Continuous distribution of LLINs through primary schools and health facilities in Ghana: Process evaluation of the pilot in the Eastern Region

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Introduction
Mass distribution is the best method to rapidly scale up long lasting insecticidal net (LLIN) coverage, while continuous distribution systems are essential to sustain the results achieved. Ghana has recently engaged in a massive effort to scale up malaria prevention using mass distributions, aiming at reaching universal access to LLINs for the general population (one net for every two persons). In the Eastern Region, mass LLIN distributions took place in December 2010 and April 2011, supported by the National Malaria Control Programme (NMCP) and implementing partners. A set of continuous distribution activities was piloted in Eastern Region, where nets are being distributed through antenatal clinics (ANC), the Child Welfare Clinic (CWC) under the expanded programme on immunization (EPI) and through primary schools.

Methods
This evaluation was designed to provide a critical review of the process of LLIN continuous distribution through the various delivery mechanisms, to identify best practices, achievements and lessons learned in the Eastern Region, after a few weeks of implementation. The results were expected to inform the NMCP and partners for the scale up of LLIN continuous distribution in Ghana. This was a retrospective and cross sectional process evaluation covering all levels of implementation, including the national, regional, district, sub-district, and community levels. Existing literature, guidelines, and tools developed and used in Ghana were reviewed. The fieldwork consisted of collecting qualitative data through key informant interviews, feedback sessions and direct observations. The sampling method of districts, health facilities and schools was purposive, based on accessibility criteria (a mix of easily accessible and hard-to-reach districts and communities) and stakeholder advice. Two districts were selected. Data was collected by a team composed of NetWorks project officers and Eastern Regional Health Team members. Stakeholders interviewed in this evaluation were as follows:

Regional:
- National:
  - NMCP: Malaria Entomologist and Health Workers of 1 health centre, 1 District Supply Officer
  - District SHEP Coordinator
  - Regional SHEP Coordinator
- Private School

Orientation, training and supervision were as follows:
- Training: Many participants at the training were not the ones managing the LLIN distribution in the facility. Against the expectation and agreed process, trainees did not provide orientation for their colleagues at health facilities in most cases. Also many store managers at all levels were not sufficiently involved in the orientation meetings and the trainings sessions at district level.
- Supply chain management: Significant delays in LLIN shipments from the Central Medical Store to the districts in the Eastern region were reported, and mostly attributed to contracting issues between partners. Also, communication between operational levels in the region was lacking during the movements of LLIN, resulting in a lack of effective follow up of LLIN movements and arrangement of storage space where needed.
- Data collection and reporting: Because untrained health workers were recording data on LLIN distributed, there is no standardisation of data collection and reporting across health facilities, leading to improper reporting to the central level and an underestimation of LLIN distributed.

Results

Summary of key successes, best practices, weaknesses and lessons learnt

<table>
<thead>
<tr>
<th>Health facility based distribution</th>
<th>School based distribution</th>
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<tr>
<td>SUCCESSES AND BEST PRACTICES:</td>
<td>SUCCESSES AND BEST PRACTICES:</td>
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<td>Coordination: Effective central coordination through the ITN national committee and “vibrant” leadership by the NMCP ensured a commendable implementation of the pilot</td>
<td>Coordination: There was a high level of enthusiasm for the LLIN distribution activities in the education sector because traditionally, less attention and fewer resources are directed to this sector. This resulted in high commitment amongst the education authorities and effective coordination with the health sector.</td>
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<td>Adoption of available tools and systems: Existing tools for data collection at ANC and CWC were adopted and used to record LLIN distributed. This enabled data being collected at health facility level to be reported through all levels to the central level, using the already existing Health Information Management System.</td>
<td>Schools as an effective channel for behaviour change: It was easy for primary school teachers to educate the children, using their already effective methods and approaches, on the cause of malaria, how to prevent it, and the proper use of LLIN. Materials were developed for behaviour change communication (BCC) and some teachers initiated the progressive introduction of key malaria messages into the daily curriculum.</td>
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<tr>
<td>WEAKNESSES:</td>
<td>WEAKNESSES:</td>
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<td>Teacher involvement: Even though the schools were involved in the distribution, the majority of the teachers were not trained to manage the distribution.</td>
<td>Validation of supplies: Quantities of LLIN needed per schools, circuits, districts and region as a whole for the “school-based” distribution were overestimated, leading to excess nets remaining at stores after distribution. This was due to lack of data validation at all levels using the Education Management Information System (EMIS) data, as required by the agreed process and guidelines.</td>
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<td>Teacher orientation and training: The lack of engagement and involvement of authorities of private schools led to the private-run schools’ lack of understanding of the continuous distribution concept, not willing to share school registrant data, and late inclusion of some private schools in the distribution exercise.</td>
<td>Schools as an effective channel for behaviour change: It was easy for private school teachers to educate the children, using their already effective methods and approaches, on the cause of malaria, how to prevent it, and the proper use of LLIN. Materials were developed for behaviour change communication (BCC) and some teachers initiated the progressive introduction of key malaria messages into the daily curriculum.</td>
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Lesson learnt:
Revision of training methods and procedure: Trainings will be conducted in health facilities and ‘on the job’ instead of bringing personnel together, out of the facilities for a didactic training session. This will ensure that all personnel who will be involved in the LLIN distribution are provided proper orientation, and that all the real and practical issues related to distribution are discussed and addressed.

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