolescent girls seem to fall under educational programs, including several that engaged adolescent girls living in slums with reproductive and sexual health education. Educational programs, often focusing on menstrual hygiene, family planning, and STIs/HIV, were commonly paired with livelihood and empowerment activities. Girls' agency and resilience was often strengthened through peer groups; the Girls Gaining Ground program in India created safe spaces where adolescent girls in the community could socialize and relax (Baker, Nakagami, Noronha, Potaski, & Puckart, 2009). Programs differed in targeting only unmarried girls or both married and unmarried girls. Several boasted unique recruitment strategies. In Ethiopia, the Biruh Tesfa program successfully reached out-of-school, female domestic servants through a door-to-door recruiting strategy with female mentors (Erulkar, Ferede, Girma, & Ambelu, 2013). Additional programs targeting adolescent girls in urban slums include the Demand-Based Reproductive Health Commodity Project (DBRHCP) in Bangladesh, the Empowerment and Livelihood for Adolescents program in Uganda, the Tigri model in India, and the ongoing Adolescent Girls Initiative-Kenya program (Austrian et al., 2016; Bandiera, Buehren, Burgess, Goldstein, & Gulesci, 2013; Kabir et al., 2015; Swaasthya & International Center for Research on Women

(ICRW), n.d.). Evaluations of these programs document increases in participants' health knowledge from baseline to end line (Bandiera et al., 2013; Kabir et al., 2015; Shetty & Kowli, 2001).

Another programming gap that emerged from the scoping is that, despite the ubiquity of private, for-profit providers in and near slums, few MNH programs have attempted to include or integrate these providers. Some efforts, such as including private providers in participatory consultations, do not involve wide scale coordination (UNICEF & Save the Children, 2012). Others depend upon the goodwill of individual providers; NGOs and CBOs in India have been reported to work with "socially committed private doctors" who provide healthcare in slums in return for transportation reimbursement and user fees from clients (Agarwal et al., 2008). These programs may have a limited impact on the root causes of insufficient access to quality healthcare for slum residents.

Larger-scale (not slum-specific) efforts to engage the private sector include voucher programs and social franchising. Voucher programs have been implemented in India and Kenya. In 2006, the Kenyan government piloted a reproductive health voucher program for low-income women in two Nairobi slums. The voucher included antenatal care, delivery in a facility, and postnatal care. Women who purchased a voucher for a small fee could redeem it in a public, private, or faith-based facility. Only accredited facilities were able to participate, thus allowing the government to monitor providers and direct women to appropriate facilities (Amendah et al., 2013). In India, the Chiranjeevi and Balsakhal schemes reimbursed private providers and government facilities for maternal and newborn care. The Chiranjeevi program reimbursed gynecologists for delivery services and transportation to a government facility (if needed). The Balsakhal scheme engaged private pediatricians to visit newborns within two days of birth and provide "early neonatal care, immunization, and feeding advice" (UNICEF & Save the Children, 2012). Finally, the social franchise model requires an agency to gather separate private providers together under one common franchise name. Providers benefit from subsidized commodities but also agree to monitoring visits, trainings, and clinical and business protocols. A recent review noted 64 social franchise operations around the world, serving at least 27,652,449 people (Viswanathan & Seefeld, 2015).

While these programs, which are not specific to slums, are promising for poor families wherever they live, the sheer scale of private, for-profit providers in urban slums and the often ambiguous relationship with the formal health system created by the slum's informal or illegal status, calls for additional innovative, inclusionary programming based on more accurate data than currently available (Montagu & Goodman, 2016). A very recent *Lancet* series on "universal health coverage: markets, profit and the public good" (<http://www.thelancet.com/series/private-sector-health>), while highlighting the dearth of evidence, frameworks, and useful metrics for understanding the operation of the very diverse private sector in LMICs, argued strongly that any equity-oriented approach to private sector provision needs to be framed and understood in the context of the health system as a whole (McPake & Hanson, 2016). This will surely also be true for efforts to extend MNH services to the urban poor through mobilization of the private sector.

BRAC's Manoshi Program

Manoshi is an MNH program in slums of seven cities in Bangladesh, providing care through a cadre of community health workers who do home visits and small delivery centers within slums, staffed by trained TBAs, but linked through an actively managed referral system to referral hospitals (both contracted private hospitals and large, public tertiary hospitals). The project has been quite successful in assessing the context, adapting to the changing aspirations of slum dwellers, and documenting these decisions and processes (Roy, Marcil, Chowdhury, Afsana, & Perry, 2012).

Acknowledging that BRAC, as the largest NGO in the world, has unique characteristics (such as its own elaborate training and management systems) that limit Manoshi's generalizability, we have highlighted below important program components that have been tested and adapted over the last few years that are useful for the global audience.

- The Manoshi Project has documented its approach, reflecting on the benefits and limitations of **engaging local leaders**, creating Maternal, Neonatal, and Child Health Committees for populations of approximately 10,000 people, responding to advice from the community, **social mapping** of the community, and **census-taking**. Community engagement allowed the project to understand community opinion and organization, and so to make changes to the program, as their initial assumptions about the political dynamics of community participation proved incorrect (Marcil et al., 2016).
- A pilot project explored the possibility of **using mobile phones** for information collection by CHWs. Following the six-month pilot, the mobiles were found to reduce data collection and entry time, and to simplify risk assessment and monitoring of project staff. The system was found to be efficient, usable, acceptable, and cost-effective (Alam, Khanam, & Khan, 2010).
- An evaluation of the Manoshi **referral system** found that women in BRAC delivery centers were less likely to delay seeking care compared to women who delivered at home. Women who received financial assistance from Manoshi "took significantly less time implementing the decision" (Banu et al., 2010).
- A qualitative evaluation of the Manoshi **birthing huts** (later called "delivery centers") revealed that the community desired full health services in the facility, expected physicians to attend the births, had a perception that supplies and services would not be available, and feared that it would cost money.
- CHWs (Shasthya Shebika), although central to the operation of the Manoshi program, were not pleased with remuneration rates and disliked working for the birthing huts (Khan & Ahmed, 2009). Especially given the competing income-generating opportunities that exist for women in the urban setting, retention of CHWs was a huge challenge for the program.
- In an evaluation of a **behavior change community program** associated with Manoshi, exposure to behavior change communication (BCC) was associated with higher health knowledge scores. However, the importance of fully understanding and working within the context of the women the program is trying to reach was highlighted. Barriers included the following: "posters or stickers with human pictures were not allowed in any Muslim's prayer room; women felt ashamed to keep or hang stickers showing images of prolapse; [and] slum houses made of tin and bamboo were not suitable to hang posters or stickers, and house owners did not allow them to hang them" (Sarker, Mridha, Dasgupta, Islam, & Reichenbach, 2012). Over time, responding to this client feedback significantly changed the imagery and tone used in their behavior change materials.

There are other challenges to the Manoshi model that are important to acknowledge. The improved accessibility of hospitals facilitated by the program (and reinforced by a protocol for TBAs that encouraged early referral from the slum-based delivery centers/birthing huts) led to high rates of unnecessary cesarean section. BRAC's response – to begin building a network of upgraded delivery centers staffed by midwives who can better manage both normal deliveries and complications – is logical, but not necessarily within the capacity of most NGOs.

X. Lessons from Existing Programs and Research Initiatives

This scoping was designed to get a sense of the range of existing MNH programs in urban slums, particularly in SNL countries. Looking across these programs and drawing on findings from the few slum-based research studies related to MNH that are in the literature, we can articulate some provisional insights about programming to improve MNH for the urban poor.

We divide the discussion into sections on intervention strategies (including CHWs, women's groups, financing interventions, and social/spatial mapping) and implementation strategies (how to put the intervention strategies into place). We do this to emphasize the important insight from implementation science about the need for both effective interventions and effective implementation strategies in order to produce meaningful social change (Fixsen, Naoom, Blase, Friedman, & Wallace, 2005). The analysis of the existing evidence on these two critical dimensions of effective programming for MNH in urban slums reveals significant gaps in our understanding. Section XI on Implementation Challenges analyzes key aspects of urban slum programming that will need increased attention. Section XII on Recommendations further addresses these gaps and challenges in describing possible ways forward for SNL/SC.

A. Intervention Strategies

In an effort to improve the MNH outcomes in slums, NGOs and research institutions have adapted several of the more typical 'rural model' approaches as well as trying some new interventions. Below are some examples of what has been tried, with varying levels of success.

1. Community Health Workers

We found several attempts to adapt rural CHW models to the urban context, including BRAC's SS/SK in Bangladesh, the anganwadi worker (AWW) of the ICDS program in India, and the community health officer (CHO) of the urban Community-based Health Planning and Services (CHPS) program in Ghana. Not all informants or the literature agreed that utilizing CHWs was the best strategy to reach women in slums. However, if a CHW program is being considered, a few key lessons emerged from these examples:

- "Volunteerism is dead": Women and their families move to the slums to make money, for better opportunities, and will generally not volunteer for programs given the opportunity costs. Slums are very expensive to survive in – everything costs money: water, rent, food, school, transport, etc. Asking women to 'work' during the day without wages was considered an ineffective approach (Kaosar Afsana, personal interview, December 9, 2015; Anita Patil-Deshmukh, personal interview, February 25, 2016; Bangladesh Case Study; Adongo et al., 2014). It is unrealistic for policymakers or program designers to expect women in slums to be volunteer CHWs, as they often cannot survive without cash incomes.
- Community engagement/buy-in: The definition and sense of community and of leadership structures and power dynamics is different and more complicated in slums. Yet, the support and buy-in of the community remains fundamental to any CHW program. Studies found that engaging the community and generating its support takes time and energy (more than

expected) but is a fundamental component of sustainably gaining entry into women's lives (Adongo et al., 2014; Mahapatra et al., 2016; Roy et al., n.d.).

- Expanding skills/scope: As noted earlier, the changing epidemiology of the slums offers an opportunity for CHWs to meet more than just MNH needs of women (blood pressure is an example). Generating demand for the CHW through understanding what information people want and adding MNH to that was a successful tactic in Ghana (Adongo et al., 2014).
- Supervision with flexibility: Given the transient and rapidly changing nature of the slums, CHW programs have to have strong support and supervision networks that are able to respond to changes and adapt strategies quickly. If women are working outside of the home during the day, CHWs have to adjust hours, where safe/feasible (Adongo et al., 2014; Roy et al., n.d.).
- Adapting strategies well-known to communities: Well-known and understood CHW models, such as AWWs in India or SS and SK in Bangladesh, have been used to aid research/data collection efforts as well as implement health programs successfully. The role of these workers, often fundamental to the health system in rural areas, was understood by the slum communities in which they worked. When combined with broader systems strategies to support their efforts, these cadres have seen positive change, such as improved immunization rates with AWWs in India (Ghei, Agarwal, Subramanyam, & Subramanian, 2010; Agarwal et al. 2008).
- Strengthening or creating social networks for women: Social networks can have positive impact on behavior change and program support. In many slums women do not have the traditional, trusted social networks that exist in rural villages. Thus, CHWs and those working with women in slums became part of the network in many cases (Adams et al., 2015; D'Alimonte et al., 2015), and oftentimes contributed to the success of the program or intervention. These relationships take time, consistency, and trust, but can have positive impact on care-seeking behavior, infant feeding practices, and other family health behaviors (Adams et al., 2015; Agarwal et al. 2008).

2. Women's Groups

The City Initiative for Newborn Health (CINH) was a cluster randomized controlled trial (RCT) in Mumbai slums and was one of a series of trials in different countries testing the so-called "women's group" intervention for reducing newborn mortality (Prost et al., 2013). In this intervention, women's groups are established to engage in a participatory learning and action process, to discuss perinatal health concerns, and to take group action. Unlike the Ekjut trial of women's groups in rural areas of Jharkand and Orissa, India which demonstrated substantial reduction in newborn mortality (Tripathy et al., 2010), in the CINH trial in Mumbai slums, the intervention had no impact on newborn mortality (Shah More et al., 2012). While women were initially enthusiastic about participating and learning, they "were less successful in undertaking collective action such as negotiations with civic authorities for more amenities." For purposes of this report, among the most important findings was that "[g]roup members helped others individually but balked at collective strategizing." The researchers speculated that the failure of this approach to reduce the NMR may be due to social conditions within the slum or larger sociopolitical issues (Shah More et al., 2012).

This has important implications for SNL in thinking about interventions to address newborn survival in urban settings. Outside of health, there is a growing literature on the ways in which people living in

informal circumstances strategize individually – not collectively – to skirt the law in order to survive, for example illegally tapping electric lines for power, or selling snacks on the street. The sociologist Asef Bayat has called this the “quiet encroachment of the ordinary”: “non-collective but prolonged, direct action by individuals and families to acquire the basic necessities of life...in a quiet and unassuming yet illegal fashion” (Bayat, 2004). Whereas community health interventions in rural areas often build on – and simply assume – a level of social organization and networks in which collective action or family/community ties support individual health, the same cannot be assumed to operate in urban areas, and particularly in informal settlements.

3. Financing Interventions

Various innovative financial models have been employed to increase service uptake and improve health outcomes of women and children in the slums. The programs had varying levels of success. Three recent illustrative examples specific to MNCH are:

- In India, the Janani Suraksha Yojana (**JSY cash assistance program**) has been written about extensively, but for the purpose of this scoping it was found that in slums the program did not always lead to uptake in maternal health services (Angadi, Davalgi, & Raghavendra, 2016; Santra, Lahiri, Biswas, & Shrivastava, 2015). A lack of knowledge of the program and eligibility were among several factors noted in these studies as potential reasons for limited use.
- In Kenya, a **voucher program** began in 2006. The vouchers covered antenatal care, facility delivery, and a postnatal visit, but only at pre-approved facilities, allowing programs to guide women towards facilities with appropriate care (Amendah et al., 2013). For those who did buy the voucher, facility delivery increased, but unfortunately those who did not buy the voucher were less likely to deliver in a ‘good facility’ (Amendah et al., 2013). A problem with the voucher programs in Kenya, as noted by APHRC researchers, is that they do not take into account the realities of the slums. If a woman goes into labor in the middle of the night, ‘she will deliver with that voucher next to her – in her home’ (Blessing Mberu, personal interview, March 2, 2016). Finding safe and cost-effective methods for women to travel at night would be more appropriate for slum dwellers than simply providing vouchers.
- In South Africa, a study examined the relationship between a **cash transfer program for children** and stunting, including urban and peri-urban areas. The study found no effect of cash transfer receipt on childhood stunting. It was hypothesized that this lack of association could be due to the high price of food, failure to adjust the level of payment for inflation, and household dependence on the payment as its only source of income (Zembe-Mkabile, Ramokolo, Sanders, Jackson, & Doherty, 2015).

4. Social and Spatial Mapping

Spatial mapping of slums has been used in several MNH programs to get a detailed understanding of where women’s homes, community structures, and both public and private facilities are located (Kaosar Afsana, personal interview, December 9, 2015; Anita Patil-Deshmukh, personal interview, February 25, 2016). This context has proven crucial to program planning and implementation. Mapping in the Manoshi program resulted in ‘noting geographic obstacles, decreasing delays in case of emergencies, and increasing community engagement for the project as a whole’ (Roy et al., n.d.).

We include mapping here as an intervention because there is a growing evidence base in the urban literature on the use of participatory mapping and self-enumeration as itself a strategy to mobilize and empower slum-based communities. This is a methodology and intervention pioneered in India by the Alliance of Shack/Slum Dwellers International (SDI), SPARC, and the National Slum Dwellers Federation in Mumbai, and has been documented in multiple countries where organizations affiliated with SDI organize in slums (Patel, Baptist, & D’Cruz, 2012; Appadurai, 2012).

B. Implementation Strategies

Given the lack of in-depth studies on what actually works when implementing programs in slums, a comprehensive list of successful strategies was difficult to generate. However, a review of studies and/or evaluations of programs that were successful in slum settings – albeit small-scale, contextually specific pilot projects – did generate a few lessons about successful implementation:

- Flexibility and the ability to adapt quickly: Several informants from Ethiopia, Bangladesh, India, and Nigeria, as well as Washington, D.C.-based SNL staff, mentioned the importance of giving programs and NGOs the flexibility to think outside of traditional approaches (for example, to engage the private sector in a partnership manner), and to be able to quickly assess changes as they take place in the slum and make adjustments to the design.
 - In Bangladesh’s Manoshi project, the ability to keep a pulse on community members and adjust to their changing needs was considered a core component of their successful programming (Roy et al., n.d.).
 - One SNL Ethiopia staff member said that in previous projects working with HIV+ populations, the ability to shift hours of private facilities to meet the needs of their clients was one way of adjusting the approach that was successful (Yunis Musema, personal interview, January 25, 2016).
 - In Nigeria, the government turned over several vaccine projects to the private sector when it became clear it could not itself meet the needs of the urban poor (Abimbola Williams, personal interview, February 26, 2016).
- Be present and prepared for the long-term investment: Both researchers and program implementers interviewed for this scoping stressed the need to spend the time necessary to gain and build trust (often spoken as ‘twice as long’ as in rural areas) and to ensure that the community is consistently engaged and feels that what is being done is being done with and for them, rather than to them.
 - ‘Don’t paratroop in on communities’: Pukar has been training barefoot researchers for years in Mumbai, India, and they attribute much of their success to their ability to identify, train, and support local youth who live in the slums of interest.
 - Community engagement and follow-through: A recent paper outlined the steps BRAC took in Manoshi to initiate the project and invest in the community, highlighting the need to engage the community, begin providing services quickly, use various media outlets to inform the community of the project, and follow-through on the move from a pilot to scaling up (Marcil et al., 2016).

- Take time to learn about the communities: APHRC has been working in the slums of Nairobi (as well as cities throughout SSA) for decades – and when asked about their successful strategies, investing a significant amount of time to understand the community and gain their trust was a very clear recommendation and was said to have contributed to their ability to reach people and conduct their research and programs.
- Link MNH-specific issues with other ‘popular’ general health issues: Given the changing epidemiology of urban poor populations, Ghana’s CHPS project added non-communicable diseases to their CHW portfolio as the interest in measuring blood pressure was very high. This was seen as a strategy to provide women with something they wanted, thereby creating an opening for other MNCH-specific issues (Adongo et al., 2014; Save the Children, 2013).
- Link MNH efforts with ongoing WASH programs: Nearly all informants noted the predominant role water and sanitation issues play in women and children’s everyday lives. Municipal level governments and NGOs also prioritize these issues. WASH may therefore be an existing priority and platform with which to link MNH programming. At the very least, identifying what is being done for WASH issues will help to integrate WASH into future MNH programs, and can give a perspective on the workings of the slum that may provide operational lessons to be incorporated into future MNH programs.
- Community engagement/support: Acknowledging the levels of mistrust within the communities, several programs worked to identify strategies for ensuring community buy-in and support.
 - A program in Indore slums focused on two approaches: building social capital through slum-based CBOs and “encouraging local stakeholders to function in a coordinated manner to ensure better health service coverage in underserved slum areas.” These interventions led to improved MNH service outcomes (skilled birth attendance, immunization, etc.) (Agarwal et al., 2008).
 - Results from Thomson et al (2011) and Marston et al (2007) show that tracing programs (for patients lost to follow-up) and antiretroviral therapy provision can be implemented in a slum setting (Marston et al., 2007; Thomson, Cheti, & Reid, 2011). A community-based directly observed treatment program for tuberculosis (TB) in a Brazilian slum led to an improvement in treatment success. The program engaged community groups in promoting TB care and held awareness-raising activities. A local Catholic church was a partner in the program. The authors hypothesize that the increased social support led to the positive outcomes (higher treatment rates compared to a clinic-based program) (Cavalcante et al., 2007).

XI. Implementation Challenges: Emerging Issues

In addition to identifying lessons from existing programs, it is useful to step back and identify major challenges to effective implementation that emerged from the literature and from key informant interviews.

A. Lack of Accurate Data

The urban MNH field lacks good, disaggregated data to inform policy, program, and practice. For years, there have been calls for the creation of routine, disaggregated data, but apart from the health and demographic surveillance systems (HDSS) in place in a few slums globally (mostly run by APHRC and coordinated with the INDEPTH network), there is very little consistent and reliable data (David, Mercado, Becker, Edmundo, & Mugisha, 2007). This lack of information impacts the ability to target/identify communities, geographic areas, and individuals who are most vulnerable, and prevents strong program/research design, including monitoring and evaluation (Butala, VanRooyen, & Patel, 2010).

There have been interesting efforts to develop less costly and time-consuming ways than an HDSS to distinguish among different slums in terms of vulnerability in order to support targeted health interventions. The CINH team in Mumbai developed a rapid assessment scorecard to help identify appropriate slum communities for a trial (now ongoing) of an intervention on community resource centers (Osrin et al., 2011 Shah More et al., 2013). This vulnerability index is being used for baseline measurement by other research initiatives in India (Devasenapathy et al., 2015).

Another important strand of data collection in urban slums is research in which slum dwellers generate their own information and documentation about the conditions of their lives. The Mumbai-based NGO, Pukar (noted in previous section), organized upon principles that its founder has called the “right to research” (Appadurai, 2006), has long experience with “barefoot researchers.” These participatory action research strategies have an echo in the women’s group interventions that draw on Freirean “participatory learning and action” principles to develop and implement MNH interventions.

B. Lack of Stakeholder or Implementer Coordination

Coordination amongst implementing NGOs, government, and private organizations within the health sector or across multiple issues – education, infrastructure, employment, law enforcement, and the environment – is largely missing. Several informants from research institutions and implementing agencies commented on how frustrating it was not to know all of the programs being implemented in any given slum; and also how problematic it is for many different programs to be clambering for the same women’s time. As one researcher from James P Grant School of Public Health (JPGSPH) in Dhaka explained, too many organizations do interviews, focus groups, and conduct meetings for women, and none ever tries to find out who else is asking women for their time (an example given was a WASH program, an MNH program, and an education program). Whereas in the rural areas the government has a handle on the implementing programs, in the slums it was described more as a ‘free for all’, without anyone taking control to organize for the benefit of the women.

This basic problem of coordination was explicitly addressed in the Urban Health Resource Centre's Indore Urban Health Programme in Madhya Pradesh, India, where local level coordination was one of the interventions being tested – and with good results (Agarwal et al., 2008).

C. Working with Municipal Government

Typically, municipal governments have primary official responsibility for the health and wellbeing of slum dwellers. The make-up of the municipal governing bodies varies within cities and across countries. However, in nearly all interviews with implementers and researchers active in slums now, it was clear that working with the municipal government is 'fundamentally different than working with rural governments' (Robert Clay, personal interview, February 19, 2016). These governments are often overwhelmed by the challenges of the slum dwellers, managing multiple major investments at one time with minimal staff who lack the skill sets necessary to handle health and social problems of this scope and complexity. In Bangladesh it was well understood that municipal governments had almost no funding, limited capacity to manage the issues facing the slum dwellers, and were being controlled by powerful families and power brokers within the slums (Banks, Roy, & Hulme, 2011; Banks, 2008; Hossain, 2012). Many of those interviewed mentioned that the focus tended to be put on infrastructure and WASH programs – suggesting that if MNH is to get on the radar of the municipal government, it may have to link in some way with existing WASH programs.

D. Difficulties in Communication and Outreach/Establishing Trust

Nearly all of the implementers and researchers interviewed for the scoping mentioned the challenges they faced in identifying the populations of interest and then establishing a format to bring women together to solicit their feedback. Adongo's experience in Ghanaian slums highlighted the challenge to find new ways to 'gather' and solicit feedback or introduce new programs – as compared to more traditional methods (using traditional community meeting mechanisms and traditional leaders) in rural areas (Adongo et al., 2014). The need to have links and relationships with a community that is quite transitory remains a challenge, but without this relationship initiatives or programs are more likely to fail. APHRC uses community advisory boards – and acknowledging the constant movement of people in and out of slums, adjusts their make-up according to regular assessments of the board membership and who is available/still living in the community. Being flexible while prioritizing the importance of relationships was a common recommendation voiced in the interviews with implementers and researchers.

Another challenge noted was the way in which slum communities heard/received messages. Given the heterogeneity of the communities, there is no one clearly successful communication method. In Bangladesh TV is a popular medium, while in Ethiopia radio dramas are a popular strategy (National Institute of Population Research and Training (NIPORT), International Centre for Diarrhoeal Disease Research Bangladesh (icddr), & MEASURE Evaluation, 2015; Mebratu Bejiga, personal interview, March 8, 2016). Any messaging platform must also recognize the number of messages the slum dwellers see, hear, or discuss on a daily basis and how overwhelming these different messages become. One of our key informants working in Addis Ababa slums suggested that there is a tipping point of frustration: if you talk about 'best practices' or things families can or should do to improve their health or their children's

health that are outside of their control (for example building a pit latrine when there is no space), the sense of powerlessness leads to frustration and anger, and ultimately becomes counterproductive (Mebratu Bejiga, personal interview, March 8, 2016). To further complicate these challenges, rumors and myths were said to prevail around care-seeking, and several SNL country office staff as well as global experts confirmed that in newborn health, these rumors and myths are very hard to ‘break’ (Yunis Musema, personal interview, January 25, 2016; Lydia Chimtembo, personal interview, April 8, 2016; Jim Phillips, personal interview, January 12, 2016). The combination of competing messages, limited ability to create a sense of ‘community’ or to identify appropriate, influential “thought leaders”, as well as the presence of powerful myths and rumors make behavior change messaging a significant challenge.

E. Acknowledging the Reality: A Diverse, Heterogeneous, and Constantly Changing Population

The diversity and changing composition of slum populations, and their evolving needs and aspirations, pose several challenges to standard program implementation. A much more flexible, adaptive, and iterative approach must be taken. Slums are often ‘melting pots’ of sorts. Whereas many rural areas have one predominant ethnic group, slums are not always structured around ethnic lines. Slum dwellers often speak many different languages, vary in the types of work they do, the cultural norms they follow, and the religions they practice. These heterogeneous communities require accurate and more in-depth assessment of care-seeking issues, home-birth and family health practices (especially around essential newborn care), and women’s agency – all of which must then be translated to more carefully adapted programs. There is ‘considerable diversity of health and survival’ among slum dwellers that should be well understood before programs or strategies are implemented (Fotso et al., 2013).

The diversity of poverty also emerged as an important issue to be considered when discussing the urban poor. Several informants noted that often the poorest and most marginalized are *not* living in slums. A study of eight cities in India showed that the poorest did not live in notified slums – in Hyderabad 76% of its poorest population did not live in slums, and in Chennai 63% did not live in such slums (Agarwal, 2011) but rather in “informal poverty clusters” (non-notified slums), on pavements, under bridges, in other impermanent shelters, or as squatters. BRAC has been working to understand the numbers of those in Bangladesh cities who are homeless, pavement dwellers, and other truly marginalized populations that will not be reached in the slums (Kaosar Afsana, personal interview, December 9, 2015). Even less is known about these populations – how many, where they live, what facilities they utilize (if any), and all other basic facts that would be necessary for improving their MNH outcomes. Another interesting facet of the diversity of poverty was the challenge of peri-urban settings. Largely forgotten in the conversations about urban poor, peri-urban populations straddle multiple worlds. They are “neither fully urban nor fully rural with respect to demographics and setting[which] makes for unique considerations and constraints in providing services to this dynamic population” (Sheehy, Aung, & Foster, 2016). There are few studies and little data about these populations.

F. Thinking Outside of the Box

There is a need to fundamentally re-think what is possible, what partners are ‘appropriate’, and what strategies will lead to the best results. Several of those interviewed for this scoping expressed deep

concern about the inability, especially of development partners, to actually think and work outside of their comfort zone. Urban contexts challenge so much of what the rural model has done well; rethinking how to meet the needs of such dynamic populations is the only way those with the most direct understanding of the issues see change coming about. Working with the private sector, harnessing traditional practices such as TBAs, paying CHWs, rethinking how to track women, integrating MNH with WASH and other non-health related initiatives – all of these were mentioned as ways forward that would be innovative but would also challenge standard program implementation approaches. Taking what is known and adjusting it to the context of each slum will be a huge challenge for governments, NGOs, and donors to manage.

G. Time and Financing

Nearly all implementers and researchers interviewed mentioned that building and fostering trust within slum communities requires more time than in rural areas. One global expert argued not enough people (organizations/institutions) budget adequate time or put enough energy into establishing relationships with the community, leaders, and government, which ultimately impacts the implementation of any work done in slums (Robert Clay, personal interview, February 19, 2016). Institutions such as APHRC attribute some of their success to the long-term commitment they have shown and the investments they have made in slum communities over the last several decades – something impossible for programs to achieve on short-term grant cycles.

The funding for working with slum populations is also a challenge. As noted in the donor section earlier in this report, donors don't often fund around large cross-cutting themes. The SC staff members who were interviewed confirmed that reaching the truly vulnerable is extremely expensive and often viewed as a risky bet. As with most problems, the needs of the health system outweigh the funds available. Working within this complex context requires a lot more time and personal investment to even initiate any work.. The funding requirements are substantial, and in the current funding environment it can be difficult to make a compelling case for prioritizing urban MNH given the scarcity of data and evidence of successful approaches and the complexity of the issues.

XII. Recommendations for SNL/Save the Children

For the last 40 years, our strategies in maternal, newborn and child health have been underpinned by a rural mindset: an image of a rural village – isolated, tradition-bound, timeless – with a set of assumptions about who people are, what they want, how they live, and the social structures and institutions that shape their world. However inaccurate that picture might actually have been, its assumptions have been the implicit foundation for organizing the delivery of most MNCH services since at least the 1970s.

Urbanization and globalization are remaking the landscape of poverty and marginalization in the 21st century. People are on the move. Their lives are fluid and changing: in pursuit of a better life, people in an urban setting must contend with different networks of power and influence, and a hollowing out of the authority and reach of the state. The literature and experience on the ground give us glimpses of the changing realities. But the texture of people’s lives – their hopes and aspirations, their survival strategies, and their connections with the informal and formal institutions and power structures that shape their cities and deliver (or fail to deliver) services – are largely hidden from view.

The field only just beginning to think about how to catch up. The landscaping reveals a field wide open for fresh thinking and innovation. This is not a situation in which SC needs to find a comfortable niche in order to shoe-horn its expertise in newborn interventions into an existing welter of actors and initiatives. Rather, it is a moment to gather the learning from more than 15 years of intensive work on newborn health and marry it to new thinking around systems, implementation, and integration – with the ultimate goal of equitable, effective coverage of health services at scale, including for the urban poor.

SNL has been moving newborn health onto the global health agenda over the past 15 years, clarifying the causes of death, assessing the burden of disease, identifying effective, evidence-based clinical interventions, and modeling the potential impact of increasing levels of coverage. Recent work gathers evidence on barriers and facilitators to scaling up in both communities and facilities. So far, newborn health has been an intervention-centered affair; potentially high-impact, effective interventions are the core of thinking, and strategies for extending coverage of those interventions ripple outward from there. The perspective on each wider set of contextual circumstances – implementation bottlenecks, health systems building blocks, social determinants of equity – is conditioned (and limited) by the strategic focus on specific clinical interventions.

We attempt to depict this in Figure 3 below, which is meant to capture the image of a stone dropped into still water; all action/movement in the water then derives from introducing the stone (the intervention) into the aqua system.

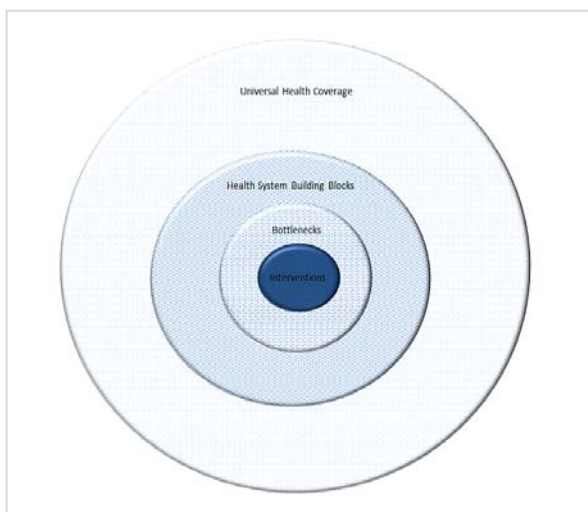


Figure 3: Intervention Centered Strategies

In some respect this fits the current zeitgeist of global health, in which we regularly hear that intensive focus on effective interventions – including strong measuring and monitoring – is the engine of change. But, based on this scoping, we want to suggest that improving MNH of the urban poor may require a fundamentally different approach. With the basic knowledge of and evidence on effective newborn interventions under its belt, SNL can pivot toward an approach that puts not the intervention at the center, but the people who are meant to use or benefit from it.

Drawing on this scoping study, as well as the provisional findings of work that both SC and AMDD have done on implementation and scale-up in global health, our recommendations build from the following public health programming logic.

If we agree that:

- effective implementation at scale requires adaptation to the context of different settings;
- the relevant contextual factors that should guide such adaptive design can be provisionally identified from SC’s experience in countries and from the literature;¹
- urban slums and slum dwellers differ in relevant ways from rural settings and poor rural populations, but the specifics are varied, ever-changing, and not well-understood;
- urban governance, health systems (formal/informal and public/private), and thus potential urban program platforms differ in relevant ways from those prevailing in rural areas, but are not well-documented or well-understood;
- sustained, effective, and equitable implementation at scale requires:
 - engagement of the beneficiaries and their communities;
 - ownership by key stakeholders;
 - appropriate enabling policies; and

¹ See, e.g., Damschroder 2009 and the Consolidated Framework for Implementation Research for the domains of context that have been found to be relevant for effective implementation generally.

- appropriate policies and sustained, effective, and equitable implementation of interventions require an adaptive learning system that continually feeds relevant data, information, and insights to key actors in a policy-practice cycle;

then a potential way for SNL to address newborn health for the urban poor would be to shift from an intervention or clinical focus to what we might call an “ecology of implementation” approach.

We use the term “ecology” because it highlights the interactions among different agents and between those agents and the environment in which they operate, and understands that whole ecology as being essential to the social change we are seeking. At the center of this ecology of implementation for urban MNH is a deep understanding of the texture of the lives of the urban poor, the institutional and physical environment in which they live, and the interaction among them.

That understanding grows not only from research, but also from the actual experience of mobilizing with communities, implementing programs, and advocating for policy change. Consequently, we do not think of urban MNH strategy in a traditional, linear way as one might in designing an RCT:

formative research → program/intervention design → baseline measurement → intervention → endline measurement → disseminate findings

Instead we think of strategy as proceeding simultaneously in three spaces: policy/advocacy, program implementation, and research. Each of these generates data and evidence, used to gradually deepen a shared understanding of the ecology and to increase the impact of policy and programmatic action.

The ecology of implementation approach to urban MNH is depicted in Figure 4. The foundation or floor is the “rich picture” of the urban poor, their environment, and the interactions among them. The SC actions then proceed simultaneously in the policy/advocacy, program/implementation, and research spaces, building on and contributing to an increasingly nuanced understanding of the urban poor and the ecology of implementation in urban settings.

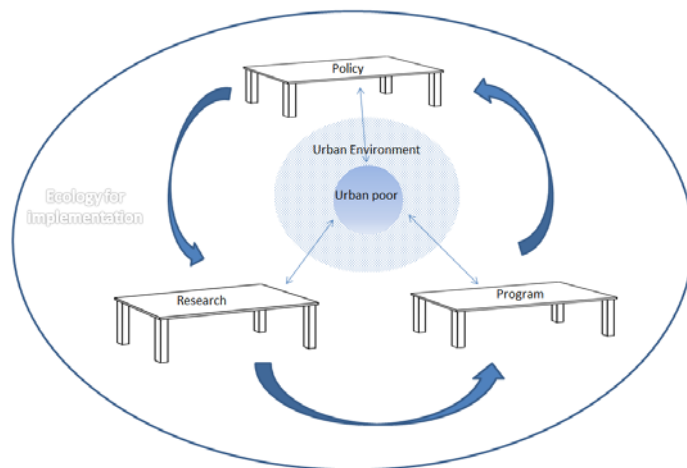


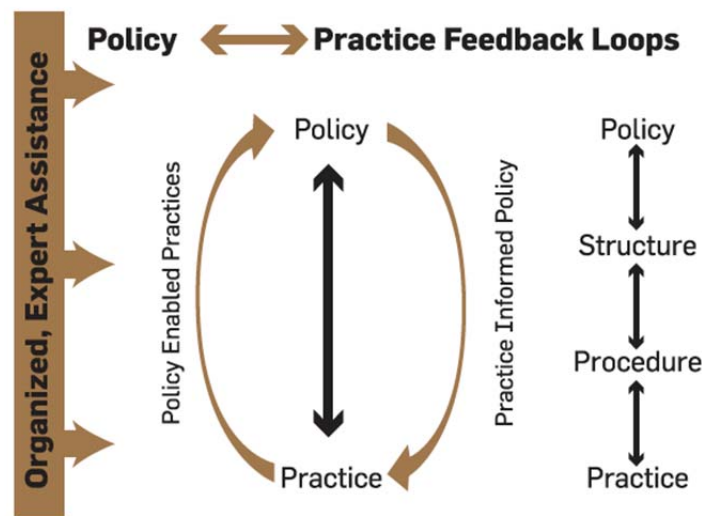
Figure 4: Ecology for implementation of urban MNH

We can translate this conceptual framework into more specific action strategies. A key finding of this scoping is the dearth of existing platforms for taking actions related to urban MNH. It therefore is useful to think specifically about potential to create new or modify existing platforms for policy, program, and research on urban MNH – recognizing that each platform is likely to entail partnerships with different actors and perhaps with different sectors as well.

Detailed recommendations that emerge from the scoping are divided below into these three domains of policy/advocacy, program/implementation, and research. Each country will need to survey its own setting and make strategic decisions about where to focus within each domain and how to create synergy across domains, while also generating an increasingly rich picture of the urban poor and an increasingly robust policy-practice loop for the circulation of evidence and insight.

That policy-practice loop is depicted in Figure 5, taken from the National Implementation Research Network (Metz & Bartley, 2012). It is notable not only for its clarity that policy enables good practice and that learning from practice must inform evolving policy, but for two other points as well – both meant to drive home the truth that even good policies do not implement themselves automatically. First, on the right side of the diagram is a recognition that policies on paper move into sustainable practice and practice generates effective policies when they are accompanied by needed changes in structures and procedures to support and extract learning from new practices. Second, on the left side of the diagram is a recognition that strong program implementation requires expert assistance (what Fixsen et al call implementation support teams [Fixsen, Blase, Metz, & Van Dyke, 2015]). This does not usurp community leadership; it supports it. Essentially, this is a key potential role for SC.

The specific potential strategies we suggest below still have a focus on achieving equitable, effective coverage of the health services needed for improving newborn survival (as indicated by SC’s current health strategy). We do not attempt to address in any detail the more upstream determinants of



Source: Reproduced with permission from the National Implementation Research Network. (2008).

Figure 5: Policy-Practice Feedback Loop (Metz & Bartley, 2012)

population health in cities, although these obviously can have some impact on newborns. We note only that within the growing field of urban health more generally, there is increasing recognition of the importance of “place” and of the built environment – including, but not limited to, public space – for population health (Harpham, 2009). This has led to a growing literature linking both urban planning practice and urban planning theory with health.

The learning in the former (urban planning practice) is perhaps best represented by the 2012 report of the UCL Lancet Commission on Healthy Cities, which highlighted the need to understand cities as complex systems and to accept the fact that no grand strategies can be successfully devised and implemented entirely from above. The Commission argued for “experimentation through projects” and for “dialogue between stakeholders...enabling them to assess and critically analyze their working practices and learn how to change their patterns of decision making” (Rydin et al., 2012). The learning in the latter (urban planning theory) tends to focus on issues of urbanism (“the built environment and how it structures and is structured by social life” [Shatkin, 2011]), particularly the dynamics of globalization and resulting exclusion of the poor and marginalized (Bhan, 2009; Roy, 2011). Its emphasis on understanding informality, governance, and the hidden dynamics through which marginalization happens may ultimately provide a useful frame of reference for SC as it considers the broader values that underlie its work in the SDG era.

However, the sections that follow keep the focus on SNL/SC’s overall strategic goals of effective coverage of high impact health interventions for newborns, sketching out what the three domains, joined in an ecology-of-implementation approach, might look like.

A. Policy/Advocacy

In virtually every level of advocacy from local to global, there is still a need to accomplish the basic task of getting newborn health onto the urban agenda and getting urban issues onto the newborn health agenda. Arguably, without such focus, newborn health strategies will continue to be implicitly based on rural models thus compromising their impact; and urban health will continue to neglect newborn interventions in its service delivery strategies. It might be useful for SC to develop a short policy brief making this fundamental argument about the need for both the urban development field and the MNH field to acknowledge the unique challenges of MNH of the urban poor.

We divide the rest of the advocacy discussion between country level and global level.

1. Country Level

Each SNL country is in a different place in terms of the national-level attention given to urban issues generally, and to urban health and urban MNH specifically. For example, in some countries such as Bangladesh (Rahman, 2014), urbanization is often seen as a threat to the country’s stability and wellbeing, and so the reflexive reaction is to do nothing that might inadvertently encourage rural-to-urban migration by improving urban conditions. Other countries have recognized (at least in global forums) (UN HABITAT, 2016; United Nations General Assembly, 2015) that cities are the engine of economic, social, and cultural development in the 21st century and that supporting cities to function well

for all their residents advances development. Still others have turned a blind eye, simply ignoring the swelling populations and expanding informal settlements that are remaking the urban landscape.

SNL offices in each country will have to “take the temperature” of policymakers and public opinion in their own setting, and strategically build coalitions of partners across sectors who recognize a shared interest in shaping these broad public goals concerning urbanization. In some countries, this platform for effective advocacy already exists; in others it will have to be built. SDG 11 (“Make cities inclusive, safe, resilient and sustainable”) may provide a new policy window for this kind of coordination.

Specific strategic goals of country-level advocacy depend, of course, on the specific context and opportunity, and on the SC country office’s overall strategy. One open question in most countries will be to what extent to devote advocacy attention to municipal level authorities and processes.

2. Global Level

At a global level, SC can make possible exchange and shared learning across country offices, and can simultaneously enter the global policy and advocacy spaces where these issues are being discussed and settled. Going back to “expert, organized assistance” as depicted in Figure 5, we acknowledge that few organizations or academic training programs have given specific attention to the skills needed to provide such assistance to generate change in complex systems, such as today’s cities. As SC enters this new arena, it can use its ability to convene and link country offices in a learn-as-you-go community of practice on urban MNH.

In terms of global-level policy itself, the two obvious immediate global policy windows are around the SDGs and Habitat III’s “New Urban Agenda.” An additional advocacy space is in the area of humanitarian emergencies, refugees, and migration. Increasingly, refugees and internally displaced persons are in urban settings, not in camps (Earle, 2016), and increasingly newborn mortality itself is concentrated in fragile states and settings (Wise & Darmstadt, 2015). SC, as a broader development organization, obviously has the potential within its own organization to model the mobilization of cross-sectoral action for urban development that will be needed to take effective action in these policy spaces.

All of this is, of course, premised on an internal SC process that works through a clear position on these fundamental questions about urbanization, slums, informality, the role of cities, and the rights of their residents.

With respect to the role of health and MNH specifically within the broader urban development agenda, the published literature and actual advocacy efforts are both exceedingly thin. WHO has yet to take up urban health as a major focus (its urban health programming focuses primarily on environmental risks and non-communicable diseases). Nor has there been a strong health component to the NGO mobilization efforts that fought successfully for a separate urban SDG (now SDG 11).

If SC decides to lead in this area, then it needs to find a coalition of like-minded organizations and agencies who can, together, create the evidence base, mobilize popular pressure, and develop policy and program expertise to influence action globally. There is a growing academic literature about how to influence such global processes (Brolan, Hill, & Ooms, 2015; Forman, Ooms, & Brolan, 2015). There are

also plenty of examples from which to draw lessons, including, for example: HIV as a human security issue; population growth as a development issue; access to social services and basic needs as a human rights issue. (For a history of urban issues in the global policy sphere, see Parnell 2016 [Parnell, 2016] .)

The specific terms of reference for a like-minded coalition would depend on the policy window chosen. Whichever opportunity presents itself, it will likely fall to SNL to make the initial case (investment case, moral case, rights case) for why potential partners who do not now have a newborn focus or an urban focus should collaborate on this issue.

B. Program/Implementation

For these recommendations, we have resisted the suggestion by some informants that the best learning strategy might be to choose a specific newborn intervention and attempt to implement it in a range of different slum settings. There would no doubt be many lessons from such an initiative. But our recommendations here are meant to shift the overall way in which newborn health is addressed in a complex situation such as urban slums, where the primary learning needs to be about how the dynamics of the urban context shape the ecology of implementation, facilitating initiatives in urban MNH to create deeper, more sustainable change. In our view, it calls for a fundamentally different program and research strategy.

As with policy/advocacy, different SNL countries are at different levels of readiness to design and implement or modify existing service delivery programs to include newborn health interventions for the urban poor. But, whatever the readiness, any urban program will need to have high tolerance for uncertainty – indeed, would be well-advised to embrace uncertainty as an opportunity for learning.

Below we sketch out a general set of questions that always need to be answered in program design, with some observations about the unique challenges of programs for the urban poor/slum dwellers. A strong implementation research component to any program will turn the challenges into opportunities for learning; and SC should make such learning the currency (the measure of value) of its urban MNH programming.

1. What Intervention and Implementation Strategies?

The current openness of the urban MNH space makes it fertile ground for people-centered (as distinct from intervention-centered) design and implementation strategies that make use of evidence from the growing field of implementation science. Working in tandem with engagement at the policy level, ground level programs should build from the realities of slum settings rather than a command-and-control effort to implement so-called evidence-based interventions from the top. This is an important lesson from the efforts to take RMNCAH programs developed in and designed for rural settings and import them wholesale into urban settings, as shown by the experience with CHPS in Ghana (Adongo et al., 2014).

Therefore, program design for urban slums needs to employ a participatory, human-centered design that puts high value on slum dwellers' perspectives regarding their own situation and priorities. This is where teasing out the differences between life in a traditional rural village and life in an urban slum will be crucial. It is likely that an effective MNH program will need to address different social dynamics,

individual aspirations, environmental and physical constraints, resource availability, and financial pressures.

2. For What Population?

Whether SC's goal in implementing either community-based or facility-based newborn care services is to develop lessons on "what works", or is simply to provide good quality, equitable services to people in need, it will have to confront the instability and informality of slum-based populations in order to create meaningful measurement and monitoring systems.

In either case, it is not likely to be enough to simply open a clinic and treat whoever arrives at the door. To improve equitable coverage and to draw evidence-based, policy-relevant conclusions about the impact of its initiative, SC is likely to want to consider creative ways to enumerate the households and population in the catchment area and to track potential and actual beneficiaries of its services. The challenges to doing this for highly mobile populations living in illegal housing in unofficial settlements and engaging in informal employment or income-generating activities are daunting. Mobile and other electronic or internet-based methods hold promise and some are being tested (e.g., Manoshi; MAMA).

The mapping and self-enumeration strategies described earlier in this report point to potential methodologies for defining and describing the catchment area. The rapid assessment scorecard for measuring vulnerability of a slum as a whole (developed by David Osrin and colleagues) may also be valuable in determining the best place for SC to work (Osrin et al., 2011).

The field remains open for creative new ideas.

3. Delivered Through Which Providers?

In the absence in most urban areas of a robust formal public-sector health system with a hierarchy of linked facilities and/or an established outreach system, a key issue for SC is whether there exists a platform for an initiative focusing on newborn interventions. It will be important to develop an understanding of how and why the urban poor in an urban area currently access services. This will inevitably force SC to confront the extensive reach in urban slums of small-scale, unregulated, for-profit private providers.

A fundamental choice is whether to accept their dominance in the urban space and attempt to work with them to improve newborn care, or instead to try to develop and support a better alternative network of service providers in the hope of drawing the urban poor to it. Is it possible to do both? We know of no successful examples. BRAC's effort in its Manoshi program to change private providers' practices (e.g., inappropriate injections of oxytocin during labor) while simultaneously building its own network of facilities did not succeed as originally planned; BRAC ultimately focused on its own providers and dropped efforts to influence directly the slum-based drug-sellers and other private actors from whom its clients had regularly sought care.

4. With What Outcomes?

Beyond standard newborn health outcomes related to health status or intervention coverage, in the slum setting it might be particularly important to understand better how to address the dynamics of

care-seeking and service utilization among different segments of the urban poor. In particular, our scoping highlighted the lack of connection between poor communities – especially informal/illegal slums or informal/illegal residents and workers – and the health system. This was expressed not only in low rates of intervention coverage, but also in lack of knowledge/information, distrust, expectations of poor quality treatment, and fear of catastrophic health costs. This suggests a range of potential outcomes that could be important to measure in a newborn health program for the urban poor.

5. Measured How?

The metrics and measurement strategies used obviously depend on the intervention and implementation strategies being employed. This may be an area where presence in densely populated cities, with good internet and cellphone coverage, might open the possibility for creative new uses of mobile phones, electronic records, and other uses of information and communications technology to improve data collection. In areas where cell phones are not owned or controlled by women, or where residency is even more tenuous, creative use of local groups and mobile units may be tested.

6. With What Potential for Scaling and Sustainability?

This generic challenge for health programs will no doubt take on unique characteristics for urban health. The mobility of populations makes any community-based organizing strategy inherently difficult, if not unstable. The fact that generally weak municipal governments have formal responsibility for urban health compounds the challenge.

For urban slums there is also the very real and present danger of eviction and demolition. Indeed, the deep insecurity of tenure when housing is informal/illegal is likely to have profound effects on the willingness of people to invest their time, energy, and trust in health service programs.

C. Research

Very little data and very few research studies exist on the unique issues of urban MNH, 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. Most research will be done at the local and country level, but there are some potential areas where a global perspective could be useful. We incorporate (and repeat) here most of the areas of research that we highlighted in the report for the Bangladesh case study, as most countries have the same research gaps.

Priority issues that emerge from our scoping study include the areas that follow.

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.

Urban averages or overall urban-rural comparisons can be misleading. Data should be disaggregated along relevant lines of social disadvantage. For cities, this will include not only wealth, but also neighborhood, employment conditions (formal/informal), citizenship status, etc.

It will be especially useful to document trends and estimate future numbers 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 every society and on the global stage.

2. Descriptive Epidemiology

The “who, when, and where” of newborn mortality in urban slums across the world – or even in any given country – is unknown. The causes of newborn mortality and morbidity in slums are largely undocumented and unanalyzed, apart from small studies done in specific catchment areas. In particular, distal determinants such as occupational 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.

There are also large gaps in our knowledge of how social determinants influence health status, including MNH for the urban poor in LMICs (Kjellstrom & Mercado, 2008; Mercado, Havemann, Sami, & Ueda, 2007).

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. Globally, we know that newborn mortality is increasingly concentrated in places of political instability, conflict, and weak state capacity (Wise & Darmstadt, 2015). Especially in these settings, it is critical not to mistake formal law and policy or aspirational statements of entitlement and obligation for lived reality (Akerkar, Joshi, & Fordham, 2016). Empirical research can help make this distinction and its implications clear.

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

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? How are referrals managed between private and public sector facilities? What is the quality of care for available services?
- 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? Where are the private facilities located?

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 and practice-based lessons. Systematic reviews of the literature on service delivery in multiple fields have generated useful frameworks that could guide the development of an implementation research agenda for urban MNH programs. These include the Consolidated Framework for Implementation Research (Damschroder et al., 2009; Kirk et al., 2015) and the Active Implementation Frameworks (Fixsen et al., 2015; Fixsen et al., 2005).

To summarize, we recommend that SC proceed simultaneously in the policy/advocacy, program/implementation and research domains. Each domain generates valuable evidence and insights that can and should inform action in the other domains. It is the constant circulation of this knowledge and ongoing adaptation of policy, program, and research agendas that will enable SC to respond to the true needs of the urban poor. Ultimately, the landscaping does not point to one right way to proceed. It points to the importance of a collaborative process to determine strategically which issues to prioritize in each domain. Each country might proceed differently, even as it learns from other countries in the process.

XIII. Conclusion

This scoping study finds that urban dynamics will challenge many of the conventional and comfortable strategies our field has developed for conceptualizing and addressing the health and wellbeing of mothers and newborns. Yet there can be little argument that the epicenter of the MNH challenge will increasingly move to cities, where poor and marginalized people live in circumstances that bear little resemblance to the rural villages where existing MNH practice has taken shape.

The post-2015 era brings renewed commitment to universal health coverage with quality and equity, to cities that are inclusive and sustainable, and to human rights-based approaches to development. If the world is true to these commitments, then the door will swing open for creative new approaches to achieving good health for the urban poor.

XIV. References

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