



Reviewing Vaccine and Logistic Systems

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The Mid-Term Programme Review (February 2011) reported that the Routine Immunization has shown major progress in the 4 PRRINN-MNCH states. However, the review team also identified that in all programme states there are issues with the management of cold chain and vaccine logistic system (CC&VLSM) that stem from deep-seated and persistent problems throughout the country.

This mission was decided to review the cold chain and vaccine logistic system in the PRRINN –MNCH states and identify areas of technical and/or managerial gaps. Thereafter, to provide recommendations on improvements/new approaches for the cold chain and vaccine logistic system management in Nigeria, with a focus on the PRRINN-MNCH states, along with groundwork necessary at the State and National level to make the system more efficient and cost-effective.

The mission was divided into 2 parts. The first one consisted of a desk study of national and State-level assessments of the cold chain, vaccine logistics and supply systems. Based on the study, a preliminary report (Annex 3) was submitted which highlighted several key issues and some recommendations for improvements and follow-up needed during the second phase. In the second phase, originally, the consultants were to visit the 4

PRRINN-MNCH states and evaluate the ground situation and interact with respective officials at the State and some LGA stores. These visits had to be cancelled due to the security situation. Hence, some of the officers were called to Abuja for a two-day workshop with the consultants. Following improved security

situation in the 2nd week, the consultants were able to visit Zonal Cold Chain Store, State store and one LGA in Kano. Meetings were also held with the officers of the NPHCDA and some of the partners and key stakeholders.

According to the consultants' findings and reviews, the recent EVM assessment (and other reviews referred to during this mission) reflect several issues in the cold chain and vaccine logistic system management. The critical issues that need to be improved in the cold chain and vaccine logistics system management in Nigeria include:

- stock-out of vaccines,
- non-availability of documents for vaccine management,
- poor record keeping,
- insufficient cold chain capacity
- use of non-PQS equipment
- inefficient vaccine distribution
- lack of maintenance and repair.

The basic questions are whether the different issues have some common

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causes and how can we address those root causes and move towards an efficient and sustainable vaccine supply chain. In view of this the methodology of the two-day workshop described for the second phase was planned.

The interaction during the two days workshop permitted the consultants to obtain a better understanding of the issues persisting in the PRRINN-MNCH states and possibly in the whole country. The consultants interviewed key stakeholders, conducted a rapid visit to the National Strategic Cold Store in Abuja, and also a short visit to Kano to see Zonal, state and LGA facilities. The short visit to Kano greatly enhanced the understanding through a direct experience with the operations of the officers in their environment. The visit to NSCS was rather short to be able to obtain sufficient information. Based on the workshop, the interviews and visit to Kano, the following root causes were identified:

1. Standardized documents for record keeping are lacking at the different levels. Standardized documents are important for keeping track of events (e.g. temperature of storage and stock movement, for both day to day needs as well as any kind of audits in case of an Adverse Event Following Immunization (AEFI).
2. The cold chain officers and their supervisors have insufficient practical technical knowledge of recommended standard practices of CC&VLSM, which affects cold chain performance, safe storage of vaccines, and continuous supply off vaccines.

3. There is lack of enforcement of the national immunization policy, which requires that PQS equipment must be procured for the immunization programme, to ensure better safety of the vaccines. PQS equipment has been proven effective by WHO to store vaccine. The non-PQS equipment (often purchased at lower levels on the local market) do not maintain proper temperatures to safely store vaccines.
4. Lack of maintenance and repair guidelines to ensure longer life of equipment and shorter down time during equipment failures
5. Vaccine and syringe stock-outs at the national level have severely affected performance at the State and LGA levels. Currently, cold chain officers are managing vaccine stocks on an ad hoc basis.

To address these issues, the following Solutions have been proposed.

1. Ensure that all standard supply chain management forms, documents and tools are provided in sufficient quantities to all. Cold chain officers must be trained in how and why they are used (2 below). This is also important for the Pentavalent vaccine introduction tools.
2. Conduct practical based capacity building of all State and LGAs Cold Chain staff in small batches (maximum of twenty trainees at a time) in

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- CC&VLSM using the “Learning by Doing” methodology. Current practices of cascaded training tend to strongly dilute the quality and quantity of information and skills transferred.
3. Procure only PQS equipment, as defined in the National Immunization Policy and use PQS equipment at all levels of the cold chain. The NPHCDA needs to increase awareness on the importance of standardized equipment and advocate reinforcing it.
 4. The National Logistics Working Group should produce a maintenance and repair guideline for national adoption. The guidelines will provide the directions and operating procedures for ensuring periodic maintenance and timely repair of equipment.
 5. For maintenance and repair guidelines to be implemented effectively, the NPHCDA should conduct a technical cold chain maintenance training of the cold chain officers and selected refrigerator repair staff by zones, from their respective catchment area.
 6. Ensure an effective structure of supervisors at each level and training them to carry out supportive supervision of CC&VLSM in a continuous manner with required follow-up wherever necessary.
 7. PRRINN-MNCH STMs support the State SIOs, CCOs and LGA CCOs to complete the action plan template developed during the two-day workshop. The same should be synchronized with the existing plan of action of the state. It can then be used as a monitoring tool as well.
 8. To minimise / avoid stock-outs at national level, the Government MUST ensure that funds are available on time to UNICEF for procurement, and sufficiently to ensure uninterrupted supply of vaccines throughout the year.

The NSCS should ensure that a mechanism is put in place to have funds on hand that can be used to move vaccines and supplies without reference to the agency for every transaction. A system of contingency funding may be implemented to ensure that any delays or lack of sufficiency in timely funding can be taken care of by such funds.
 9. The capacity of the Zonal stores was critical to ensure sufficiency of storage capacity of the NSCS for the introduction of the Pentavalent vaccine. Functioning of the Zonal stores is also important for ensuring uninterrupted supply of vaccines to the neighbouring states within its zone. The states of the NW zone are dependent on the Zonal store in Kano. Putting it into operation is a top priority.



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10. For the distribution system to improve it is important that every upper level store provides the supply based on the actual requirement of the lower store. Hence, an informed push or pull system needs to replace the current distribution, which is based on stock availability or ad-hoc.

These solutions are proposed with the PRRINN-MNCH states in mind, but they also have a larger implications on the whole country. For example the completion of the Zonal store of Kano will support 10 other states as well as enhance the capacity of the NSCS. Implementation of the PQS policy will support the entire country and not just the PRRINN-MNCH states.

The implementation of these solutions is expected to contribute significantly to:

- ❖ Improvement in the effective immunization,
- ❖ Increase in the total RI coverage and
- ❖ Reduced infant and maternal mortality rates.

All this will help Nigeria to achieve the MDG 4 objective and NPHCDA's own motto of "Making Nigerians Healthy".

Please email info@prinn-mnch.org for the full report