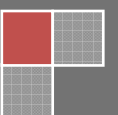


2009

# Detailed Implementation Plan (DIP) for a Health Facility Assessment in 9 States

NATIONAL MALARIA CONTROL BOOSTER PROJECT,  
FEDERAL MINISTRY OF HEALTH, ABUJA



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## **ACKNOWLEDGEMENT**

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## **BACKGROUND**

High morbidity and mortality amongst children under the age of five and pregnant women in Nigeria are major public health concerns in the country. Major childhood killer diseases like malaria, pneumonia, diarrhea, malnutrition and vaccine preventable diseases contribute to the all-cause under-five mortality rate of 201/1000 while pregnancy-related deaths rate is put at 800/100,000.

Malaria contributes the most to childhood and under-five mortality, 30% and 25% respectively, and more than 10 out of 100 deaths in pregnant women are attributable to malaria. The burden of malaria continues to constitute a major public health burden in Nigeria.

In order to intervene meaningfully in the current trend in childhood and maternal mortality, the health systems must be correctly positioned to deliver effective and efficient services especially targeted at these vulnerable groups. Adequate infrastructure, human resources, equipment, adequate supplies and high quality services made accessible to the target population in a timely manner are imperative for the country, if the Millennium Development Goals are to be achieved.

The federal Government of Nigeria (FGN) received a credit of \$180million from the International Development Agency (IDA), a member of the World Bank Group to finance the Nigerian Malaria Control Booster Project with the following general objectives:

- To ensure that the target population will have improved access to and utilization of a well-defined set of Malaria-Package Plus (MPP)Interventions

- To strengthen federal and state ability to manage and oversee delivery of MPP intervention.

These MPP plus interventions consist of key maternal and child health interventions that can reduce morbidity and mortality with marginal cost increase as compared to malaria-specific interventions alone.

The two components of the project therefore include

- i. Strengthening the capacity of the FGN to provide malaria control leadership and coordination over the medium and long term.
- ii. Strengthening the health system to improve delivery of MPP interventions in the target states.

In view of the above, a Rapid Health Facility Assessment survey is being planned for the seven project states and two control states. To facilitate this, NMCP received technical assistance from World Bank on 14<sup>th</sup> – 21<sup>st</sup> April, 2008 to plan for a rapid Health Facility Assessment (HFA) to be conducted in the World Bank-assisted states and two control states. The preparation process included taking a representative sample of health facilities in the states, adapting a rapid tool for the assessment (a version of which was field tested in other countries by the member organizations of the CORE Group<sup>1</sup>), developing a sampling frame for the assessment, preparing a logistics plan and proposing tentative dates for implementation. The Focal Person for the HFA in NMCP (Olusola Oresanya, MD, MPH), who also heads the M&E Branch of the Programme supported by Joseph Valadez <sup>2</sup>prepared this DIP for the HFA survey.

## **STUDY AIM AND OBJECTIVES**

### ***The Aim of HFA Survey***

The aim of the survey is to rapidly assess the human, infrastructural and material inputs available at critical service delivery point in the focal seven states for qualitative child health and antenatal care service delivery; including availability of effective anti-malarials at PMV shops within the communities in order to inform policy decision-making at the community and local government level.

### ***Objectives of the Health Facility Assessment Survey***

The following are the general objectives of the HFA survey:

- To evaluate the assessment, diagnosis and treatment of children with the most common illnesses (diarrhea, fever/malaria, and acute respiratory tract infections) in health facilities (public/private) in 9 states

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<sup>1</sup> The CORE Group is the membership organization of Private Voluntary Organizations based in the USA and which work in countries throughout the world.

<sup>2</sup> Joseph Valadez has been the Senior M&E Specialist the Malaria Implementation Resource Team of the World Bank. During 2008 he was appointed Professor of International Health at the Liverpool School of Tropical Medicine.

- To rapidly assess the essential infrastructure, equipment, and supplies available in health facilities, especially with reference to primary health care services
- To appraise the quality of management processes (e.g., training, supervision, record keeping) in first level health facilities and
- To describe effective anti-malarials available at PMV shops within the catchment areas of study health facilities.

### ***Justification For HFA Survey***

The second component of the NMCBP aims at strengthening the health system to improve delivery of malaria-plus interventions in the target states. In order to evaluate the achievement of this, it is important to do a baseline assessment of the infrastructure, human resources, equipment, supplies and quality of services provided in the health facilities in these target states. This study will therefore provide the baseline information that will form the bench-mark against which the progress of the project will be evaluated. Results of this study will also provide scientific evidence for decision-making at the community and local government level in terms of human resources for health, equipment and provision of quality health services.

## **STUDY DESIGN AND METHODOLOGY**

### ***HFA Study Location***

The survey will be conducted in the seven States where the MPP Project is currently being implemented. However, Kaduna and Delta being Global Fund-assisted States, have been selected as control States for the survey. The table below shows the HFA survey areas.

<b>Northern Region</b>	<b>Southern Region</b>
Kano	Rivers
Jigawa	Akwa Ibom
Bauchi	Anambra
Gombe	Delta*
Kaduna*	

\* Control States

### ***Sampling Methodology and Sample Size Calculation***

A sampling scheme which uses a quality control approach similar to Lot Quality Assurance Sampling (LQAS) was used for sampling health facilities. The principal difference is that the hypergeometric rather than the binomial formula was used to determine the sample size of health facilities due to the relatively small number of health facilities present in each state or Senatorial District. LQAS is a method derived from industrial quality control technology that is most

properly termed a *classification method*. Its primary purpose is to identify health facilities that are performing substantially below the established standard. The issue of standard setting is discussed later in this DIP. Nevertheless, when using LQAS one identifies an upper threshold which is the minimum proportion of health facilities that should function according to the standards of care. In the MPP Project we set this standard to be 80% of health facilities reaching the standards of care. The lower threshold is set at 30 percentage points lower, or 50%. As a classification method LQAS is very sensitive to identifying states and Senatorial Districts which are the priorities for improvement, so that resources can be directed to improve them. Those that are classified as having reached the standards are maintained as they are while attention is directed toward those which are the priority for improvement. But being a classification method, LQAS explicitly identifies a middle range of States and Senatorial Districts, namely, those which are between 80% and 50%. These are classified as well since LQAS uses a binary classification scheme. Health facilities that are closer to the lower threshold have a high likelihood of being classified as a priority while those which are closer to the upper threshold have a high likelihood of being classified as having reached the target. Therefore at the end of an LQAS classification one is reasonably certain that the States and Senatorial Zones that are identified for improvement and problem solving indeed have problems needing to be resolved.

Once the LQAS classification of Senatorial Districts is completed then the raw data can be aggregated to calculate the percentage of health facilities that fail to reach the standard. A finite population correction would be used in the calculation due to the small number of health facilities in each state.

The current list of all health facilities (public and private) in the study locations was obtained from the Department of Planning, Research and Statistics of the FMOH. Each state was divided into the official 3 Senatorial Districts and all eligible facilities listed to constitute the sampling frame.

Each senatorial district was taken as the sampling universe and it was assumed that at least 80% of Health Facilities (HF) has to perform adequately in order for the Senatorial District to be considered as performing to an acceptable standard. This was the upper threshold, while the lower threshold, an unacceptably low level of coverage that should not go undetected, was put at 50%. In calculating the sample size, the Good Lot effective Rate was therefore 20% while the Bad Lot Defective Rate was 50% and both the alpha and beta errors are assumed to be less than 10%. The total number of health facilities located in each state and Senatorial District and the sample size are displayed in the following table.

<b>States and Senatorial Districts Participating in the Health Facility Assessment by Total Number of Health Facilities and Sample Sizes</b>			
<b>State</b>	<b>Senatorial District</b>	<b>Total Number of HF</b>	<b>Sample Size</b>
<b>NORTH</b>			
<b>Bauchi</b>	North	11	7
	Central	20	10
	South	12	8
<b>Gombe</b>	North	5	4
	Central	7	5
	South	10	7

<b>Jigawa</b>	North	9	7
	Central	10	7
	South	9	7
<b>Kano</b>	North	35	13
	Central	54	16
	South	53	13
<b>Kaduna</b>	North	51	13
	Central	65	13
	South	38	13
<b>SOUTH</b>			
<b>Akwa Ibom</b>	Eket	88	16
	Ikot Ekpene	93	16
	Uyo	82	16
<b>Anambra</b>	North	52	13
	Central	88	16
	South	104	16
<b>Rivers</b>	East	105	16
	South East	74	16
	West	46	13
<b>Delta</b>	North	101	16
	Central	77	14
	South	88	16

Having enumerated all eligible health facilities in each SD, sampling was done by choosing the required number of health facilities from a set of computer-generated random numbers ranging from 01 to the highest number of eligible HF in the SD. If a number was selected twice, a replacement HF was simply sampled to ensure that all HF are unique.

Patent Medicine Vendors (PMV) are also included in the HFA. One PMV will be randomly sampled from the list of PMVs in the ward where the sampled Health Facility is located. Two alternate PMVs will also be sampled in the event that the PMV identified first is no longer in business then the first alternative PMV will be selected. Should that PMV then the next alternate will be sampled. The list of PMVs will be provided by the LGA as developed by the PMV Association.

### ***Eligibility Criteria***

The inclusion and exclusion criteria considered for the sampling were as follows:

#### **Inclusion criteria**

- Facilities classified as
  - Primary Health Centers (public or private)
  - Comprehensive health centers
  - Secondary facilities (Government-owned/Faith-based)
- Facilities providing child and maternal health services

#### **Exclusion criteria**

- Facilities classified as
  - Tertiary hospitals

- Health posts
- Private clinics/hospitals
- Dispensaries/ Health clinics
- Maternity centers (where child health services are not provided)
- Dental clinics
- Eye clinics
- Specialty hospitals or clinics/centers

### ***Training and Timing***

Training of data collectors and supervisors will be conducted in 4 zones –two northern (Bauchi and Kano) and two southern (Anambra and Delta) zones. Each zone is comprised of participants from 2 states, except Bauchi, which will host 3 states.

Each training workshop will be of 4 days duration with specific emphasis on conducting and supervising the assessment, sampling sick children, conducting exit interviews, sampling PMVs, completing the survey questionnaires and general implementation of the survey protocol. There will also be practicum lessons with visit to health facilities. (see details in training curriculum)

The first workshop will be attended by all master trainers for the HFA survey and will be facilitated by the lead trainer (Ron Mathias –A World Bank Consultant). This will take place in Bauchi State on Mar 16-19, 2009. Subsequently, training in the other three zones (Kano, Anambra and Delta) will then run concurrently on Mar 23-26, 2009. The table below shows details.

<b>Training Schedule for Training zones by number of participants and master trainers</b>						
<b>Training Zone</b>	<b>States</b>	<b>No of Trainees</b>	<b>No of RBM Partners</b>	<b>Master Trainers</b>	<b>NMCP</b>	<b>Date (2009)</b>
Bauchi Zone	Bauchi Kaduna Gombe	50	2	Ron Mathias Dr. OB Oresanya Dr. S. Mizan	Dr. T.O. Sofola Dr. S. Oyeniyi Mr. M. Aro	Mar 16 - 19
Kano Zone	Kano Jigawa	32	1	Dr. OB Oresanya	Dr T. O. Sofola Mr. F. Okoh Mr. M. Omo-eboh	Mar 23 - 26
Anambra Zone	Akwa Ibom Anambra	42	1	Ron Mathias	Representative of NC Mr. E. Onyefunofua Mr. James Ujoh	Mar 23 - 26
Delta Zone	Delta Rivers	42	1	Dr. S. Mizan	Representative of NC ??? Ms. A. Olanpeleke	Mar 23 - 26

### ***Implementation***

Data collection will be undertaken by a team of three data collectors and this will commence immediately following the training in the different zones. Two will collect data at the sampled HF while the other will collect data from the sampled PMV. A set of clinical observations will be made with the most

experienced clinician in treatment of sick children. While there are different sampling schemes for obtaining random samples of cases to observe in each clinic, for the purposes of this rapid assessment, we observe six consecutive cases that fit the criteria (child 1-59 months whose reason for visit is any or all of the following: fever, diarrhoea, cough with rapid/difficult breathing). We are assuming that the sequencing of the patients that come to a clinician is not biased and can be treated as a simple random sample. The manager should ensure that we have no reason to suspect that the clinic is biasing the presentation of the patients by allowing the wealthiest or most politically powerful to be seen first. Also, we would not want to observe only the sickest patients or only those who live closest to the health facility because of the way the sample was chosen.

In this simple random sample of cases we are looking to see if treatment of 5 of the 6 observed cases adhere to the norms. If so, then the HF is given a passing score for this indicator. This sampling design also uses LQAS principles. The 6:1 design (a sample of 6 and 1 failure permitted) is 97% specific for identifying clinicians providing appropriate services 95% of the time. In this design we assume that clinicians should have a conservative performance standard; at least 95% of the time, they must provide adequate care to patients. The benefit of using a design with such a high level of specificity is that one can be quite certain that all or almost all of the health facilities identified as problematic do have performance problems. Very few (only 3%) of those that have reached the standard of care are incorrectly classified as having below standard performance.

One data collector will observe the clinician providing care using the HFA instrument while the other data collector will interview the caretaker as she leaves the clinic. Once they finish this part of the HFA, one data collector will interview the health worker while the other checks the pharmacopeia and essential equipment.

One supervisor is designated for each Senatorial District. Supervisor along with the master trainers and Central level participants will supervise the data collectors to ensure they follow the data collection protocol. The total number of data collectors, supervisors, number of HF to be sampled and schedule of data collection is displayed in the following table.

**Data Collection Plan by Region, Zone and State.**

Region	Zone	States	Data Collectors	Supervisors	Total HF Sample	No of Days for data collection	Data Collection Date (2009)
North	Bauchi Zone	Bauchi	15	3	25	8	Mar 23 - 30
		Gombe	9	2	16	8	Mar 23 - 30
		Kaduna	18	3	39	10	Mar 23 -Apr 1
	Kano Zone	Kano	18	3	42	10	Mar 30 -Apr 8
		Jigawa	9	2	21	11	Mar 30 -Apr 9
South	Anambra Zone	Akwa Ibom	18	3	48	12	Mar 30 - Apr 10
		Anambra	18	3	45	11	Mar 30 -Apr 9
	Delta Zone	Delta	18	3	46	11	Mar 30 - Apr 9
		Rivers	18	3	45	11	Mar 30 - Apr 9

## ***Sampling***

The sampling of the Health Facilities and of the PMVs is carried out by the M&E unit of the NMCP. Sampling of the health worker, and of the children to be treated is carried out by the data collection team using the protocols included in the HFA training manual.

## ***Data collection tools***

This is a rapid assessment tool, designed specifically to aid managers assess the quality of and access to child health services at the "primary level as described above. It is based on an instrument designed by a partnership of international agencies that include Macro International, The MEASURE Evaluation Project, USAID, the CORE Group, and the World Bank (MIRT). That instrument was field tested in multiple countries prior to being adapted for use in Nigeria.

The R-HFA methodology is based, to a great extent, on the BASICS Integrated Health Facility Assessment (IHFA). The IHFA was developed in the late 1990s and is available online: <http://www.basics.org/publications/pubs/hfa/>. The indicators in the R-HFA have been formulated to conform to recent work by the International Technical Working. The ITWG indicators were supplemented with indicators adapted from the Service Provision Assessment (SPA) tool of the DHS. The SPA is described on the MEASURE / Evaluation web site: <http://www.cpc.unc.edu/measure/publications/html/ms-02-09-tool06.html>

Some indicators and elements of the methodology also come from the IMCI-based Health Facilities Survey (HFS) tool of the World Health Organization. It is quite similar to the BASICS Integrated Health Facility Assessment tool. The WHO tool and manual is available at WHO's website: <http://www.who.int/child-adolescent-health/publications/IMCI/HFS.htm>

The core questions collect information on 12 key indicators of quality and access. There are also 7 optional indicators that can be collected with supplemental questions that are indicated by being highlighted in a yellow background. If these optional indicators are not desired, they can be deleted. On the other hand, if in-depth information is desired about a subject like vaccinations or growth monitoring, then project managers may want to add additional questions to supplement the information obtained in this R-HFA.

The HFA comprises four components (and a fifth optional one):

- Facility Checklist: (based on the ITWG core indicators) To assess the presence of a minimal level of infrastructure, supplies, and medications.
- Health Worker Survey: To assess the staffing, MNCH services offered, as well as frequency of training, supervision, and other key processes.
- Observation Checklist for sick child care: observation of six consecutive cases of care of children with fever, diarrhea, or breathing difficulty. Assess for adherence to national (IMCI) protocol for assessment, classification, and treatment.
- Client Exit Interview: To assess correct knowledge of how to administer drugs given for diarrhea, malaria, and/or breathing difficulty (used a proxy for adequate counselling)

- PMV Checklist: Collects data for CHWs on 6 of the 12 HF core indicators - inputs, processes, and service delivery (through examination of registers)

### ***Data Analysis***

Data analysis will be carried out using the Tab Plan that is included as part of the HFA tool. This will be carried out in two ways. Firstly, data will be hand tabulated on a senatorial district basis to allow for rapid feedback of results. This level of analysis will focus on assessments of indices already described in the Tab Plan. Secondly, data will be entered in to a computer data base for more detailed analysis. This level of work will focus on assessing individual components described in the HFA.

### **RELIABILITY ASSESSMENT**

In order to assess the reliability of the data collected during the HFA, one module of the instrument will be selected for review. The recommend instrument is the Health Facility Checklist since the results will not change over time. An external consulting team to the NMCP will be employed to carry out this task. This group can be the same NGO or Firm hired to carry out the master training. They will sample approximately 10% of all the instruments and revisit the clinics in questions and verify the accuracy of the entered results. The sampled instruments will be photocopied. They will be used for entering the reliability measures. The team will use a colored pen and note concordant responses and discordant pairs of results (original results vis a vis the reliability measure). Concordant responses will be noted by circling a response that is already entered in the original instrument. Discordances will be noted by circling a different response. The number of discordant results above the total number of results will yield a measure of reliability for each Senatorial Zone and for each state.

A reliability standard will be established by NMCP. Let us assume that no more than 7% discordance will be permitted in any Senatorial Znes. Should more than 7% discordance be detected then all modules will be discarded for that Zone and the data collected again. All data collectors will be informed of the reliability assessment during the training and made aware of the consequences of inaccurate data recording.