



## Technical Brief on Medical Equipment Improvement: From procurement to installation and utilisation in CEOC clusters

### Summary

During the project design of the PRINN-MNCH programme it was noted that Healthcare Technology was an important part of the healthcare delivery system. Budgets and technical assistance was set aside to safeguard existing investments in physical assets and to provide additional basic new equipment in order to ensure improved access to quality MNCH services across the program States.

The baseline physical infra structure assessment reviewed insufficient information to make informed decisions on the nature of support that each state would require. The assessment was carried out in all Comprehensive Emergency Obstetric Care (CEOC) cluster facilities to assess the availability, level of functionality of existing equipment, as well as the capacity to maintain the equipment. 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 centers and eight PHC facilities providing 24 hour care.

The assessment reviewed the absence of medical equipment inventories; no information on the size and status of the buildings; Weak capacity of the few medical equipment technicians and they had no working tools to provide back up support. .

The model equipment list was developed based on the minimum service packages for each level of clinical care. The specification and quantification of the equipment required for each facility type was also carried out with support of PLAMAS, a software tool that facilitates the management of physical assets, following the baseline assessment

Procurement on this scale has advantages of the economy of scale for better prices; is however brings to the fore, the complex procurement management challenges. Even with the help of Crown Agents, a specialized procurement agency, the process has proved challenging and time consuming. It has also witnessed considerable delays in the delivery of the new equipment. The installation of cluster 1 equipment took three months, starting in March 2011 and could only be completed after the election period in May of the same year.

As the time-span to complete the procurement for the first cluster had been much longer than expected, the procurement for cluster 2 and 3 have been initiated with the help of a framework agreement between Crown Agents and the supplies



## Partnership for Reviving Routine Immunization in Northern Nigeria; Maternal, Newborn and Child Health Initiative

to reduce the procurement cycle. Deliveries have been spread from December 2011 to March 2012. This has reduced the procurement cycle from almost 24 months to about 15 months. The installation of cluster 2 is planned to commence in April 2012. The procurement for the clusters 4, 5, 6 and 7 is at quantification and specification stage and will go for a restricted tender in a framework agreement early April 2012. The expected delivery will be first or second quarter 2013.



In order to safeguard the investments in physical assets the SMOH will be encouraged to set up a modest but effective maintenance unit with adequate capacity. Basic tool kits for the installation and maintenance of equipment have been procured for each State. The equipment inventory

documentation will provide a platform for the preventative and corrective maintenance system.

The installation of equipment process in the first cluster has been used to build capacity of the State technical teams. Both the technician and user trainings conducted before and during the installation have been an important step to ensure the correct use and the prolonged lifespan of the newly procured equipment.

Procurement of solar powered lights for use in the Maternity to facilitate night deliveries had been postponed for cluster 1 in order to opt for the latest developments in this field and value for money considerations. The cluster 2 and 3 consignment now include modern, high efficiency, long life LED lights which reduce the required investment in battery, solar panels and replacement light bulbs. Cluster 1 facilities will also receive the lights in this consignment.

### **The Challenges**

One of the key challenges noted during the design phase of PRRINN-MNCH program was the very low priority accorded to maintenance of the physical assets in the health sector.

A baseline equipment inventory assessment of selected facilities in the first cluster revealed that the poor medical equipment situation was not conducive for the delivery the minimum package of health services which the program had as a core package of MNCH services to promote. In the absence of standard minimum package of care for each facility type, the health managers based the facility equipment distribution and management was based on political and



## Partnership for Reviving Routine Immunization in Northern Nigeria; Maternal, Newborn and Child Health Initiative

economic interests of policy makers and health managers. This created a mismatch between the needs of health facilities and what they had.

The capacity of the equipment users, medical equipment technicians and medical equipment workshops were also very weak. The tabulated below rating the workshops from the three States

STATE Workshop	Zamfara	Katsina	Yobe
SCORE	50.50 %	47 %	24.25 %

There were also few medical equipment technicians; they had no working tools and were not provided with work schedules and back up supervision to improve performance. Equipment needs for each state was large resulting in concomitant large equipment procurement proposal on a scale that the program has to use a Crown Agent as a procurement specialist for the program.. Even with the help of a specialized procurement agency the following issues have proved challenging and or time consuming and have caused delays in the delivery of the new equipment;

- clarifications of specifications
- tender evaluation process
- delivery times of suppliers
- consolidating of consignments
- import documentation and shipment clearance with Standard Organisation of Nigeria Conformity Program(SONCAP)
- custom clearance
- handling within each state medical store, distribution and installation within the cluster facilities



Most storage facilities were of poor quality with insecure environment, dilapidated and unkempt infrastructure, etc. Technical capacity to handle the installation and commissioning of the new equipment was weak.

There is an ongoing security challenge, especially in Yobe State, affecting timely and sustained support to further build instate capacity re: inventory management using PLAMAS, follow up installation of theatre lights, training of users and equipment technicians.