Technical Brief **April 2012**

Physical Infrastructure Rehabilitation in PRRINN – MNCH programme.

Executive Summary

During design of the PRINN-MNCH programme it was acknowledged that Healthcare Technology was an important part of the healthcare delivery system. Budgets and technical assistance have been made available to safeguard existing investments in physical assets and to provide basic improvements in order to facilitate improved quality of MNCH services.

The MNCH component of the PRRINN-MNCH Programme State focuses its main support to Yobe, Katsina and Zamfara States. It was difficult to make informed decisions on the management of the physical infrastructure situation in these three states during the start of the programme because of insufficient existing information. Information on the size and status of the buildings and supporting utilities like water and power was none-existent.

The purpose: Functional health facilities

A baseline assessment was carried out in all Comprehensive Emergency Obstetric Care Centres (CEOC) and selected Basic Emergency Obstetric Centres and some PHC facilities that made up the first CEOC cluster. This was to assess the availability and the level of functionality of existing buildings and utilities like water, light and sanitation, as well as the capacity to maintain the buildings. A CEOC cluster has an estimated population of about 500,000 people with focus on improving services in one general hospital (Comprehensive Emergency Obstetric Care), four Basic Emergency Obstetric Care Centres and eight PHC facilities providing 24 hour care.

The baseline assessment showed that there are large variation in the sizes and the status of the health facility buildings. The required rehabilitation improvements typically ranged from basic repair of roofs and ceiling to small extensions of rooms too cramped for its intended tasks. Many buildings were infested with termites or bats. Although there were ongoing constructions at some of the health facilities, this was not organized and the system for building maintenance was poorly developed.

The most important utilities like water and electricity and waste management services were in poor shape and services were erratic supply where available.

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The assessment report recommended general remedial work, making good the buildings and equipment provision of water, sanitation and electricity services that are just 'good enough' for the performance of basic MNCH functions at the facility. Intensively used rooms that are usually wet and require regular disinfection e.g. delivery rooms and bathrooms would require improved water repellent, easy to clean tiled surface.

In 2010 and early 2011, the rehabilitation process was less structured but still had emphasis on ensuring value for money. National building consultants worked with the international building and equipment consultant in developing rehabilitation briefs and reviewing same to accommodate available budgets, which were usually in the range of N15-20million Naira per cluster. Detailed tender documents were prepared and tender process carried out in collaboration with each SMOH and other key stakeholders in each state. The approach to the tender process ensured local ownership by the SMOH but also emphasised strong adherence to transparency and accountability as key underpinning factors for good rehabilitation. Successful contractors executed the rehabilitation under the close supervision of the national consultants, the international consultant and officials from Kano providing quality assurance throughout the rehabilitation work.

A number of challenges were observed in cluster 1 rehabilitation where several facilities did not reach the 'good enough' status after rehabilitation. Some of the challenges included poor bills of quantities, poor supervision, delayed payments, inadequate participation by facility health committees and staff.

During rehabilitation of cluster 2 facilities in 2011, the rehabilitation initiative adopted a more structured approach and steps: establishment of standards and guidelines for building and utility services, structured and more participatory facility assessment with briefs, more standard drawings and bills of quantitative, robust tender process and rehabilitation plans, more emphasis on supervision system with participation of facility health committees and structured reporting, clearer documentation and payment systems and handover of completed work. Other issues like communication flows between the consultants, state teams, SMOH and other stakeholders and Kano office. A facility rehabilitation guide was also developed to assist consultants, state program teams and other stakeholders.

New VIP latrine under construction

It must be stressed that the programme is only able to alleviate the most urgent needs to ensure that facilities are functional enough for MNCH services; the process is also intended serve as an example to the SMOH and policy makers on what can be achieved with minimal means. Although modest, response in Katsina State and in Zamfara has shown that some LGA authorities and communities have invested and are still willing to invest in facility rehabilitation to complement the efforts of the programme

In order to safeguard the investments in physical assets, the SMOH in all states has been encouraged to set provide more budget to improve the maintenance capacity. Though budget release remains a challenge, it is hoped that this will eventually translate into action to improve the quality of infrastructure even after the end of the program.

The Challenges

The initial assessments of the facilities showed poor management of the physical facilities that are illustrated by the following observations:

- Spatial mismatches of important rooms like delivery rooms that are not conducive to proper work routines
- Floor and wall finishes that are not conducive to the required frequent cleaning of delivery and sanitary rooms
- Minor repairs to e.g. the roof that over time will lead to extensive damage have been seen in many facilities with no apparent action taken
- Infestation of insects, bats and other vermin, causing significant damage are commonplace
- Insufficient sanitary facilities
- Lack of shaded waiting space for ANC activities
- Insufficient water facilities like storage and reticulation
- Insufficient electricity power supply to almost all facilities

The report concluded the LGA and SMOH authorities may not be paying adequate attention to the maintenance of physical assets like buildings and utilities like water, electricity and waste management system in health facilities. That there was also lack of management capacity to plan, budget and manage this kind of specialized jobs that require different skills normally available to SMOH and LGA settings.

In order to safeguard the investments in physical assets, the program recommended that the SMOH should be sensitised be encouraged to set up a modest but effective maintenance capacity. The ideas of the three national consultants will be formulated in a maintenance proposal to the SMOH over the year 2011.
The PLAMAHS inventory and management system capable of keeping track of the building status and the utility status was also recommended. Yearly inventory updates will make it possible to identify the most urgent work and set priorities. On a biennial bases the M&E tracer information will give an indication of the building status.

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Ceiling affected by termites and

Ceiling reconstructed awaiting

The response

A major remitting factor in the facility rehabilitation initiative is the limited budget is available from the program to carry out adequate scope of rehabilitation work for most facility rehabilitation needs. The program strategy is to therefore to render the facilities functional to perform basic MNCH services by carrying out limited but 'good enough' work on the following areas: the maternity unit, ANC, laboratory, theatre and outpatient department, drug stores and very limited work on water and electricity as well as waste disposal sections of the facility.

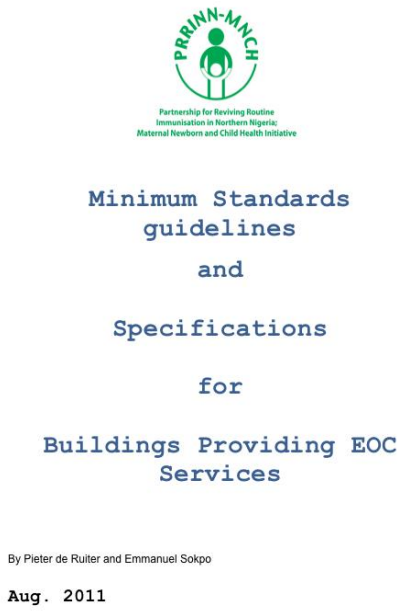
In management arrangement, the Implementation will be carried by the PRRINN-MNCH program in partnership with the State Ministry of Health (SMOH) and other key stakeholders. The program has reached agreement with the SMOH and other stakeholders on the roles of each partner, for example all contractual agreement with contractors will be handled by the SMOH while the program provides most of the rehabilitation funds as well technical assistants (international and national consultants) to ensure international best practice and ensure value for money. Below is an outline of the activities and responsibilities on rehabilitation initiative

S/No.	Activity	Resp. Stakeholder
1	Facility selection	Team: PRRINN-MNCH/SMOH & Other stakeholders (MOLG & LGA) Criteria: geographical spread, state of infrastructure, utilisation, politics exigency, hard to reach areas. Preliminary inspection/validation
2	Assessment of buildings	PRRINN-MNCH/SMOH & Other stakeholders (MOLG & LGA) & National Building Consultant, (with advice from International Building Consultant on CEOC & BEOCs)
	Production of Bill of Quantity and tender documents	National Building Consultant, with QA monitoring & advice from International Building Consultant
3	Competitive bidding to select the best contractors	SMoH/PRRINN-MNCH
4	Prepare contract documents and	National Building Consultant/SMoH

	award of contracts	
5	a. Rehabilitation b. Minor rehabilitation	Contractors Minor rehabilitation through direct labour by PRRINN-MNCH
6	Site supervision to ensure value for money	National Consultant/Facility Health Committee/SMOH/ PRRINN-MNCH with QA monitoring & advice from International Building Consultant
7	Signing off and handover of completed work	National consultant/contractor/Facility Health Committee/SMOH/ PRRINN-MNCH with QA monitoring & advice from International Building Consultant
8	Payment to contractors	SMOH & PRRINN-MNCH, National Building Consultant with QA monitoring & advice from International Building Consultant

The PPRIIN-MNCH programme's objective is to make basic improvements to the facilities and to provide essential equipment in 18 CEOC clusters across the three States of Zamfara, Yobe and Katsina. This will provide improvement in 18 CEOCs, 72 BEOCs and 144 PHC clinics in the three states within the life span of the project.

The facilities in the first CEOC cluster were identified in collaboration with the service delivery team and then assessed in terms of medical equipment, buildings and utilities like water and power. By the end of 2011, all the six clusters in each state have been selected and the different levels of facilities identified for rehabilitation.


Partnership for Reviving Routine Immunisation in Northern Nigeria; Maternal Newborn and Child Health Initiative

Minimum Standards guidelines

and

Specifications

for

Buildings Providing EOC Services

By Pieter de Ruiter and Emmanuel Sokpo

Aug. 2011

In 2011, the rehabilitation initiative adopted a more structured approach and steps: Standards and guidelines for building and utility services were developed, structured and more participatory facility assessment with briefs, more standard drawings and bills of quantitative, robust tender process and rehabilitation plans, more emphasis on supervision system with participation of facility health committees and structured reporting, clearer documentation and payment systems and handover of completed work. Other issues like communication flows between the consultants, state teams, SMOH and other stakeholders and Kano office. A facility rehabilitation guide was also developed to assist consultants, state program teams and other stakeholders.

By the fourth quarter of 2011, initial facility assessment had been completed for cluster 3 with

bills of quantities at various levels of completion for each state. After facility assessment, the detailed information obtained from the site visit is compared to the minimum standards required as defined by the Minimum Package of Care. Based on this, proposals to improve the building and utilities status in the selected BEOC, CEOC and 24/7 facilities agreed with the State program team and stakeholders.

Laundry location with standpipe and good drainage (under construction)

The building consultant therefore has an important role in the rehabilitation program. In 2010, one building consultant was based in each state and with responsibility for: preparing drawings and detailed Bills of Quantity of all work that will be contracted out; preparing tender documents and producing confidential cost estimates that will enable the programme to set priorities in the rehabilitation work if required, managing the tender process; supervising and monitoring the progress of work as well as its quality. The building consultant is also responsible for recommending payments to contractors.

Since 2011, communities have been sensitized to ensure local ownership, facilitate quality of work, ensure safety of materials and are sensitized to facilitate subsequent timely repairs

In order to spread the risk and to ensure that contracts can be completed in a eight to twelve weeks period the contracts in each state are divided into not less than three lots. The division in lots makes the total value and the workload of the different lots manageable for local or regional consultants with regards to financing and completion time.

The administrative evaluation uses the following criteria: the company registration, up to date tax clearance, required bid bond been ensured by bank or insurance company etc. Technical evaluation criteria include, consistency in cost, contractor's work past experience, capabilities of the staff employed, the contractor's tools and equipment capability level of adherence to other bid instructions

Based on the evaluation outcome the contracts are awarded to successful contractors and after a mobilization payment the sites are handed over to the contractor. A works schedule is agreed with the contractors with timelines on key progress to the completion of the work. Supervision schedules are developed by the national building consultant and supervision carried out by the consultant, SMOH and project representative, with intermittent assistance from the international consultant. Facility committees are also helpful in providing regular on-the-site supervision. Supervision visits are planned by the national consultants in order to ensure that the key officials of the contracted are available for meaningful dialogue and consensus; planning also ensures that at least each site is visited once a week. The national consultants provide regular progress reports to the STM who has management responsibility while the International consultant has technical responsibility. In 2011, the program has emphasised on submission of regular supervision reports to the international consultant to ensure quality and value for money.

Upon completion of rehabilitation, a final inspection is made and the site is handed over to the client again. There is usually a retention period to ensures that the works performed will stand the test of time. E.g. repaired of new roofs have to go through a rainy season in order to test that they are indeed rainwater tight.

Capacity of the each state is been built in order to safeguard the investments in physical assets. The SMOH is sensitised to set up a modest but effective maintenance capacity that will include recruitment and training of staff in physical assets management. Information on the status of the buildings and utilities being generated is updated on a biennial basis in order to provide the SMOH with planning information for budget and resource mobilisation purposes. A PLAMAHS inventory and management system installed in each state is capable keeping track of the building status and the utility status. Yearly inventory updates will make it possible to identify the most urgent work and set priorities.

In the last quarter of 2011, an international building consultant was engaged to provide closer attention to the rehabilitation work. His overall objective is to provide quality assurance on all steps in the rehabilitation initiative, to ensure international best practice, value for money and to build national capacity for ownership and ensure faster rehabilitation process. Communication channels have been agreed between him and the national consultant, the state program team and Kano offices.

Water-pump, storage tank and standpipe provided in remote BEOC, Yobe State.

Results and Impact

The building and utility services inventory for cluster I and II was entered into the database system in 2010 and by 2011, cluster III inventory was also added and cluster I &II revised.

The rehabilitation work in all 39 cluster 1 facilities from the three states was completed to a satisfactory quality in 2010 and by end of 2011; similar progress was made for cluster II; bills of quantity and tender process carried out to various levels in cluster III and assessment of cluster IV completed.

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15 CEOC and CEOCs rehabilitated have met the minimum building status in 2010 and the same number for 2011
24 PHC facilities rehabilitated achieved a standard minimum building status in 2010 and in 2011 another 24 PHC facilities achieved the same standard in cluster II
Water and electricity supply has been improved in 8 of key facilities by end of 2011.

PRRINN-MNCH

Katsina, Yobe, Zamfara

MoH/HPI/Save the Children/GRID

Evaluation of buildings: per facility type

Cluster 1; Quarter 4

Score catogories			
Cat	Action	Min	Max
G Good	No Repairs required	0.85	1.00
F Fair	Minor Repairs	0.60	0.85
P Poor	Major Repairs	0.30	0.60
VP Very Poor	Major Structural Problem	0.00	0.30

Date calculations performed: 29-11-10 17:32:02 *ME Interval:* **Quarter 4-2010**

State	L G A	Facility Name	Beds	Owner	Bldg count Noted	Bldg count Valid	Surface Area Buildings Noted	Surface Area Buildings Valid	Surface Area Rooms Noted	Surface Area Rooms Valid	Ratio bdg/rm Valid	Evaluation Overall Score	Evaluation Overall Cat
Facility Type		**CEOC**											
		State Katsina											
Katsina	Daura	Daura GH	120	GOVT	4	**4**	999	**999**	155	**155**	0.16	0.93	G
	Totals for	State Katsina	Facility Count	1	4	**4**	999	**999**	155	**155**	0.16	0.93	G
		State Yobe											
Yobe	Geidam	Geidam GH	100	GOVT	4	**4**	1,264	**1,264**	96	**96**	0.12	0.87	G
	Totals for	State Yobe	Facility Count	1	4	**4**	1,264	**1,264**	96	**96**	0.12	0.87	G
		State Zamfara											
Zamfara	Bungudu	Bungudu G H	60	GOVT	2	**2**	406	**406**	123	**123**	0.32	0.86	G
	Totals for	State Zamfara	Facility Count	1	2	**2**	406	**406**	123	**123**	0.32	0.86	G
	Totals for this facility type	CEOC	Facility Count	3	10	**10**	2,669	**2,669**	374	**374**	0.20	0.89	G

The procurement of solar light systems planned for 2010 was supplied in the later part of 2011 and will be installed towards the middle of 2012. A yearly inventory update of newly rehabilitated buildings and utilities is now maintained in the physical asset database and can be used for the planning of maintenance.

The database system was adapted to provide a biennial M&E routine report on buildings and this has been further strengthened in 2011 to provide basic or tracer information on key building aspects.

Capacity of national building consultants, health managers from the SMOH, LGAs and targeted facilities is improving gradually regarding transparency and accountability in managing rehabilitation tender

Value for money gains was achieved as some states and LGAs had gone ahead to rehabilitate some aspects of the infrastructure outside the brief of the program. Such extra rehabilitation include building of latrines, improving water supply, etc.

The following documents have been produced in 2011 to facilitate the rehabilitation process:

1. Minimum standards, guidelines and specifications for buildings providing EOC services;
2. guidelines for tendering, contracting and rehabilitation of facility infrastructure;
3. work plan for rehabilitation of cluster 2-6 facilities;
4. templates on supervision, reporting, tracking sheet for activities and expenditure,
5. revised generic list of tasks for national building consultant and their team;

Lessons learnt

The building process for the first cluster building rehabilitation was slow as most stakeholders were unaware of their roles and responsibilities. The roles became clearer as the rehabilitation work progressed. Improvements in the procedures and documentation including prior agreement of roles and responsibilities in this complex exercise like rehabilitation can assist to reduce conflict, built trust and ensure smooth implementation. Substantial savings have been made across all the states inform of extra work by the SMOH and LGAs on sanitation, repair of electricity and water, construction of drugs stores, etc in the cluster facilities.

It essential to develop templates for tendering, bills of quantity and contracting procedures as this can hasten the process .
Contractors learnt that a good quality job will earn them additional work and ensured that high standards were maintained. Some who did shabby jobs learnt that they would be asked to effect repairs at their expense. In the mist of souring corruption, good quality work can be executed at economic value if the rules of the contract are maintained.

Ensuring compliance to specifications and paying attention to details in claims from contractors is key to ensuring value for money. Several times, contractors presented claims that had arithmetic errors or outright distortions which if not properly scrutinised would have resulted in improper payments.

Engaging facility committees and other community members and facility staff in the day to day supervision of rehabilitation and providing mechanism for the above important clients to communicate their concerns to the consultants promotes local ownership, improving transparency and accountability and so capable of ensuring improvement in quality in the final rehabilitation.