

# Innovations

*for* maternal, newborn  
& child health

**CONCERN**  
worldwide

**A conceptual framework and  
research approach for  
identifying, analyzing and  
prioritizing barriers to  
effective maternal, newborn  
and child health interventions**

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Innovations for Maternal, Newborn and Child Health

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## 1. Introduction

Innovations for Maternal, Newborn and Child Health (Innovations) is a global partnership between Concern Worldwide and UNICEF that aims to identify and test innovations that overcome barriers to quality coverage of effective health interventions. The initiative is designed to complement national efforts to achieve the 2015 Millennium Development Goals of reducing by two thirds the mortality rate for children under five years (MDG 4) and reducing by three quarters the maternal mortality ratio (MDG 5). It is being implemented in Malawi, Sierra Leone and the Orissa State of India.

Innovations has undertaken a unique approach to reach out to a broad spectrum of people who have had limited influence on how services are delivered within the health sector. These “unheard voices” include individuals living in remote and medically underserved communities, mothers, young people, entrepreneurs, traders, frontline health workers, academics, members of civil society organizations and other community members. To facilitate the participation of these individuals and groups in finding solutions that will work, Innovations has developed a conceptual framework and research approach that engages them in identifying important barriers to maternal, newborn and child health (MNCH).

In this document we present Innovations’ conceptual framework including background information on its purpose, how it was developed, and its specific characteristics at various health system operational levels. We then present a participatory research approach that was used to identify, categorize and prioritize the major barriers to MNCH care in Innovations target countries.

## 2. Conceptual framework

### Purpose

The purpose of the Innovations conceptual framework is to provide a classification system for identifying and categorizing the range of factors that support quality coverage of effective MNCH interventions and illuminating at what points implementation challenges can occur within the health system. Defined broadly, the “health system” includes public, private and informal sector actors, institutions, resources, services and commodities. One relevant description is provided by the World Health Organization (2006):

**The Conceptual Framework helps classify the various factors that support coverage**

A health system includes all actors, institutions and resources that undertake health actions – where a health action is one where the primary intent is to improve health. Although the defining goal of a health system is to improve population health, other intrinsic goals are to be responsive to the population they serve, determined by the way and the environment in which people are treated, and to ensure that the financial burden of paying for health is fairly distributed across households. Four key functions determine the way inputs are transformed into outcomes that people value – resource generation, financing, service provision and stewardship.

The framework lists various areas to consider when identifying implementation barriers (particularly those that occur at the district coordination, service delivery and household behavioral levels) so that partners can then work together to prioritize barriers and proposed solutions. It is intended to be a template that should be adapted and tailored within each setting.

### Methods

In order to identify existing frameworks on barriers to coverage, we conducted a review of published literature in Medline and Google scholar using the search terms “health systems,” “health system framework,” “health system model,” “health equity,” and “health care coverage.” In addition, we reviewed analytic tools and models present in grey literature such as those developed by UNICEF, the World Health Organization, the CORE Group, and BASICS.<sup>1</sup> We also surveyed Concern Worldwide’s field-based MNCH program

1 The complete list of literature and models reviewed are included in the reference list.

managers to elicit their inputs regarding key implementation challenges and useful tools and frameworks. Specifically, the program managers were asked to describe specific “immediate” barriers to MNCH as well as some of the contextual and “underlying” determinants of health. Finally, we conducted key informant interviews with several researchers who study health implementation issues in order to obtain their inputs regarding how to conceptualize the range of barriers to quality coverage.

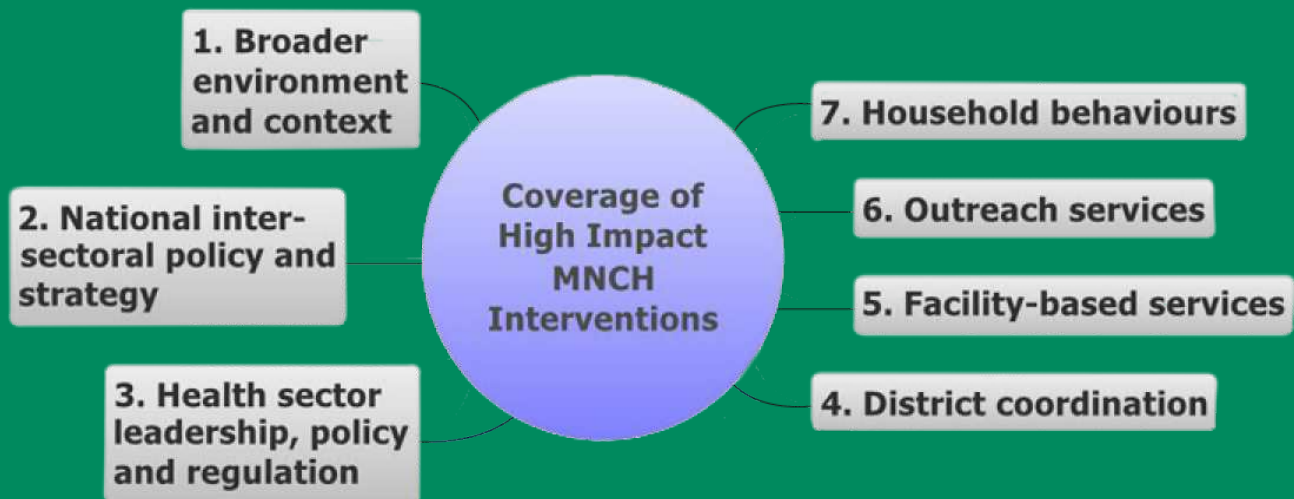
Based on the frameworks identified and various inputs received from practitioners and researchers, we outlined a model of the health system that builds on the levels of constraints delineated by Hanson et al (2003). As described in section 4 of this document, we then tested the model in three diverse settings and, following these experiences, made revisions to specific components outlined in the model.

### Characteristics

Figure 1 presents the seven operational levels necessary to ensure quality coverage of high impact MNCH interventions. A brief description of these levels and their critical components follows.

**Figure 1: Operational levels relevant to quality coverage of high impact MNCH interventions**

1. *Broader environment and context* represents environmental and contextual elements that affect the



population and systems including governance/political stability and accountability, history, economic growth/ prosperity/markets, demographic trends, disease profile, and resources/infrastructure relating to water and sanitation, transportation, communication/media and information technology.

2. *National inter-sectoral policy and strategy* encompass government strategies relating to economic growth and poverty reduction, education/literacy, social protection, linkages with the private sector, disaster preparedness, prioritization of resources for social sectors, and an enabling inter-sectoral environment.

3. *Health sector leadership, policy and regulation* represents the national health department’s overall governance and strategic vision, harmonization of differing priorities and investments, collaborative initiatives with private sector entities, and policies relating to regulation, primary health care, financing, human resources, and drugs and supplies.

4. *District coordination* represents the degree of decentralization, inter-sectoral actions and partnerships between public sector and civil society, incentives/sanctions, and structural capacity (including organizational, information, physical, human and fiscal resources) at the district level. These areas pertain to district health management teams, to non-public sector coordination and planning bodies such as professional guilds and associations, and hierarchies of traditional and religious authorities at the local level.

5. *Facility-based services* relate to health facilities' available range of services, drugs and supplies, physical infrastructure and setting, management practices, health worker performance (quality against standards), and referral systems. It includes clinical services delivered by private and informal providers and by micro-entrepreneurs.

6. *Outreach services* represent a variety of interventions relating to health education, family planning (including contraceptives), antenatal care, postnatal care, provision of preventive interventions such as immunizations, insecticide-treated bednets and micronutrient supplementation, and community case management of childhood illnesses such as malaria, diarrhea and pneumonia. These can be delivered through the public sector, the private sector (including pharmacies) and the informal sector (including drug sellers and traditional healers).

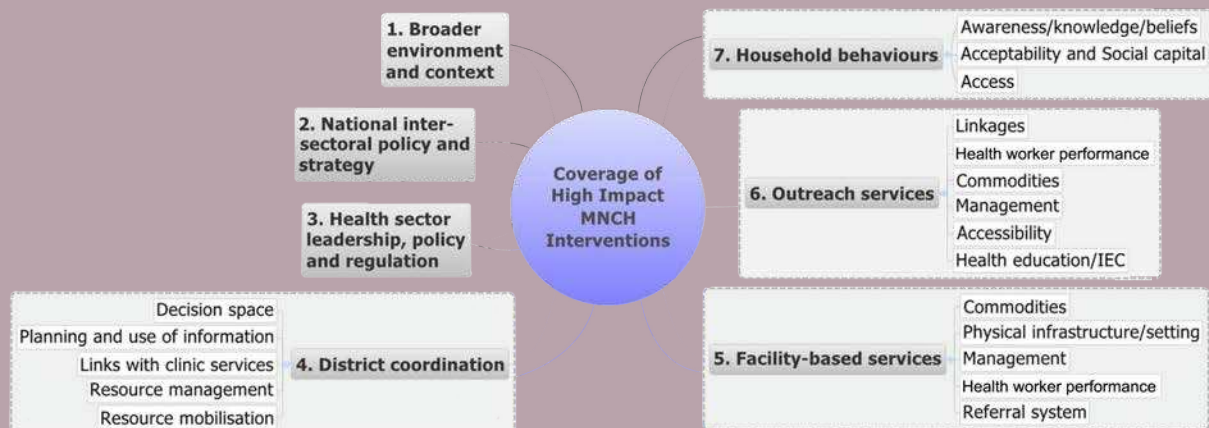
7. *The household behavioral level* represents demand awareness, knowledge and beliefs, acceptability, social capital, and access.

As Hanson et al (2003) note in the discussion of their framework, the organization of each of these levels and what they represent can be debated. In addition, there are multiple interactions among these levels that influence the quality coverage of services. One example of this is the impact of district management decisions regarding resource allocation on health services delivery at the facility level. In addition, at all levels it is important to consider the impact of competing goals – both health and non-health related. For example, at each operational level actors are struggling to meet multiple, pressing needs, and unexpected synergies or forced substitutions may lead to important implementation challenges.

While it is important to analyze the broader environment, context and national policies that exist, the four levels emphasized for analysis in this framework are the household behavioral, outreach services, clinical service delivery and district coordination levels. Figure 2 illustrates the critical components (major activities and resources) required to promote the quality coverage of services at these four operational levels.

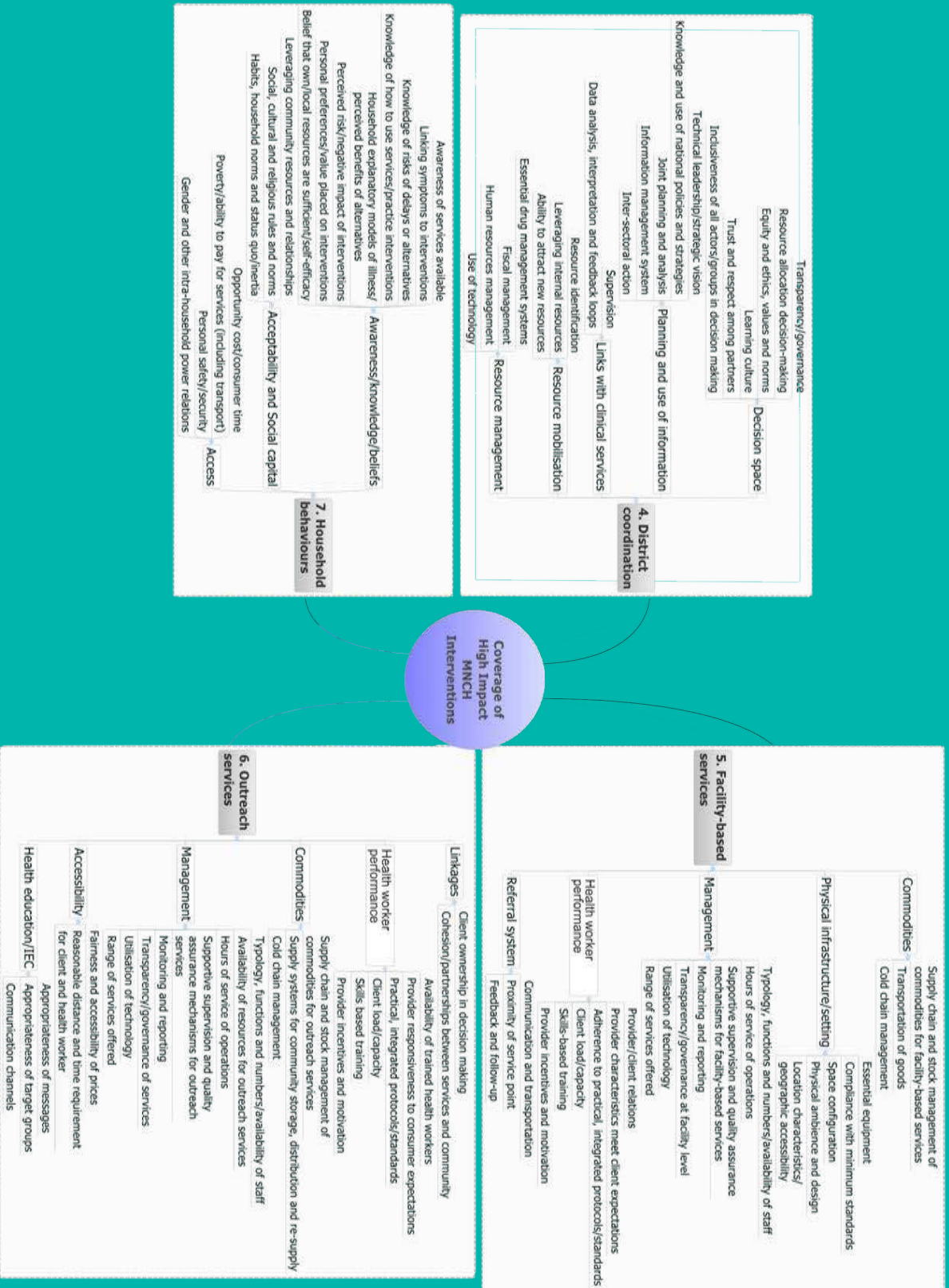
**Figure 2: Critical components that promote quality coverage of MNCH interventions at the district coordination, clinical service, outreach service and household behavioral levels**

Within each of the critical components outlined, specific characteristics that promote quality coverage must



be considered. For example, within “awareness/knowledge/beliefs” at the household behavioral level, some of the issues to consider include awareness of services available and knowledge of risks of delaying care or choosing alternative types of care. Issues to consider within “clinical performance” of facility-based services include adherence to practical, integrated protocols and standards and provider performance that is responsive to consumer expectations and provider incentives and motivation. Figure 3 provides illustrative examples of these characteristics, organized by critical component.

**Figure 3: Specific characteristics of district, clinical services, outreach services and household behavioral levels that can affect quality coverage of MNCH interventions**



### 3. Application of the framework

In this section, we outline a participatory research approach to identify, analyze, and prioritize implementation barriers using the Innovations conceptual framework.

#### Step 1: Analyze coverage gaps to identify a set of priority tracer MNCH interventions

**First, use existing data to choose tracer interventions for in-depth analysis**

Given the large number of efficacious MNCH interventions and the complexity that would be involved in analyzing each of their related implementation barriers in depth, it is helpful to choose a tracer set of interventions to focus the analysis from the start.

Using available data and policy/strategy documents, identify the current coverage of and national targets for a comprehensive list of effective MNCH intervention areas. As possible, include equity-oriented breakdowns of the data by locally relevant geographic and population

characteristics. The most recent country-specific Multiple Indicator Cluster Survey (MICS) and Demographic and Health Survey (DHS) are two potential data sources. Selection of tracer interventions might also take into account each intervention's potential impact on mortality using the Lives Saved Tool (LiST)<sup>2</sup> adjusted for the national context or other metrics such as Disability Adjusted Life Years (DALYs)<sup>3</sup>. Other factors to consider when choosing interventions might include the local political climate (for example, analysis of abortion care will be impractical in areas where abortion is not legal) and whether or not baseline coverage of the intervention is already at least moderately high (e.g., coverage above 60%). A brief rationale for why the intervention area was determined a priority or not can be incorporated into the coverage analysis table. Finally, discussions with key partners within the Ministry of Health or key non-governmental organizations may facilitate an appropriate short list of tracer intervention areas for in depth analysis.

**Table 1** provides an example worksheet for this activity, with a list of illustrative MNCH intervention areas. In addition, **Table 2** provides an example of how the Innovations team identified an initial list of tracer interventions in Malawi in June 2009.

Our desk review of baseline and target data yielded an initial “long list” of potential priority MNCH interventions for further analysis. To identify a smaller and more manageable number of tracer intervention areas, we then identified where each of the long listed interventions fit within a matrix of the MNCH continuum of care and the three proximal health system operational levels: household/behavioral, outreach services and facility-based services. Based on the placement of the long listed interventions, we were then able to choose a smaller number of tracer intervention areas representing various levels and stages within this matrix. **Table 3** provides an example of tracer interventions used in our research in Malawi.

2 More information on the LiST is available at: <http://www.jhsph.edu/dept/ih/IIP/list/index.html>

3 More information on DALYs is available at: [http://www.who.int/healthinfo/global\\_burden\\_disease/metrics\\_daly/en/index.html](http://www.who.int/healthinfo/global_burden_disease/metrics_daly/en/index.html)



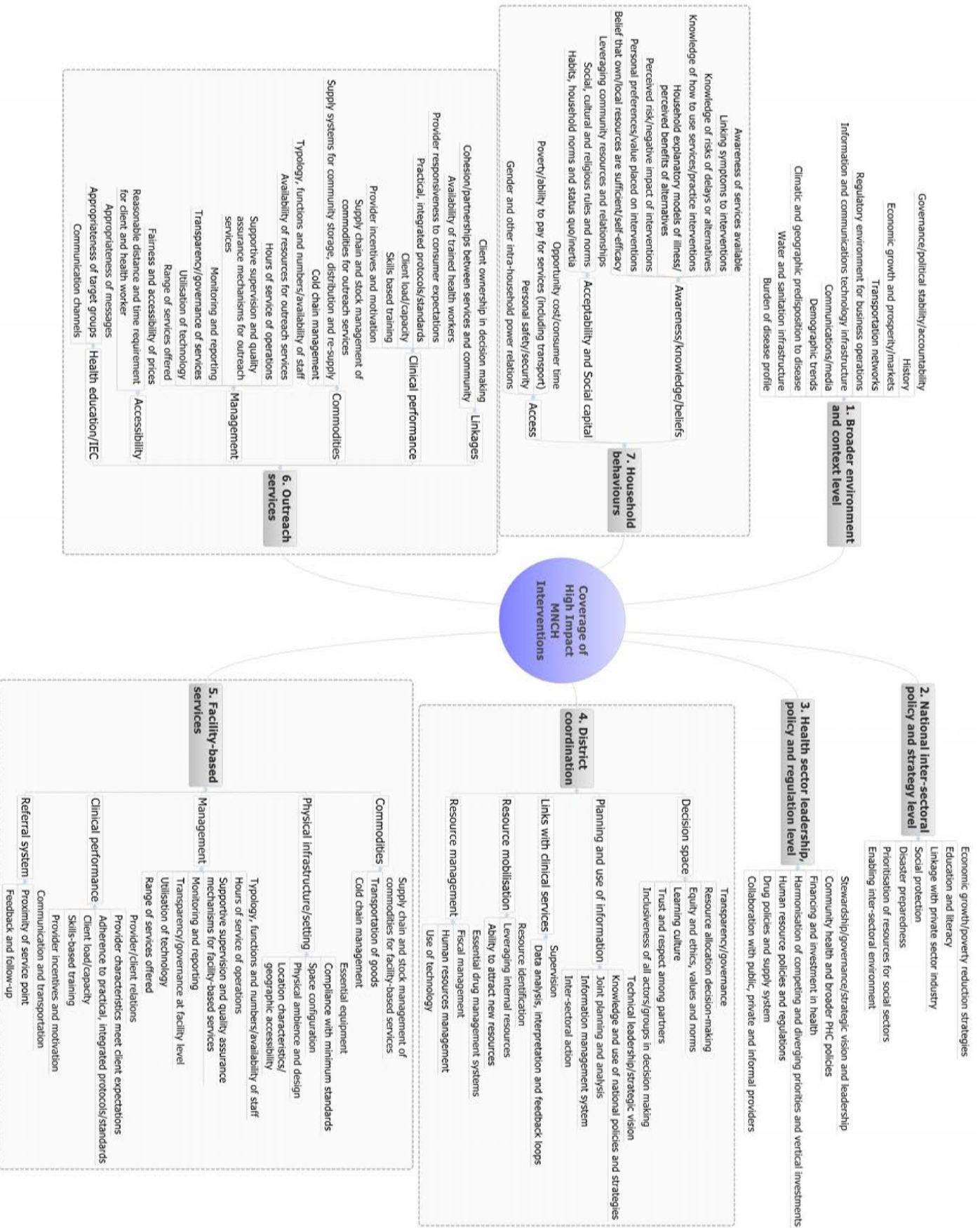
## Step 2: Categorize barriers

Once a core set of tracer intervention areas is identified for further analysis, create a plan for collecting existing and new data on barriers relating to each tracer intervention. Within this plan, give attention to eliciting the perspectives of disenfranchised segments of the population, preferably within districts or regions experiencing poor coverage.

**Next, collect existing and new data on barriers for each tracer intervention**

1. **Create a spreadsheet for compiling and examining data on implementation barriers.** **Table 4** provides an example template with sample data from Sierra Leone.
2. **Conduct a desk review** of existing policy/strategic documents, independent evaluations, reports and peer review literature for information on implementation barriers. Match barriers with specific characteristics in the health system framework (as shown in **Figure 3**) and enter data into spreadsheet.
3. **Conduct key informant interviews** with national (or state) level with relevant government program managers, NGO program staff, academic researchers, or other stakeholders as necessary. Again, match barriers with specific characteristics in the health system framework (**Figure 3**) and enter data into spreadsheet.
4. **Identify gaps in the knowledge base** that remain following the desk review and key informant interviews. Pay particular attention to existing inequities (e.g., around tracer interventions, perspectives of specific beneficiary or stakeholder groups, or geographical areas). For example, if no information is available on why women within certain communities do not utilize antenatal care services, this might be a priority research question for the primary data collection exercise.
5. **Identify target geographical areas for primary data collection.** Key factors to consider in selecting areas for research include local coverage data for tracer interventions, existing relationships with key stakeholders (which can facilitate access), and feasibility issues relating to the distance to travel and the number of areas to target based on the amount of time allocated for research.
6. **List types of participants to target** within research areas, using purposive sampling to focus on “unheard voices” (i.e., those who are not represented in existing data but who are key beneficiaries or who may have decision-making power over key beneficiaries). Examples include MNCH service users and non-users, husbands, mothers-in-law or other decision-makers within the home, front line health practitioners (public, private and informal), students, and private drug sellers. **Box 1** illustrates how this participatory research approach yielded different information on barriers from different informants in Malawi.
7. **Develop data collection instruments** for the various types of participants. Example instruments from research conducted in Sierra Leone in December 2009 are included in **Module 1**.
8. **Conduct interviews, focus group discussions and observation exercises.** Match the barriers identified with specific characteristics in the health system framework as shown in **Figure 4** and enter data into a spreadsheet. **Table 4** provides an example of how this was done in Sierra Leone.

**Figure 4: Conceptual Framework of the range of factors that support coverage of quality and effective MNCH interventions.**



**Box 1: Example of the importance of eliciting information on implementation barriers from multiple perspectives**

During the Innovations team’s research in Malawi in July 2009, key MNCH implementation barriers identified via the desk review correlated well with the barriers highlighted by national health decision-makers and researchers during key informant interviews (e.g., lack of health staff and financial resources).

The Innovations team noted that there was a dearth of available data on barriers from clients’ (or potential clients’) perspectives. They therefore collected new data in two districts with low coverage of the tracer MNCH interventions. As part of this effort, the research team held focus group discussions with “non-doers,” i.e., women who did not deliver at the health facility or did not bring their sick child to a formal health provider. In these discussions, women identified numerous barriers that were not well described in the desk review or by other sources. These barriers included neglect and harsh treatment by health workers, the amount of time it takes to seek care, and low supplies of drugs and supplies as the key reasons they do not utilize health services. In other focus group discussions, women who were attending antenatal care clinics stated that the main reasons they might not deliver their babies in the hospital related to whether they have a clean dress to wear at that time, whether they have all the items they are required to bring to the facility for a clean delivery (e.g., razor blade, blanket, string, etc) and whether they have their husbands’ or brothers’ permission to go.

**Step 3: Analyze and prioritize the barriers and “challenge areas” identified**

Throughout data collection, data entry and coding, look for patterns and relationships within the data. After data collection is finished, focus the analysis by sorting data by operational level and critical component. Highlight barriers that appear most prominent either because they were identified by numerous respondents, multiple respondent types, across data collection sites, or across intervention areas. Based on the most prominent barriers emerging, form “challenge areas” that capture the significant themes arising. These may be grouped within or across operational levels. **Table 5** provides an example of the emerging challenge areas identified in our research in Malawi.

In addition, graphic representations of barriers (as illustrated in **Figure 4**) may facilitate analysis and the identification of challenge areas. Various “mind map” software packages are available at no cost (e.g., XMind, Free Mind, Edraw Mind Map).

**Validation of emerging challenge areas**

The list of emerging challenge areas should then be validated with community level (especially beneficiaries of MNCH interventions), district level and national (or state) stakeholders. Validation has several objectives:

- to provide clarification and further explanation of the emerging findings as well as a critical assessment of whether or not there appear to be errors or implausible conclusions,
- to review assumptions made with regard to the relevance and impact of the identified challenge areas on coverage, and
- to better determine how the challenge areas are understood and perceived by various stakeholder groups.

Validation adds credibility to the research process. It also facilitates the early engagement of a range of stakeholders in determining which programs and/ or policies will be most effective in reducing or eliminating the identified barriers.

## 4. Pilot testing experiences

In 2009, Innovations used and documented this framework and research approach to engage a wide range of stakeholders in identifying barriers to quality coverage of effective MNCH interventions. These experiences have been documented in separate reports for Malawi, Sierra Leone and the state of Orissa, India. In each setting, it was necessary to select one challenge area in each country around which to issue a Call for Ideas. As a result, our validation consultations included mechanisms to assist gathered stakeholders in prioritizing one issue over the others. Key criteria utilized during these consultations to select one challenge area included:

- which barriers were deemed to be most problematic,
- which, if resolved, had the potential to eliminate other barriers,
- which related to existing positive practices and
- which were most likely to result in broad commitment and engagement.

Examples of the emerging challenge areas for Malawi are included in Table 5. A case study of how the validation exercises were done in Sierra Leone is described in Box 2.

### Box 2: Case study of how participants in validation activities in Sierra Leone selected one priority challenge area (December 2009)

#### Stage 1: District and community level validation

In district X, a meeting was held with representatives of the District Health Management Team, the district education office, the District Council, the Ministry of Agriculture and several non-governmental organizations (NGOs). After each potential challenge area was described to participants, the group was split into subgroups to discuss: whether or not the challenge area is solvable, the potential impact on mortality if the problem was solved, the ease with which the challenge area can be communicated across broad groups of people, and whether or not it is familiar/ recognized as a true problem.

In the same district, a meeting was held with community members including a Paramount Chief, Section Chief, local councilor, women's group leader, ceremonial chief, community para-veterinarian, police partnership board chairman, town chief, ward committee members, traditional court representatives, headmen and assistant headman, and other community members. Following a discussion of community members' interpretation of the challenge area, we asked participants to choose which they considered to be more important.

A final meeting was held in the same district with staff from five local NGOs. Following a discussion of participants' interpretation of the challenge area, we asked them to discuss: whether or not the challenge area is solvable, the potential impact on mortality if the problem was solved, the ease with which the challenge area can be communicated across broad groups of people, and whether or not it is familiar/ recognized as a true problem.

#### Stage 2: National level validation

An Innovations Challenge Day was held in Freetown with individuals representing NGOs, donors, and private sector entities including newspaper, radio and television companies. The day was chaired by the Acting Chief Medical Officer, the most senior civil servant in the Ministry of Health and Sanitation, and was attended by the chairperson of the parliamentary committee for health. The six emerging challenge areas were presented as "contenders" for selection and participants chose one challenge area to champion. Group debates, discussions and voting determined the strongest two contenders. Following the Innovations Challenge Day, further discussions were held between the Innovations team and the Ministry of Health and Sanitation, and one challenge statement was selected.

### Experience and lessons in each country

Using this research approach in three diverse settings, we were able to identify subtle yet important differences in barriers to high coverage of effective MNCH interventions. For example, while the poor performance of health workers was highlighted as a key barrier to MNCH care in all three Innovations target settings, we were able to identify specific performance issues relating to different cadre of health workers in each setting. Other examples of how we found the approach to be sensitive to the specific setting in which it was applied include its ability to facilitate

**This research approach yielded new information on barriers for women and children in Malawi, Sierra Leone and Orissa**

identification of:

- communication problems with particular population sub-groups,
- the extent to which individual policies and programs have been rolled out across various districts (and the extent to which they are resulting in positive change), and
- the identification of inequities in gender and intra-household power relations by sub-group and region.

It is important to note that the specific wording used to convey challenge areas (both in English and after translation) proved to be particularly important, provoking some strong reactions and misunderstandings. We suggest that market research be conducted in all languages deemed relevant locally, and consultations be held with stakeholders to ensure that the research findings are appropriately communicated to local audiences.

A primary objective of our research was to capture the barriers identified as most important by “unheard voices.” As a result, groups and key informants from communities and points of service delivery were purposively targeted as the main sources of primary data, with a smaller number of consultations at district and national level. Due to this weighting, the majority of barriers identified relate to the household/ behavioral, outreach and facility-based operational levels of our conceptual framework. Other research efforts may aim to capture different perspectives and therefore may prioritize alternative respondents and sources of information.

Our experiences demonstrate other flexible aspects of this approach. It was applied over several months across diverse geographic locations, and enabled us to identify barriers at district, state and national levels. We believe it can also be of use to identify barriers at village, community, sub-district or chiefdom levels. It can also be used quite quickly, as it is not resource intensive and the analysis and data collection functions can be separate. Our research efforts took between 4-8 weeks to complete in each country.

Finally, these pilot experiences have enabled us to improve the framework. In particular, we have clarified and re-worded some characteristics of the health system model to reduce overlap between some specific characteristics and eliminate ambiguity. It is a live framework, and relevant changes to the model can be made as they are identified.

## 5. Summary

The conceptual framework and research approach described here were designed to support the Innovations initiative and our partners in efforts to uncover implementation challenges at different health system operational levels. Following the identification of barriers (conducted in conjunction with a multi-sectoral group of in-country partners) and ultimately a core set of “challenge areas,” the Innovations team solicited ideas for innovative solutions to these challenges.

The research produced a wealth of information that is of relevance for stakeholders across the three countries and to a wider audience. The findings can contribute to a better understanding of the MNCH context and can also facilitate evidence-based advocacy efforts by governments, donors and NGOs to use their resources in a more effective way to deliver high impact MNCH interventions.

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## 7. Glossary of terms

**Barrier:** Problems relating to the specific characteristics (within the critical components) identified in our proposed model of the health system. In particular, these are problems that obstruct or impede coverage. Hanson et al (2003) have defined them as “obstacles that restrict or limit the pursuit of desired goals. [These can include] inputs..., systems, processes, incentives and values or norms.”

**Challenge area:** A grouping of identified barriers that impact coverage of high impact MNCH interventions.

**Critical component:** The major activities and resources required at each operational level to promote the coverage of MNCH interventions.

**Continuum of care:** The continuum of care for maternal, neonatal, and child health refers to the set of interventions that ensure health from preconception, pregnancy, childbirth, the postnatal period, through childhood and adolescence. This continuum requires access to care provided by families and communities, by outpatient and outreach services, and by clinical services throughout the lifecycle. Saving lives depends on high coverage and quality of integrated service-delivery packages throughout the continuum, with functional linkages between levels of care in the health system and between service-delivery packages, so that the care provided at each time and place contributes to the effectiveness of all the linked packages. (Source: [http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(07\)61578-5/fulltext](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(07)61578-5/fulltext))

**Coverage:** The extent to which an intervention reaches those in need. Also see universal coverage, below.

**DALYs:** One DALY can be thought of as one lost year of “healthy” life. The sum of these DALYs across the population, or the burden of disease, can be thought of as a measurement of the gap between current health status and an ideal health situation where the entire population lives to an advanced age, free of disease and disability. DALYs for a disease or health condition are calculated as the sum of the Years of Life Lost (YLL) due to premature mortality in the population and the Years Lost due to Disability (YLD) for incident cases of the health condition:

$$DALY = YLL + YLD$$

YLL correspond to the number of deaths multiplied by the standard life expectancy at the age at which death occurs. The basic formula for YLL (without yet including other social preferences discussed below), is the following for a given cause, age and sex:  $YLL = N \times L$  where  $N$  = number of deaths and  $L$  = standard life expectancy at age of death in years.

Because YLL measure the incident stream of lost years of life due to deaths, an incidence perspective is also taken for the calculation of YLD. To estimate YLD for a particular cause in a particular time period, the number of incident cases in that period is multiplied by the average duration of the disease and a weight factor that reflects the severity of the disease on a scale from 0 (perfect health) to 1 (dead). The basic formula for YLD is the following (again, without applying social preferences):

$$YLD = I \times DW \times L$$

where  $I$  = number of incident cases,  $DW$  = disability weight, and  $L$  = average duration of the case until remission or death (years).

(Source: [http://www.who.int/healthinfo/global\\_burden\\_disease/metrics\\_daly/en/](http://www.who.int/healthinfo/global_burden_disease/metrics_daly/en/))

**Equity:** The absence of systematic disparities in health (or in the major social determinants of health) between groups with different levels of underlying social advantage/disadvantage—that is, wealth, power, or prestige. (Source: <http://jech.bmj.com/cgi/content/full/57/4/254>)

**Health system:** The health system represents organized linkages between community, services and health



institutions in order to improve population health. In 2006, the World Health Organization adopted the following definition: A health system includes all actors, institutions and resources that undertake health actions – where a health action is one where the primary intent is to improve health. Although the defining goal of a health system is to improve population health, other intrinsic goals are to be responsive to the population they serve, determined by the way and the environment in which people are treated, and to ensure that the financial burden of paying for health is fairly distributed across households. Four key functions determine the way inputs are transformed into outcomes that people value – resource generation, financing, service provision and stewardship.

**Intervention:** A program or service that prevents or treats a disease or condition, or promotes a healthy behavior. In this framework, we consider a distinction between behavior-based, outreach and facility-based interventions.

**Innovation:** The term innovation refers to a new way of doing something. It may refer to incremental, radical, and revolutionary changes in thinking, products, processes, or organizations. A distinction is typically made between invention, an idea made manifest, and innovation, ideas applied successfully (McKeown 2008). In many fields, something new must be substantially different to be innovative, not an insignificant change, e.g., in the arts, economics, business and government policy. In economics the change must increase value, customer value, or producer value. The goal of innovation is positive change, to make someone or something better. Innovation leading to increased productivity is the fundamental source of increasing wealth in an economy. (Source: <http://en.wikipedia.org/wiki/Innovation>)

**Indicator:** A health indicator is a characteristic of an individual, population, or environment which is subject to measurement (directly or indirectly) and can be used to describe one or more aspects of the health of an individual or population (quality, quantity and time). Health indicators can be used to define public health problems at a particular point in time, to indicate change over time in the level of the health of a population or individual, to define differences in the health of populations, and to assess the extent to which the objectives of a program are being reached. Health indicators may include measurements of illness or disease which are more commonly used to measure health outcomes, or positive aspects of health (such as quality of life, life skills, or health expectancy), and of behaviors and actions by individuals which are related to health. They may also include indicators which measure the social and economic conditions and the physical environment as it relates to health, measures of health literacy and healthy public policy. This latter group of indicators may be used to measure intermediate health outcomes, and health promotion outcomes. (Source: [http://www.who.int/hpr/NPH/docs/hp\\_glossary\\_en.pdf](http://www.who.int/hpr/NPH/docs/hp_glossary_en.pdf))

**LiST (Lives Saved Tool):** This new computer-based tool allows users to set up and run multiple scenarios to look at the estimated impact of different intervention packages and coverage levels for their countries, states or districts. These scenarios, developed with the LiST tool, provide a structured format for program managers or ministry of health personnel to combine the best scientific information about effectiveness of interventions for maternal, neonatal and child health with information about cause of death and current coverage of interventions to inform their planning and decision-making, to help prioritize investments and evaluate existing programs. (Source: <http://www.jhsph.edu/dept/ih/IIP/list/index.html>)

**MBB (Marginal Budgeting for Bottlenecks):** The MBB is an analytical costing and budgeting tool developed by teams from the World Bank's Africa Region, South Asia region and HNP Anchor, jointly with UNICEF and the World Health Organization. The tool has been developed in the context of HIPC and PRSP to respond to the request of low-income countries to plan, cost and budget marginal allocations to health services and assess their potential impact on health coverage, MDGs related health outcomes and health outcomes of the poor. The MBB mainly addresses the following five questions:

- Who does what? Which high impact interventions can be integrated into existing providers/service delivery arrangements to accelerate progress towards the health MDGs?
- What are the major hurdles or “bottlenecks” hampering the delivery of health services, and what is the potential for their improvement?
- How much money is needed for the expected results?

- How much can be achieved in health outcomes such as mortality reduction by removing the bottlenecks?
- Which amounts of financing is it possible to mobilize and how should these be allocated and channeled?

(Source: [http://www.gavialliance.org/resources/14\\_MBB\\_Concept\\_paper.pdf](http://www.gavialliance.org/resources/14_MBB_Concept_paper.pdf))

Millennium Development Goals 4 & 5: In September 2000, building upon a decade of major United Nations conferences and summits, world leaders came together at United Nations Headquarters in New York to adopt the United Nations Millennium Declaration, committing their nations to a new global partnership to reduce extreme poverty and setting out a series of time-bound targets - with a deadline of 2015 - that have become known as the Millennium Development Goals. Goal 4 is to reduce by two thirds, between 1990 and 2015, the under-five child mortality rate. Goal 5 is to reduce by three quarters the maternal mortality ratio and to achieve universal access to reproductive health.

(Source: <http://www.un.org/millenniumgoals/bkgd.shtml>)

**Operational level:** In our proposed model of the health system, operational levels represent the various structures, resources, actors and institutions that impact on maternal, newborn and child health at the national, district, community and household levels.

**Universal coverage:** Access to key health promotion, preventive, curative and rehabilitative health interventions for all, at an affordable cost, thereby achieving equity in access. Incorporates two dimensions: depth (health care coverage as in adequate health care) and width (population coverage).

(Source: <http://www.wpro.who.int/NR/rdonlyres/DAE2BD50-2706-43E3-9E50-CC6DFD1F7C73/0/glossary.pdf>)

## Module 1: templates and tools

**Table 1:** Worksheet to identify equity-based coverage of high impact MNCH intervention areas

Interventions	Nationally defined indicators and targets	Most recent national coverage estimate	Coverage among poorest quintile	Geographic variance (e.g. across districts, regions)	Potential impact (e.g. as identified using the Lives Saved Tool)	Is this a potential priority intervention area? (Yes/No)
<b>ADOLESCENCE/ PRECONCEPTION</b>						
Adolescent sexual reproductive health						
Use of modern contraceptives to prevent unwanted pregnancies						
Child spacing 3 to 5 years						
<b>ANTENATAL</b>						
Prevention of malaria in pregnancy (sleeping under treated bednets, intermittent presumptive treatment for malaria)						
Focused antenatal care: 4 visits (vaccinations, early recognition of complications, iron folate supplementation)						
PMTCT in HIV epidemic settings						
<b>DELIVERY/ POSTPARTUM</b>						
Skilled delivery attendance						
Emergency obstetric care						
Postnatal check-up within first 2 days						
Essential newborn care (warming newborn, immediate breastfeeding, clean cord care)						
<b>CHILD</b>						
Exclusive breastfeeding to six months of age						
Complementary feeding 6-24 months						
Vitamin A supplementation						
Full immunizations						
Sleeping under insecticide treated bednets						
Treatment of pneumonia symptoms with antibiotics						
Treatment of febrile child with efficacious antimalarials						
Rehydration of sick child						
Treatment of diarrhea with zinc						
Treatment of severe acute malnutrition with ready to use therapeutic foods (RUTF)						

**Example data collection instruments (Sierra Leone, December 2009)**

**Instrument 1: District health management team**

**Objectives:**

Focal Interventions: FP, Delivery, PNC, vit A

- o Introduce research purpose and method
- o Brainstorm barriers on 4 interventions
- o Select geographic locations of research

**Method:**

Focus group discussion with DHMT (priority is with leaders and those with a detailed, broad knowledge of health services and activities in the district) to introduce study objectives and schedule.

**Guide:**

**Step 1: Introductions, share summary of research protocol and preliminary schedule (preferably send in advance of the meeting).**

**Step 2: Free listing of implementation challenges for all interventions of the study. (Don't miss supply chain, planning, and M&E.)**

**Step 3: Select the study areas**

Collect information on numbers of health facilities by type within the district. Remember to include private, non-profit and for-profit clinics in the list.

Criteria for selecting two catchment sites:

- Lower performing area in terms of either skilled delivery coverage or EPI
- Reachable within 3 hours by vehicle
- One is an MCH Post and the other a Community Health Centre (private clinics will be visited separately).
- Representative of staffing and services available to the rest of the district

Also plan for hospital visit.

**Step 4: Wrap-up discussion**

- Encourage district health workers contribution of ideas and enquire about how information about the competition could best get to them and how they might develop their ideas
- Discuss protocol for visiting the areas and ensure the team can proceed without a district level host accompanying them.
- Note will need two people on day one for preparing sites for field work on this same day.
- Invite to analysis meeting

**Instrument 2: “Non-user” mothers for sick child treatment,  
delivery in health facility and postnatal care**

**Objectives**

Interventions: Delivery, PNC, Sick child

- o Explore why mothers didn't deliver at facility and what barriers exist to receiving PNC at facility or community
- o Barriers to care seeking for sick children at facility and community
- o Collect some basic information from “doers” by default – their opinions or what were the main difficulties when they did seek care

**Method**

Selection of households should be purposive; encourage community members to point you towards cases to speed up the process of finding them.

Team should work as one interviewer and one note taker.

Provide standard introduction once you find a woman with a child under five who has been sick in the past month.

**Key questions to cover:**

**Sick Child**

- When did you first notice that the child was sick and what were the symptoms?
- How old is the child and what is his/her sex?
- At what stage did you first seek care outside of the home (estimate number of days after symptoms appeared)?
- Who did you seek care from and what treatment was provided?

**Note if 1st care provider is a distributor for fever or a blue flag volunteer for diarrhea or a PHCU (CHC, MCH or PHU Post) then move to delivery and post-natal care questions.**

- Why did you choose to go to an informal provider at first? (Inquire about availability, quality of care, cost if not mentioned)
- Was there any discussion within your family about when to seek help for the sick child? Who made the decision about what to do?

**Delivery and PNC:**

- How many children do you have? When did you have your last child?
- Differences between what she did when she had her first child and most recent
- Reasons why she did what she did?
- Have you heard women talking about delivering in the health facility? Where did they go?
- What is your opinion of this? Would you deliver in health facility? Why not /what are the barriers?
- After delivering, what happens with you and they baby?
- Ask about differences in PNC at home and in facility? Is there referral? What are the benefits of going for PNC? Is there any reason mother and baby should stay with a nurse for 1-2 days after delivery?

**Instrument 3: District stakeholders such as counselors, CSOs**

**Objectives**

Interventions: ITN-p, EXCLUSIVE BF, Sick child, vit A

(But if CSO is specialized, then focus on their interventions)

- o Brainstorm barriers to 4 interventions
- o Explore links between traditional and formal health system
- o Explore district coordination and management constraints
- o Identify biggest hopes for change in health system
- o Discuss call for ideas and receiving ideas to get inputs

**Methods**

Key informant interview with the District Coach; small group, semi-structured interviews with Civil Society Organizations operating in more than one ward in the district.

1. What are the barriers to ITN use by pregnant women in this district?
2. What are the reasons that women in this district don't exclusively breastfeed babies for 6 months? Why do they use other food or water?
3. What do women in this district do when their baby is sick? Are there differences, depending on the type of sickness? Who provides care? Why do they not always get treated at a health facility?
4. Do you know how vitamin A is delivered to children under 5 in this district? Do all children under 5 get vitamin A twice per year? If not, what are the reasons that they do not?
5. Are there any links between TBAs and health facilities in this district? Do traditional healers have a role?
6. Are there any coordination problems in the district? Does everyone know what everyone else is doing in maternal and child health? Are there any major management constraints at district level?
7. What would you like to see change in the health system?
8. After we identify the key barriers, there will be a chance for everyone in the district to enter ideas and solutions. What would be a good way to reach people in this district, especially at community level? How could we collect ideas from all across the country?

### **Instrument 4: Women's group leaders**

#### **Objectives**

Interventions: Delivery, PNC, EXCLUSIVE BF

- o Brainstorm barriers to 3 interventions
- o Particular focus on household level barriers (gender, social, traditional)
- o What IEC (Information/Education/Communication) approaches are going on relevant to these interventions?

#### **Methods**

Key informant interview with the District Coach

#### **Questions**

1. Do the mothers in the village ever come to you with health problems?
2. Are the mothers with infants breastfeeding well in your village? Do they give anything else to young babies? What do they give? When do they start introducing other liquids? When do they start introducing food? Why do they start at that age? What are the barriers that mothers face trying to better breast feed their infants here?
3. In the first day after the birth of a baby in the community, where do the mother and baby stay? Is the mother treated any differently (e.g. special foods) during this time? Why?  
  
Are there any people who come and check on the condition of the mother and baby after birth? If so, who? What do they do?  
  
Thinking about a recent birth in this community, did the mother and child go to the health facility? What were the circumstances and when did they go? What happened at the clinic?  
  
After the baby is born, when should the mother and baby go the health post? What services are they supposed to get? Does anyone check the baby? Who, and what do they check for?
4. As community leaders, are you linked to the promotion or delivery of health services in anyway? How is the communication between the health service providers and community leaders? (campaigns)
5. If one major thing could be changed in how health services are delivered in your area, what would that be? If the change happened, what would be different for the mothers and children in your community?

**Instrument 5: Traditional local leader (eg Chief, Headsman)**

**Objectives**

Interventions: ITN-p, Delivery

- o Brainstorm barriers to 2 interventions
- o Particular focus on household/community barriers (gender, social, traditional)

**Methods**

Semi-structured, key informant interview

**Questions**

1. Do the mothers in the village ever come to you with health problems?
2. We are informed that less than 1/2 of pregnant women are sleeping under mosquito nets. What are the barriers that prevent all expecting mothers from sleeping under ITNs?
3. Likewise only ½ of all expecting mothers deliver their babies at the PHU or hospital. What are the barriers that keep all expecting mothers from having a trained health worker assist their deliveries?
4. As community leaders, are you linked to the promotion or delivery of health services in any way? How is the communication between the health service providers and community leaders? (campaigns)
5. If one major thing could be changed in how health services are delivered in your area, what would that be? If the change happened, what would be different for the mothers and children in your community?



**Instrument 6: Fathers of the poorest households with children under-five or expecting (pregnant) women**

**Objectives**

Interventions: ITN-p, EXCLUSIVE BF

- o Brainstorm barriers to 2 interventions

**Methods**

Semi-structured, small group interview with 6-9 men with children under-five that are identified by the village headman as among the poorest socio-economic groups.

Note, when arranging with the village headman, please ask what criteria he'll use to select the poorest households and note it for the report.

**Questions**

1. What are the most important things to you in regards to safeguarding the health of your family?
2. From your perspective, how big of a problem is malaria for a pregnant woman? Can anything be done to safeguard them? How do you feel about mosquito nets? Do you have them in your house hold? Did you wife get a net during her last pregnancy? Did she use it? (Probe why or why not)
3. Does/did your wife breastfeed your youngest child? For how long? Why did she stop? Some women do not breastfeed for 6 months or give their baby other food or water. Why do you think this is?
4. If one major thing could be changed in how health services are delivered in your area, what would that be? If the change happened, what would be different for your family?

## **Instrument 7: Private drug sellers**

### **Objectives**

Interventions: ITN-p, Sick child

- o Brainstorm barriers to 2 interventions
- o Seek local guidance on terminology to use for the call for ideas and idea receiving (re: barriers, bottlenecks, innovation, solutions)

### **Method**

Individual, semi-structured interview.

Introduce self and purpose of visit. Ensure confidentiality of information.

### **Questions**

1. What is your opinion regarding the availability and quality of health services for women and children in this area?
2. Low cost, life saving drugs exist to save the lives of sick children. However, in many places, families with sick children struggle to get the right treatment for their child and the result is a very high number of child deaths in Sierra Leone. What are the barriers sick children face to get the treatment they need?
3. Do you ever see any sick children? Tell us about the last time a sick child was seen by you..... inquire about symptoms, whether they physically saw the child, what was wrong and how she was treated). How many sick children do you see in a given month? Do you ever refer a child for more treatment? If so, ask: In which cases? To whom do you refer families?
4. Do you have treatments for malaria, acute respiratory infections or diarrhea? Talk about supply, demand, costs. Any support (training, coaching on use with PHUs or hospital staff).
5. We have heard that most women do not sleep under nets when they are pregnant. We are wondering why this is. From your perspective, what are some of the barriers to pregnant women using ITNs? Where can they get ITNs? Do you sell them? (if so, who buys them? For what purpose?)
6. What do you think are the biggest problems/blockages/bottlenecks between the government's efforts to delivery health services to the population?
7. Has anyone ever asked you how some of these problems can be fixed?
8. If the government wanted to reach out to all Sierra Leoneans to share their ideas on how to overcome these problems related to the delivery of health services for women and children, what would be the best way for them to reach people and gather their ideas?

## **Instrument 8: Students**

### **Objectives**

Interventions: ITN-p, EXCLUSIVE BF

- o Discuss the importance of 2 interventions, engage the students
- o Explore students' understanding of the barriers, before and after they investigate
- o Explore possible mechanisms for soliciting ideas through schools (also talk to teachers)

### **Method**

Notify school headmaster of request at least one day in advance. Ask him/her to select 8-10 of the most outgoing male and female students from Junior Secondary School (JSS), ages 13-14.. The male and female sessions should be scheduled separately and spaced 2 hours apart unless multiple facilitators are available. Each group should be no more than 20 students.

The first encounter is designed to prepare students to conduct a family inquiry. Students are not given a formal structured discussion guide but equipped through role plays about how to raise questions and politely probe.

The specific health practices should be limited to no more than two to avoid overcharging the group. In some cases, it may be best to only focus on one practice (suggestion is to use ITNs for boys and EBF for girls).

### **Introduce self and purpose of visit. Ensure confidentiality of information.**

First encounter

*Step 1: Start with introductions and then ask students about common songs, dances or jokes done in the community during festivals or when they are happy. Choose one of the methods and do it together to help the students feel more comfortable.*

*Step 2: Open discussion about child health and the importance of exclusive breastfeeding to six months and sleeping under nets especially for pregnant women.*

Introduce the topic of discussion. This activity should cover the objective of your visit to the school or where you meet the students. The exercise should also include asking students about their fears and expectations so that they are able to discuss freely.

Introduce the focus implementation challenge areas. This exercise could begin by asking participants about their knowledge, attitude and perception of the focus challenge areas.

*Step 3: Ask them if they know what had happened in their own situations (e.g. whether pregnant family members or neighbors are sleeping under nets and length of time before introduced foods or other liquids).*

*Collectively explore reasons why mothers struggle with each of these optimal practices from the students' perspectives.*

*Step 4: Make homework proposal to students to talk with own parents or guardians about the focus areas. Before departing conduct a role play to demonstrate how the student would introduce the topic to their guardians or parents.*

*Step 5: Agree on date and time for second encounter (normally next day). Close the day with a song or dance or any other activity from their community.*

### **Second encounter (next day)**

*Step 6: Start the activity with a song or dance or any other major activities from their community areas. Ask one of the students to give a brief recap of what happened the previous day. Then summarise all the other discussions from day one.*

*Step 7: Let each student present on the discussions she or he had with her or his parents/guardians. Record the responses and categorise them according to thematic areas.*

*Step 8: Go through the categorised responses and put the students into groups to discuss the underlying causes. After the discussion, let students present what they have discussed.*

*Step 9: Finally, in groups or working in pairs, let students brainstorm on how they (students) could be involved in finding solutions to the problems and the underlying causes identified or how their school could help solve the challenges.*

*Step 10: Close the activity with a song or any other activity.*

**Instrument 9: Health Facility (PHU)**

**Objectives**

Interventions: FP, ITN-p, Delivery, PNC, EXCLUSIVE BF, Sick child, vit A (All)

- o Rapidly collect information about use of health services, staff, supervision
- o Observe site re: infrastructure, workloads, drug availability, patient/provider interactions
- o Gather health providers' perspectives about challenges to all interventions

**Method**

Interview health provider in-charge, group discussion with staff, and facility walk through.

**Step 1: Request a quick tour through the health facility.**

Observation areas	Key aspects to consider	Comments
Consultation areas	privacy, patient table, job aides, registration books	
Waiting areas	Reception, adequacy of sitting areas, health promotion materials	
Delivery room	number and condition of delivery beds, postpartum beds, lighting (natural or other), water, cleanliness, resuscitation mask	
Drug storage	accessible to workers, security, organization	
Laboratory (where available)	Microscope, reagents, gloves	
Other infrastructure consideration	availability of patient toilets, cooking areas, water supply and storage	

Other observations:

**Step 2: Interview with MCH Aide/in-charge and available staff. Ask them about the main barrier they see to each of the interventions. Ask about basic facility information. Refer to records and reports where available:**

- Catchment population
- Number of communities they serve
- Walking distance (time or KM) for furthest communities
- What constraints they have to doing outreach
- Availability of community health actors

How many staff are working today versus number dedicated to the health facility? (Please explain absences.)

- clinical staff
- auxillary workers
- other support staff

**Step 3: Collect information from staff about the client load:**

Refer to registers and comment on availability and maintenance of records

Services	Number in past week	Comments
Sick children		
1st ANC visit		
Deliveries		
Postpartum consultations		

Step 4: Ask team their opinions about the three biggest constraints to ensuring that every mother and child receives the full MNCH package of services? Explore constraints at the household, outreach and clinical delivery levels as well as any bottlenecks at the national level.

Step 5: Inquire about current availability and any stock out in the past 3 months of the following

<b>Drugs and supplies</b>	<b>Available at time of visit</b>	<b>Stockouts</b>
ACT		
ORS packets		
Zinc		
Cotrimaxole (front-line antibiotic for pneumonia)		
IV fluids/ringer lactate		
Vitamin A supplements		
Long lasting ITNs		

Step 6: Ask the date of the last supervision visit from the district. Ask if the supervisor signed the guest book and ask to verify.

Inquire about who came, what they did, and whether there was anything that was particularly helpful that happened. Any thoughts about what could be done better. Instrument 10: Religious Leaders at community level

## **Instrument 10: Religious Leaders at community level**

### **Objectives**

Interventions: FP, vit A

- o Brainstorm barriers to 2 interventions

### **Methods**

Semi-structured, small group interview with all religious leaders available in the community.

### **Questions**

1. Do community members ever come to you when facing health problems or questions?
2. Do you think there are men and women in this community who don't want to have any more children, or want to space their children? What methods do they use? Do they use any modern family planning methods? Do you have any opinion on these methods? What are the barriers that couples in your community are facing to use these services?
3. Nearly  $\frac{1}{2}$  of all children under-five are not receiving Vitamin A supplements on a routine basis. What are the barriers that the community is facing in achieving the goal of all children under-five to receive vitamin A supplements?
4. As community leaders, are you linked to the promotion of health services in anyway? How is the communication between the health service providers and the community?
5. If one major thing could be changed in how health services are delivered in your area, what would that be? If the change happened, what would be different for the mothers and children in your community?

### **Instrument 11: Volunteers and community distributors**

#### **Objectives**

Interventions: Sick child, vit A

- o Brainstorm barriers to 2 interventions
- o Seek local guidance on terminology to use for the call for ideas and idea receiving (re: barriers, bottlenecks, innovation, solutions)

#### **Methods**

Semi-structured, small group interview with all volunteers and community distributors available in the community.

#### **Questions**

1. What is your opinion regarding the availability and quality of health services for women and children in this area?
2. Low cost, life saving drugs exist to save the lives of sick children. However, in many places, families with sick children struggle to get the right treatment for their child and the result is a very high number of child deaths in Sierra Leone. What are the barriers sick children face to get the treatment they need?
3. Do you ever see any sick children? Tell us about the last time a sick child was seen by you..... inquire about symptoms, whether they physically saw the child, what was wrong and how she was treated). How many sick children do you see in a given month? Do you ever refer a child for more treatment? If so, ask: In which cases? To whom do you refer families?
4. Do you have treatments for malaria, acute respiratory infections or diarrhea? Talk about supply, demand, costs. Any support (training, coaching on use with PHUs or hospital staff).
5. Nearly ½ of all children under-five are not receiving Vitamin A supplements on a routine basis. What are the barriers that the community is facing in achieving the goal of all children under-five to receive vitamin A supplements?
6. What do you think are the biggest problems/blockages/bottlenecks between the government's efforts to delivery health services to the population?
7. Has anyone ever asked you how some of these problems can be fixed?
8. If the government wanted to reach out to all Sierra Leoneans to share their ideas on how to overcome these problems related to the delivery of health services for women and children, what would be the best way for them to reach people and gather their ideas?

**Instrument 12: Private health facilities (non-profit and for-profit)**

**Objectives**

Interventions: FP, PNC, Sick child (but tailor to services offered eg. FP for Marie Stopes)

- o Rapidly collect information about use of health services, staff, supervision
- o Observe site re: infrastructure, workloads, drug availability, patient/provider interactions
- o Explore barriers to 3 interventions delivered through private facilities

**Method**

Interview health provider in-charge, group discussion with staff, and facility walk through.

**Step 1: As a starting point, request a quick tour through the health facility.**

Observation areas	Key aspects to consider	Comments
Consultation areas	Privacy Patient table Job aides Registration books	
Waiting areas	Reception Adequacy of sitting areas Health promotion materials	
Delivery room	Number and condition of delivery beds Postpartum beds Lighting (natural or other) Water Cleanliness Resuscitation mask	
Drug storage	Accessible to workers Security Organization	
Laboratory (where available)	Microscope Reagents Gloves	
Other infrastructure consideration	Availability of patient toilets And cooking areas Water supply and storage	

Other observations:

**Step 2: Interview with MCH Aide/in-charge and available staff. Ask about basic facility information. Refer to records and reports where available:**

- Catchment population
- Number of communities they serve
- Walking distance (time or KM) for furthest communities
- What constraints they have to doing outreach
- Availability of community health actors

How many staff are working today vs. number dedicated to the health facility:

- Clinical staff
- Auxillary workers
- Other support staff

If there are absences, please explain



**Step 3: Collect information from staff about the client load:**  
 Refer to registers and comment on availability and maintenance of records:

<b>Services</b>	<b>Number in past week</b>	<b>Comments</b>
Sick children		
1st ANC visit		
Deliveries		
Postpartum consultations		

**Step 4: Ask team their opinions about the three biggest constraints to ensuring that every mother and child receives the full MNCH package of services? Explore constraints at the household, outreach and clinical delivery levels as well as any bottlenecks at the national level.**

**Step 5: Inquire about current availability and any stock out in the past 3 months of the following**

<b>Drugs and supplies</b>	<b>Available at time of visit</b>	<b>Stockouts</b>
ACT		
ORS packets		
Zinc		
Cotrimaxole (front-line antibiotic for pneumonia)		
IV fluids/ringer lactate		
Vitamin A supplements		
Long lasting ITNs		

### **Instrument 13: Youth (male)**

#### **Objectives**

Interventions: FP, ITN-p

- o Explore their understanding of family planning and the barriers they perceive. Do they pose any challenges to FP use?
- o Explore the value they place on ITNs, then focus on what prevents PW from sleeping under ITNs

#### **Methods**

Semi-structured, small group interview with all religious leaders available in the community.

#### **Questions**

1. Are you married? Do you have children? Do you want to have more children or do you have enough? Why?
2. Do you think there are men and women in this community who don't want to have any more children, or want to space their children? What methods do they use? Do they use any modern family planning methods? Do you have any opinion on these methods? What are the barriers that couples in your community are facing to use these services?
3. We have heard that most women do not sleep under nets when they are pregnant. We are wondering why this is.
4. Has your wife/mother/female relation been pregnant recently? Does/did she sleep under an ITN? Why? From your perspective, what are some of the barriers to pregnant women using ITNs? Where can they get ITNs?
5. What do you think are the biggest problems/blockages/bottlenecks between the government's efforts to delivery health services to the population?
6. Has anyone ever asked you how some of these problems can be fixed?
7. If the government wanted to reach out to all Sierra Leoneans to share their ideas on how to overcome these problems related to the delivery of health services for women and children, what would be the best way for them to reach people and gather their ideas?

### **Instrument 14: Traditional Birth Attendants (TBAs)**

#### **Objectives**

Interventions: Delivery, PNC, EXCLUSIVE BF

- o Identify services provided by TBAs regarding delivery and PNC and barriers at community level
- o Do they promote EXCLUSIVE BF/what is preventing women to EXCLUSIVE BF?
- o Explore their attitude to health facility delivery and PNC
- o Biggest change they would hope for to improve maternal, newborn and child survival

#### **Methods**

Semi-structured, small group interview with all TBAs available in the community.

#### **Questions**

1. What is your opinion regarding the availability and quality of health services for women and children in this area?
2. What guidance do you give to a pregnant women about preparing for giving birth in this community?
3. After you have delivered a baby, what do you do with the mother and baby? Do you give any advice to the mother?
4. Many women do not go to deliver their babies at health facilities. What do you think the main reasons for this might be? Do you agree with these?
5. What should a baby eat or drink when it is born, and afterwards? How long should breastfeeding continue? Explain exclusive breastfeeding for 6 months. Some women do not breastfeed for 6 months, or give other food or water to their baby. Why do you think they do this?
6. What do you think are the biggest problems/blockages/bottlenecks between the government's efforts to delivery health services to the population?
7. Has anyone ever asked you how some of these problems can be fixed?
8. What is the biggest change you would like to see to improve maternal, newborn and child health in your community?

**Instrument 15: District hospital**

**Objectives**

Interventions: Delivery, PNC, Sick child

- o Rapidly collect information about use of health services, staff, supervision
- o Observe site re: infrastructure, workloads, drug availability, patient/provider interactions
- o Explore barriers to these 3 interventions at referral level (both reaching referral level and the services once referral hospital is reached)

**Method**

Key informant Interview with DMO and/or hospital in-charge, group discussion with management team and staff, and facility walk through.

**Step 1: As a starting point, request a quick tour through the health facility.**

Observation areas	Key aspects to consider	Comments
Consultation areas	Privacy Patient table Job aides Registration books	
Waiting areas	Reception Adequacy of sitting areas Health promotion materials	
Delivery room	Number and condition of delivery beds Postpartum beds Lighting (natural or other) Water Cleanliness Resuscitation mask	
Drug storage	Accessible to workers Security Organization	
Laboratory (where available)	Microscope Reagents Gloves	
Other infrastructure consideration	Availability of patient toilets And cooking areas Water supply and storage	

Other observations:

**Step 2: Interview with DMO, hospital in-charge and available staff. Ask about basic facility information. Refer to records and reports where available:**

- Catchment population
- Number of communities they serve
- Walking distance (time or KM) for furthest communities
- What constraints they have to doing outreach
- Availability of community health actors

How many staff are working today vs. number dedicated to the health facility:

- Clinical staff
- Auxillary workers
- Other support staff

If there are absences, please explain:

**Step 3: Collect information from staff about the client load:**

Refer to registers and comment on availability and maintenance of records

Services	Number in past week	Comments
Sick children		
1st ANC visit		
Deliveries		
Postpartum consultations		

**Step 4:** Ask team their opinions about the three biggest constraints to ensuring that every mother and child receives the full MNCH package of services? Explore constraints at the household, outreach and clinical delivery levels as well as any bottlenecks at the national level.

**Step 5:** Inquire about current availability and any stock out in the past 3 months of the following

Drugs and supplies	Available at time of visit	Stockouts
ACT		
ORS packets		
Zinc		
Cotrimaxole (front-line antibiotic for pneumonia)		
IV fluids/ringer lactate		
Vitamin A supplements		
Long lasting ITNs		

**Step 6:** Ask the date of the last supervision visit from the central or regional level. Inquire about who came, what they did, and whether there was anything that was particularly helpful that happened. Any thoughts about what could be done better.

**Table 2: Comparative performance and impact potential of MNCH interventions, Malawi (June 2009)**

Intervention Area	National Target	National Coverage (2006)	Coverage for poorest quintile	Geographic Variance	Lives saved potential	Priority Intervention?
<b>Adolescence/preconception</b>						
WRA continuously using any modern form of contraception	40%	38%	38%	32-41%	Moderate	No (coverage close to national target)
Birth interval at least 24 months	52%	35%	35%	n/a	Moderate	Maybe
<b>Pregnancy/Delivery/Postpartum</b>						
IPT 2 during last pregnancy	81%	82%	78%	80-84%	Moderate	No (coverage close to national target)
Sleep under treated net	60%	15%	6%	11-18%	Moderate	Yes
4 ANC visits	90%	57%	n/a	56-65%	Moderate	Yes
<b>Delivery/Postpartum</b>						
Skilled Birth attendance	75%	54%	43%	51-58%	High (if provide EmOC)	Maybe
Postnatal check-up in first 2 days	90%	18%	14%	16-20%	High	Yes
Newborns with complications managed	81%	30-75%	n/a	n/a	Moderate	Maybe (definitions)
Immediate breastfeeding	78%	70%	66%	68-71%	Low	No (coverage close to national target)
<b>Childhood</b>						
Exclusive breastfeeding	76%	57%	51%	52-59%	Moderate	Maybe (high baseline, moderate potential impact)
Complementary feeding 6-24 months	80%	49%	n/a	n/a	Moderate	Maybe (high baseline, moderate potential impact)
Vitamin A	80%	69%	68%	66-72%	Moderate	Maybe (close to target, moderate impact)
Full immunization	85%	70%	66%	65-76%	High	Yes
Child sleep ITN	69%	25%	15%	24-25%	High	Yes
Treat pneumonia w/ antibiotics	67%	30%	23%	25-41%	High	Yes
Treat fever w/anti-malarial	69%	21%	17%	20-21%	High	Yes
Sick child rehydration	77%	27%	24%	23-30%	High	Yes
RUTF	80%	n/a	n/a	n/a	High	Maybe, coverage not known
Hand washing	60%	4%	n/a	n/a	High	Yes
Use improved latrine	90%	20%	4%	15-22%	High	Yes
Improved drinking water	80%	75%	61%	70-80%	Moderate	No (close to target and moderate impact)

**Table 3:** Selection of tracer interventions across operational levels and the MNCH continuum, Malawi (July 2009)

Operational Level	MNCH continuum of care			
Behavioral	Adolescence/ Preconception	Pregnancy	Delivery & Postpartum	Child
<b>Outreach</b>	Child spacing 24-36 months	1) Pregnant women sleeping under ITNs 4 focused ANC visits PMTCT (screening)	2) Postnatal check within 2 days	5A) Rehydration of sick child 5B) Treatment of child with fever w/ antimalarial 5C) Treatment of pneumonia symptoms w/antibiotic 6) Full vaccinations Child sleeps under ITN Vitamin A supplementation
<b>Clinical care</b>			3) Skilled delivery attendance EmOC for complications PMTCT (transmission prevention)	PMTCT (child follow up)

**Table 4:** Data entry template (with example data from Sierra Leone)

Operational level	Critical component	Barrier/ Specific Characteristic	Input received/ barrier mentioned	Source (i.e. document or type of research participant)	Site (eg district, local area)	Focal intervention	Primary/ secondary data	Notes
Outreach	Accessibility	Reasonable distance and time requirement for client and health worker	ITNs are not distributed to households directly	Chief (key informant interview)	Freeetown, 2nd Dec 2009	ITN-p	primary	
Household	Social capital	Leveraging community resources	At the pharmacy, the owner can treat the child and the parents pay later	Mother Non-doer (focus group discussion)	Freeetown, 8th Dec 2009	Sick child treatment	primary	
District coordination	Decision space	Inclusiveness of all actors/ groups in decision making	Poor communication between health providers, religious leaders and community regarding FP	Religious leader (key informant interview)	Tonkolili District, 15th Dec 2009	Family planning	primary	
Clinical	Clinical performance	Client load/ capacity	Inequities in distribution of health facilities and resources	Out of reach: The cost of maternal health in Sierra Leone (Amnesty International, 2009)	National	Skilled delivery care	secondary	



**Table 5: Challenge areas arising from groups of related barriers (Malawi, August 2009)**

Challenge area	Related barriers
<p><b>Drug supply shortages at district hospitals, health centres and outreach sites.</b> Insufficient stock of essential drugs affecting ability of health workers to provide quality case management. Multiple causes are both human management and systems related.</p>	<ul style="list-style-type: none"> <li>• Weak supervision controls of stock</li> <li>• Use of drug procurement system at HC level</li> <li>• Communication and transport gap between health centres and district pharmacy:</li> <li>• Disconnect between health service utilization reporting and supply requests</li> <li>• Accountability: allegations at all levels of pilfering and collusion</li> </ul>
<p><b>Unmet quality of care expectations.</b> Clients that are not using the health services demand a level of attention and service that is beyond what the current health system is providing.</p>	<ul style="list-style-type: none"> <li>• Clients feel like they are treated harshly by health workers (shouting, some physical)</li> <li>• Clients feel like they are neglected by health workers (long waits, left alone, child left undressed and cold)</li> <li>• Clients feel like examinations are rushed</li> <li>• Clients perceive drug supply to be too limited</li> <li>• Population suspects drugs are mismanaged at health service level</li> <li>• Women find labor monitoring to be poor, left alone</li> <li>• Population find window of admission time to be very narrow</li> </ul>
<p><b>Cultural communications gap between communities and front line health workers.</b> Communication and partnership approaches are not working effectively with rural communities' social capital to address social norms and collective problem solving.</p>	<ul style="list-style-type: none"> <li>• Communication style of many Health Surveillance Assistants (HSAs) is ineffective (i.e., lecturing messages rather than allowing discussion and critical thinking)</li> <li>• Many HSAs are not from local community, some spend little time in village</li> <li>• Under- tapped traditional authority hierarchy beyond the village headsmen</li> <li>• Low male involvement in health service promotion</li> <li>• Feeling of shame and stigma among clients</li> <li>• Burden of health placed on women</li> <li>• Non-effective complaint or engagement mechanisms</li> <li>• Top down partnership from health sector with communities</li> <li>• Some very good community mobilization efforts exist but have not been taken to scale</li> </ul>
<p><b>Physical distance between services and populations.</b> With travel times exceeding 2-3 hours to a health centre and much longer to hospitals, physical access barriers make care seeking even more challenging for remote, rural families.</p>	<ul style="list-style-type: none"> <li>• &gt;50% of Malawians live more than 5 km from HC and 80% more than 25km from a hospital</li> <li>• HSAs focus on non-care services (minding committees, inspecting houses, group health education)</li> <li>• Skilled delivery assistance limited to facilities and most don't offer BEmOC</li> <li>• Poor road and transport infrastructure</li> <li>• Limited investment in community health services at district level (e.g. bicycles)</li> </ul>
<p><b>Supervision among district level health workers.</b> Limited supervision of the performance of health workers at the health center and HSA level.</p>	<ul style="list-style-type: none"> <li>• No culture to inspect and coach</li> <li>• Dissatisfied workers who don't feel like needs are being listened to</li> <li>• Limited resources for supervision (transport, allowances)</li> <li>• Limited use of HMIS data for decision-making</li> <li>• Suspicion of corruption through the ranks, distrust</li> </ul>
<p><b>Low health worker retention and motivation in rural areas.</b> Understaffed skill positions at rural health facilities due to turnover of workers and slow incoming streams from national level.</p>	<ul style="list-style-type: none"> <li>• Health workers emigrating out of Malawi</li> <li>• Critical illness (HIV)</li> <li>• Limited capacity to train skilled workers in-country</li> <li>• Non-desirability of rural posts for many graduates</li> <li>• Task-shifting – filling gaps with lower cadres</li> </ul>