Implementation Guidelines for Continuous Distribution of Insecticide Treated Nets for Malaria Control and Prevention in Ghana

National Malaria Control Programme
Ghana Health Service

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ACRONYMS

ANC	Antenatal Clinic
CBO	Community Based Organization
CHN	Community Health Nurse
CHPW	Child Health Promotion Week
CWC	Child Welfare Clinic
DHIMS2	District Health Information Management System 2
EPI	Expanded Programme for Immunization
FBO	Faith Based Organization
GES	Ghana Education Service
GHS	Ghana Health Service
ISS	Integrated Supportive Supervision
ITN	Insecticide Treated Net
NGO	Non-Governmental Organization
NMCP	National Malaria Control Programme
OTSS	Outreach Training and Supportive Supervision
RCH	Reproductive and Child Health
SBCC	Social and Behavior Change Communication

I. INTRODUCTION

Insecticide Treated Nets (ITNs) are the cornerstone of malaria control in Sub-Saharan Africa together with Indoor Residual Spraying. This is because the principal malaria vectors` largely bite and rest indoors. ITNs are used to break the vector-human interaction and to reduce transmission. In Ghana, The National Malaria Control Programme (NMCP) leads malaria protection efforts across a variety of population groups using mass ITN distribution campaigns, a continuous distribution system of integrating ITN distribution into Antenatal Clinics (ANC), Expanded Programme for Immunization (EPI) and through schools, and complementary retail sector, which is active in urban areas, where nets are available for sale according to free market principles. This all-inclusive public and private sector approach paves the way for the Government of Ghana to maintain universal coverage of ITNs as guided by the World Health Organization.

The success of continuous distribution through commercial sales and free ITN distribution requires a framework and guidelines for planning, implementation, and monitoring. In addition, it heavily depends on a solid supply chain system supported by accurate data reporting and effective supportive supervision (mainly integrated into routine activities). It also depends on a well-designed and well-implemented Social and Behaviour Change Communication (SBC) strategy.

NMCP works closely with the Ghana Education Service (GES) and a number of donors and implementing partners to carry out annual distributions. NMCP is responsible for coordination, strategic planning, advocacy, procurement and distribution, data collation and sharing, and quality control.

1.1 POPULATION AND HOUSEHOLD STRUCTURE

According to the 2014 DHS, pregnant women make up 4% of the population, and 14% of the population are children under 5 years old. Primary school children (5-14) make up 28% of the population. Over a third of households have a child under five and over half have a student in primary school. Therefore, these households are eligible to receive free ITN while other households representing about 8% of the population have options to obtain an ITN through private sector channels at full or discounted price at the retail outlets or through work-based programmes.

1.2 USING THE GUIDELINES

These guidelines represent a framework and are intended to describe in detail the mechanisms for implementation of continuous distribution in Ghana. These guidelines

should enable both public and private sector planners, managers and practitioners to understand and implement distribution activities according to policy.

2. Goal and Objectives of the Guidelines

The Implementation Guidelines for Continuous Distribution of Long-lasting Insecticidal Nets for Malaria Control and Prevention in Ghana represent a framework to manage and implement effective ITN distribution through broad range of partnerships under a mission of ensuring health lives for all as described in the National Health Policy of the Ministry of Health and the New Charter of Ghana Health Service (GHS).

With the main goal to maintain universal coverage of ITNs, GHS/NMCP target a variety of population groups through several distribution channels to supply needed nets. Objectives of the document are to provide clear and sufficient guidance for implementation of each of the main ITN continuous distribution channels, and to outline roles and responsibilities of all levels of GHS in the net distribution system.

3. Distribution Methods

NMCP works closely with the regional and district health offices as well as Ghana Education Service to integrate ITN distribution into existing structures and carry out stand-alone mass distribution campaigns. NMCP also advocates and engages complementary routes of distribution through private sector. The distribution channels are utilized with consideration of demographics, geographical locations (urban vs. rural), and financial viability of the targeted population groups.

The NMCP uses a 'pull' and 'push' approach to get nets into households periodically throughout the growth of the household from couple to family and beyond. The following channels are utilized to implement the 'push' approach:

- ANC, targeting pregnant women at their first ANC visit
- EPI, targeting 18-month-old children receiving their 2nd measles/rubella vaccination

- Primary schools, number of classes is determined by quantity of nets required to ensure ITN coverage is sustained.

Complementing 'pull' channels will provide additional coverage for households through:

- Sales of ITNs to students in secondary schools
- Open retail sales in urban and peri-urban areas
- NGO, CBO and FBO distributions at the community level
- Workplace programmes to encourage employers to purchase of ITNs for employees

4. DISTRIBUTION THROUGH ANC AND EPI

At ANC facilities (public and private), midwives and community health nurses will give a free ITN to every pregnant woman coming for her first antenatal care visit. The midwife or nurse will mark the date and place of ITN given in the pregnant woman's ANC booklet and also record information in the health facility ANC register. For each new pregnancy, the pregnant woman will be eligible for a new ITN.

For EPI, a health worker at Child Welfare Clinic (CWC) will give an ITN to each child receiving 18-month measles/rubella vaccination (booster) and vitamin A. The health worker will record the receipt of ITNs in the child's health card, and also in the CWC's register.

NMCP will ensure that at least a six-month quantified stock within each district. The NMCP and partners will be responsible for procuring ITNs. Initial quantified allocations will be provided from the district level to all health facilities. Health facilities will subsequently place requisitions for ITN re-supply every month (based on stocks used) when monthly reports on ANC/ EPI are sent to district level. Where applicable, requisition will be done through the Ghana Integrated Logistics Management Information System (GHILMIS) and delivery made by the regional medical stores or their contracting agents.

Reporting of distributed nets will be done using existing ANC and EPI monthly reporting protocol and entered into DHIMS2 at health facility, sub-district or district level, whichever is applicable.

4.1 Roles and Responsibilities

Table 1 provides detailed description of duties for all personnel involved in the ITN distribution in ANC and EPI facilities from national to the clinic level.

TABLE 1: ANC AND EPI DISTRIBUTION ROLES AND RESPONSIBILITIES

HEALTH FACILITY LEVEL	
Midwife and Community Health Nurse (CHN)	• Register pregnant woman on first visit • Properly document ITN given in the health facility register and pregnant woman's ANC booklet • Properly document ITN given to child at measles immunization • Collate monthly ANC/EPI data and ITN stock • Order for ITN (through Ghana Integrated Logistics Management System)
Health Facility In-Charge	• Manage ITN stock in the facility • Supervise implementation at health facility and outreach • Review ANC/EPI data and ITN stock and forward to sub-district • Make monthly requests to district level for resupply of ITNs • Train health workers at district level
SUB-DISTRICT LEVEL	
Sub-district Head	• Review and approve monthly ANC/EPI data and ITN stock received from all health facilities • Endorse monthly health facility requests for action by district storekeeper • Supervise and monitor distribution and reporting in health facilities in the sub-district
DISTRICT LEVEL	
District Health information Officer **Disease Control officer**	• Receive monthly ANC/EPI data • Enter data into DHIMS2 monthly • Review and validate data in DHIMS2 monthly • Train health workers at district level
District Health Promotion Officer	• Oversee SBCC, education, and social mobilization activities • Support monitoring and supervision of district level continuous distribution activities
District Supply Officer	• Manage storage and security of ITN stock at district level • Manage inventory and logistics flow to ensure availability of ITN

	• Receive and approve sub-district requests for sub-districts and health facilities • Prepare quarterly re-stock requests for district
District Malaria Focal Person	• Review and approve ANC/EPI data from sub-districts • Endorse monthly sub-district requests • Train health workers in district • Monitor and supervise activities within district • Coordinate continuous distribution activities in district
District Director of Health Services	• Custodian of ITNs for district • Lead the implementation of continuous distribution activities at district level • Review and approve monthly sub-district ANC/EPI data and net stocks for onward submission to the regional level • Review and endorse quarterly requests for ITNs for district • Co-facilitate training of health workers at district level
REGIONAL LEVEL	
Regional Health Information Officer	• Receive and review ANC/ EPI data and ITN data • Share data with Reproductive Child Health, EPI, Disease Control Officer, Malaria Focal Person at regional level • Member of regional continuous distribution steering committee
Regional Health Promotion Officer	• Coordinate SBC, education and social mobilization activities for ITN-related behaviors in region • Member of regional continuous distribution steering committee
Regional Supply Officer	• Manage storage and security of ITN stocks at regional level • Receive and approve the release of quarterly district requests • Monitor supply chain and logistics of region • Member of regional continuous distribution steering committee
Regional Nutrition Officer	• Coordinate Child Health Promotion Week (CHPW) • Share data on CHPW with RCH, EPI/Disease Control Unit, Malaria Focal Person • Member of regional continuous distribution steering committee

Regional Disease Control Officer	• Review EPI data from districts in DHIMS2. • Monitor and supervise continuous distribution activities in Child Welfare Clinics in region • Train trainers at regional level • Member of regional continuous distribution steering committee
Regional Reproductive and Child Health Officer	• Review ANC data in DHIMS2 and provides feedback to district teams • Monitor and supervise continuous distribution activities in ANCs in region • Trainer of Trainers at regional level • Member of regional continuous distribution steering committee
Regional Malaria Focal Person	• Review and approve ANC/ EPI data and ITN stock data from districts • Endorse quarterly district requests • Monitor and supervise continuous distribution activities in region • Trainer of Trainers for district level training • Coordinate all continuous distribution activities at regional level • Member of regional continuous distribution steering committee
Regional Director of Health Services/ Deputy Director of Public Health	• Custodian of ITNs in the region • Review and approve monthly district ANC/ EPI data for submission to national level • Review and endorse quarterly district ITN requests • Head of continuous distribution steering committee at regional level
Representative of the Regional Coordinating Council	• Coordinate involvement of Municipal, Metro and District Assemblies at all levels • Member of regional continuous distribution steering committee
NATIONAL	
NMCP	• Coordinate overall continuous distribution activities at national level • Advocate for the inclusion of distribution of ITNs in ANC/ EPI • Monitor and supervise overall continuous distribution implementation nationwide • Review and approve semi-annual allocation and distribution of ITNs to regions
Reproductive and Child Health Division	• Monitor and supervise continuous distribution implementation in ANCs nationwide

EPI	• Monitor and supervise continuous distribution implementation in CWCs nationwide
Central Medical Stores	• Review requests for semi-annual distribution of ITNs for regions • Ensure supply of semi-annual net stocks to regions
Director General, Ghana Health Service	• Approve and communicate continuous distribution guidelines to all regions • Monitor and supervise health facility based ITN distribution
Minister of Health	• Ensure inclusion of continuous distribution strategy in malaria vector control policy • Advocate for the inclusion of ITNs in the long term into the essential drug/ commodities list for the National Insurance Scheme

4.2 Training Plan

The rollout of any new guideline, policy, or procedure requires significant training of individuals responsible for implementing activities prescribed in these protocols.

Table 2 present a training plan that should be used for a high-quality execution of continuous distribution through ANC and CWC channels.

TABLE 2: TRAINING PLAN FOR ANC AND CWC DISTRIBUTION

Level	Trainee	Content	Trainer
National level	Maternal and child health officers	• New activities, • ITN distribution, and reporting *(This can be combined with the ITN distribution taskforce meeting).*	national level trainers
Regional level	• Regional Director of Health • Deputy Director Public Health (DDPH) • RCH Coordinator • Regional Disease Control Officer • Regional Medical Stores Manager • Regional Malaria Focal Person	• ITN distribution • Roles and responsibilities • Logistics • Reporting and supervision	national level trainers

Regional level	• District Directors • Disease Control Officers • District Malaria focal person • District Public Health nurses • Selected health workers, and District Storekeepers	• ITN distribution • Roles and responsibilities • Logistics • Reporting and supervision	national level trainers
District level	• Health facility staff including ○ ANC/EPI nurses ○ Head of health facility ○ Person responsible for storage and receipt of ITNs.	• ITN distribution • Roles and responsibilities • Logistics • Reporting and supervision	

NMCP jointly with partners have developed training materials in consideration with the guidelines to be used for trainings at district and health facilities.

4.3 ANC/EPI Outreach

ITN distribution should be integrated into outreach activities that are conducted in rural and hard-to-reach areas. Target groups will be the same as for routine ANC/EPI activities; pregnant women attending first-visit ANC and children receiving measles/rubella vaccinations. CHNs and midwives should carry ITNs along as part of regularly scheduled outreach activities, with quantities determined by previous data (previous 3 months) on number of first-time ANC and measles vaccinations given during outreach activities.

Continuous distribution stakeholders at district, regional, and national levels should allocate additional resources to support outreach activities in the hard-to-reach areas. Sources of funding will include internally generated funds and support from government and donors.

4.4 ITN Recording and Reporting at ANC

Health Facility Level

- Midwives and community health nurses document the receipt of the ITN in the pregnant woman's Maternal Health Record Book, recording "net given/date/ location."
- Midwives and community health nurses record the receipt of the ITN in the Health Facility's ANC register, using the column adjacent to the "ITN" column.
- Total ITNs distributed per month is tallied in the midwife's monthly returns form (Form A, see Annex 1), along with stock remaining.
- A requisition is made by the facility store keeper/midwife to the district level for restocking when stock reaches minimum stock level (one-month stock based on consumption) and is approved by the Health Facility In-Charge, then sent to District level.

Sub-district Level

- The Sub-district In-charge compiles the ANC reports from all health facilities and sends to District for validation and approval.

District Level

- District Health Information Officer enters ANC data into the DHIMS2. Once data are entered it can be accessed by all levels.

Regional Level

- The Regional Malaria Focal Person and Health Information Officer review district level data and share pertinent information with the Unit Heads of ANC and CWC during the regular monthly data validation meeting. The Regional Malaria Focal Person provides feedback to districts for follow up on health facilities performing below expectation.
- Public Health reports are reviewed by the Regional Health Director.

National Level

- NMCP reviews data from DHIMS2 and shares the reports with national-level stakeholders.

4.5 ITN Recording and Reporting at EPI

Health Facility Level

- Community Health Nurses (CHNs) document the receipt of the ITN in the maternal and child health booklet recording "net given/date/location."
- Nurses record the receipt of the ITN in the Health Facility's EPI Tally Sheet (Annex 2).
- Total ITNs distributed per month is recorded by CHNs in the monthly vaccination report (Annex 3) which are sent to the sub-district, along with stock remaining.
- A requisition is made by CHNs/storekeeper each month and is approved by the Health Facility In-Charge.

Sub-district Level

- The Sub-district Leader (Head) compiles the EPI reports and sends to the District Disease Health Information Officer for entry into DHIMS2.

District Level

- District Health Information Officer enters EPI data into the DHIMS2 in instances where data entry is not done at health facility level
- District Director of Health endorses the data

Regional Level

- The Regional Health Information Officer reviews data and shares monthly report with the Regional Malaria Focal person and other members of the regional team for validation and follow up.
- The Regional Director of Health endorses the reports.

National Level

- NMCP compiles and shares the reports with the national level stakeholders.

4.6 SUPERVISION

Supervision of ANC and EPI ITN distribution is integrated into the existing GHS integrated supportive supervision (ISS) and malaria outreach training and supportive supervision (OTSS) plans.

5. SCHOOL-BASED DISTRIBUTION

5.1 PRIMARY SCHOOL DISTRIBUTION

ITNs are delivered free for school children in two particular classes (as dictated by NetCALC, ITN needs quantification tool, or the situation pertaining). In previous years, this has been the second and last grades (P2 and P6) of primary school. P2 and P6 will remain the classes of choice unless pertaining conditions warrant a review. Distribution is done according to class register and enrolment figures. The distribution is led by the District Director of Education and District School Health Education Programme (SHEP) Coordinator in conjunction with the Head of School and School-based Health Coordinator and the P2 and P6 teachers. Supervision is done by Circuit Supervisors, District, Regional and National level supervision teams.

5.2 SENIOR HIGH SCHOOL DISTRIBUTION

Starting 2012, ITNs have been specified in the prospectus for all secondary school students to purchase nets at full retail cost. Schools negotiate directly with private sector distributors on price and type; NMCP provides a list of approved manufacturers and products to guarantee quality.

Free nets by the Government and/or other donors will be distributed to senior high school students in both private and public schools when available. It is expected that nets available will be sufficient for all three forms (levels) of the senior high school (SHS). When nets are inadequate, priority will be given to students in SHS2 because

SHS1 students usually buy ITNs from commercial outlets prior to the start of the school.

5.3 ROLES AND RESPONSIBILITIES

Table 3 provides detailed description of duties for all personnel involved in the ITN distribution at schools from national to the school level.

TABLE 3: SCHOOL DISTRIBUTION ROLES AND RESPONSIBILITIES

SCHOOL LEVEL	
Head Teacher/ Class Teacher/ School SHEP Coordinator	• Distribute ITNs to school children based on class enrolment numbers in registers • Educate pupils on malaria prevention and ITN use and care • Document ITNs distributed using the Form A
CIRCUIT LEVEL	
Circuit Supervisor	• Assist third party logistics contractors to distribute individual schools' allocations to headmasters within the circuit • Supervise ITN distribution to school children • Support the training (*check training plan*) of headmaster, class teachers and school-based coordinators • Review, collate, and approve data for submission to district
DISTRICT LEVEL	
District Storekeeper	• Responsible for storage and security of net stock at district level • Issue stock to third party logistics contractors or circuit supervisors • Receive leftover stock • Issue leftover stock to district health directorate
District Director of Health Services	• Receive and review school distribution data • Train circuit supervisors at district level • Monitor and supervise distribution in district
District Malaria Focal Person	• Train circuit supervisors at district level • Monitor and supervise distribution in district • Ensure school distribution data is captured in DHIMS2

	• Coordinate transportation of excess nets from district education stores to health for distribution through health facilities
District SHEP Coordinator	• Report to regional level on ITN stock received at district level • Receive and review school distribution data • Train circuit supervisors at district level • Monitor and supervise distribution in district • Ensure transport of excess ITNs from district GES stores to GHS stores for routine distribution through health facilities
Assistant Director/Deputy Director Supervision and Private School Coordinators	• Report to regional level on nets received at district level and quantity distributed • Supervise and ensure all enlisted schools receive ITNs • Ensure education of pupils on ITN use and care
District Director of Education	• Custodian of ITNs for district • Endorse ITN stock received at district level • Review and endorse school distribution data • Monitor and supervise distribution in district • Authorise movement of excess nets from education stores to health
REGIONAL LEVEL	
Regional Education Service Supply Officer	• Review reports from districts on ITN stock received
Regional Chairman of Association of Private Schools	• Coordinate and supervise net distribution activities in private schools in region • Member of regional continuous distribution steering committee
Regional SHEP Coordinator	• Review and endorse district ITN allocations received • Monitor and supervise ITN distribution in region • Train district and circuit officers • Coordinate all school distribution activities at regional level • Review and endorse school distribution data • Member of regional continuous distribution steering committee

Regional Director of Education Service/ Deputy regional Director of Education Service	• Custodian of ITNs at regional level • Review and approve regional enrolment data and ITN stock needed for distribution • Review and endorse district ITN allocations received • Monitor and supervise ITN distribution in region • Review and endorse school distribution data
Regional Director of Health Services & Malaria Focal Person	• Train district and circuit officers • Monitor and supervise ITN distribution in region • Ensure school distribution data is captured in DHIMS2 • Ensure left over nets are moved to health stores for health facility distribution
NATIONAL LEVEL	
National SHEP Coordinator	• Coordinate school ITN distribution activities at national level • Monitor and supervise school ITN distribution implementation nationwide • Review and approve school enrolment data for ITN stock to be distributed to regions • Coordinate secondary school level ITN distribution with NMCP and commercial sector sales in schools at national level • Oversees the continuous education of headmasters, teachers, and students on malaria prevention and ITN use and care.
NMCP	• Facilitate the coordination and communication between GES and implementing partners • Review and approve school enrolment data. • Lead ITN needs quantification for districts
Central Medical Stores	• Review requests for distribution of ITNs to individual districts for school distribution • Ensure supply of net stocks to individual districts
Director General, Ghana Education Service	• Communicate school-based ITN distribution strategy to all regions • Monitor and supervise school-based ITN distribution

5.4 TRAINING PLAN

Trainings will be organised annually as per training plan presented in Table 4.

TABLE 4: TRAINING PLAN FOR SCHOOL DISTRIBUTION

National Level		
Trainee	**Content**	**Trainer**
• NMCP • SHEP • Partners	• The basics of malaria prevention: transmission, malaria prevention tools and benefits, and ITN use and care • The School ITN Distribution • Roles and responsibilities • Logistics • Reporting/use of App • Supervision	Selected national level trainers
District Level		Regional Level
• District Directors of Education • District Directors of Health • District SHEPs • District Malaria Focal Persons • Assistant/Deputy Superintendents • Private school coordinators • Circuit supervisors		Regional team
• Headteacher • School SHEP	• The basics of malaria prevention: transmission, malaria prevention tools and benefits, and ITN use and care • The School ITN Distribution	Circuit supervisors

5.5 ITN RECORDING AND REPORTING

Reporting of ITN distribution in schools will be done using paper-based forms and a mobile electronic application, Net4Schs (developed by the NMCP). The paper-based School Form A (see Annex 4) will be used by class teachers to record names of pupils as evidence of ITN distribution in schools. This will be the source document for Net4Schs.

The Net4Schs app will mainly be used by the circuit supervisors. Using the schools Form A, circuit supervisors will record ITNs distributed in the respective schools into Nets4Schs App. The data will be uploaded to a server established and managed by NMCP. The data will be available electronically for the different categories of supervisors during monitoring visits and made easily accessible after the distribution is completed.

When using paper-based forms only (not recommended)

Primary School Level

- The Class Teacher records the names of the children receiving ITNs in the class reporting form (School Form A), including the tallies of nets received and nets distributed on the day of the net distribution.
- The Headmaster and the circuit supervisor sign off on the Form A for each class

Circuit Level

- The Circuit Supervisor uses information from the Form A to complete the circuit summary Form B (see Annex 5) a week after distribution exercise. Under no circumstance should the Form A be taken from the school.

District Level

- The District SHEP Coordinator compiles the circuit report using the form C (see Annex 6) and sends it to the Regional Education office, copying the Regional Malaria Focal and the DHMT two week after end of distribution exercise.

Regional Level

- The Regional Education office compiles the district ITN report using the Form D (see Annex 7) using information that arrived in the circuit reports and shares it with the NMCP and partners three weeks after the distribution exercise.
- The Regional Malaria Focal Person reviews and endorses the reports, to be submitted to the NMCP.

National Level

- The NMCP ITN focal point compiles and shares the regional reports with the national stakeholders.

When using the Nets4Schs App (recommended)

Primary School Level

- The Class Teacher records the names of the children receiving ITNs in the class reporting form (School Form A) including the tallies of nets received and nets distributed on the day of the net distribution
- The Headmaster and the circuit supervisor sign off on the schools Form A for each class involved in the distribution
- The Circuit Supervisor enters the data in the Nets4Sch app. Form A is kept at the school. Under no circumstance should the Form A be taken from the school

Circuit Level

- The Circuit Supervisor compiles the class reports using the Net4Schs application.
- Once the Circuit Supervisor enters the primary data, the data are automatically aggregated into district and regional data sets/reports in the Net4sch app.

5.6 SUPERVISION

Supervision of the school-based ITN distribution is carried out by a Circuit Supervisor at each school in his/her circuit. As part of the supervision, the Circuit Supervisor

ensures that each school obtains the right quantity of ITNs and every pupil enrolled receives an ITN along with explanation how to hang, use and care for the net. The District Director of Education and District Disease Control Officer will also conduct supervision visits during the distribution period, as will the Regional and National levels.

6. DISTRIBUTION THROUGH PRIVATE SECTOR

Private sector provides vast opportunities to complement the GHS/NMCP efforts to provide ITNs to the beneficiaries through various channels: retail, subsidized sales through NGO/CBO/FBO outlets and work-based distribution.

Bearing in mind that provision of resources for free ITN distribution may face challenges in the following years, the country should begin introducing co-payment practice as a new norm to the population. All private and public sector partners should make a conscious effort to stimulate and encourage individuals to pay full or partial (subsidised) price to obtain an ITN. This is to take advantage of the culture of net use that has been steadily growing through the nationwide mass distribution campaigns and high ITN ownership since 2011. Enhanced positioning of a net as an essential household commodity for each family in Ghana should boost motivation of beneficiaries to pay a small amount for an ITN. The private sector partners play a crucial role in stepping up the availability of ITN in various forms and shapes at full-price or subsidised through the retail sales and other channels, and assisting with education of the beneficiaries at the points of distribution.

6.1 PRIVATE SECTOR CHANNELS

The following are the major channels that should be used to attract the private sector distributors and manufacturers of nets:

- Retail sales of nets promoted through mass media. Distributors and sellers should increase points of sale to reach those who willing and able to buy the nets at full price, mostly in urban centres.
- Subsidized or discounted distribution through NGO/CBO/FBO. These should be targeted at populations not reached by the ANC, EPI and school-based distributions such as living in hard to reach and disadvantaged areas; the elderly; etc. Distribution can be done as part of regular activities of such organizations.
- Employer-based schemes. These may include subsidized or free distributions by employers who wish to provide ITNs to the employees and their families. Another

scheme might have full cost recovery, with the full price of the ITN gradually deducted from employees' salaries.

ITNs should be available in various areas (particularly urban or higher SES areas) for sale at full price, for those willing to buy them.

6.2 ITN Recording and Reporting

It has been difficult to capture private sector sale of nets to inform national planning. There is little incentive for distributors, private companies and NGOs to report back to NMCP sales figures. For distributors to feel comfortable sharing such strategic information, confidentiality would have to be guaranteed and figures would need to be aggregated at national level before being shared with other stakeholders. Including questions in surveys (GDHS, GMIS etc) about where each net in the household was purchased or received will be important to track how far retail nets are reaching into Ghana over time.

7. ITN Supply Chain Management

Effective and efficient supply chain management includes core components such as planning, quantification, procurement, inventory management and transportation. The planning process for ITN distribution at the national level should include at least the following steps: establishing cost requirements, estimating quantities, and developing procurement and distribution plans. ITNs should be procured for continuous distribution on an annual basis. The procurement plan should reflect the routine nature of ANC and EPI and the annual distribution through schools.

7.1 Quantification

While NetCALC is excellent for determining how different channels can be combined to reach and maintain universal coverage, it does not provide quite the right figures for procurement planning. The number of nets it provides as output reflects programme efficiency (both in reaching the target population and in getting them an ITN); if Ghana were to use the total number of nets required as stated in NetCALC , it would not be able to improve the efficiency targets that NetCALC uses as variables. Quantification for national, regional, district and health facility needs should be based on demographic data, adjusting for current rates of attendance or enrolment at ANC, EPI, and schools but leaving room for programme efficiency to reach 100% rather than limit itself to 75% or 80%. Quantification should also consider nets reported through DHIMS2 on nets given at ANCs and CWCs

Continued monitoring of ITN stock levels at each level is necessary to determine uptake rates and ensure that a scheduled requisition process and buffer stocks prevent stockouts at all levels.

7.2 PROCUREMENT

Procurement is a lengthy process. The time lag between tendering and the actual supply of ITN can be between 6 months to a year. The routine nature of distribution of ITNs through ANC and EPI clinics requires a steady flow of ITNs to the health facility throughout the year. Therefore there should be adequate stocks at the regional level at each point in time to cover at least 6 months of distribution. To achieve that procurement requires informed forecasting optimization of the purchase orders. Procuring ITNs in bulk has the advantage of reducing the number of times the NMCP has to go through the tendering process, but it also has its challenges of requiring large storage facilities at the various levels. Agreements should be made with suppliers to deliver agreed quantities of ITN every six months to the national or regional medical stores.

Funding for ITN currently depends on donor funding cycles. To ensure the routine distribution system does not run out of ITNs, funding should be guaranteed one year ahead of when it will be required for the procurement process to start. Donors will therefore be required to commit funds for procurement two years before the ITNs have to reach the health facility for distribution.

ITNs will be procured through a government or donor-selected procurement agency. ITNs procured will be delivered directly to Regional Medical Stores. The cost of transportation from the port to the regional stores will be incorporated into the tender.

7.3 PRODUCTS AND SPECIFICATIONS

All ITNs procured to be used in the country should be in line with the WHO recommendations and approved by the Ministry of Health through the Food and Drugs Board. The denier, size, material, and other specifications recommended by Ministry of Health are detailed in Section 2.5 of the Integrated Malaria Vector Management Policy. Table 5 provides information on product specifications that impact storage and logistics requirements.

TABLE 5: CHARACTERISTICS OF ITNS RELEVANT TO LOGISTICS

Characteristics	Multifilament Polyester ITN (75 denier)	Monofilament Polyethylene ITN (150 denier or move)
Weight of ITN	440g	625g
ITNs per bale	100	50
Weight of bale	42kg	29kg
Capacity of 20 ft container	33.2m^3	33.2m^3
Bales for 20 ft container (loaded at 90% capacity)	157 bales	235 bales

7.4 TRANSPORTATION

ITN transport costs can easily become a barrier to the smooth flow of ITNs from the national, regional and district levels to the health facility. Planners must be aware of and closely follow the details involved in calculating distances, truck capacity, fuel needs, as well as allowances for transporters, conveyors, and ITN handlers. The cost of transportation form the port to the Regional Medical Stores should be factored into the ITN procurement budget.

7.5 STORAGE

Most Regional Medical Stores can store about five 40-foot containers at their locations with few stores that may not have adequate storage space. The Eastern Regional Medical Stores, for example, have limited storing capacity but can keep ITNs for continuous distribution in leave-behind containers on their compound. Alterations will have to be made to the containers to reduce the direct impact of the sun on the containers generating a lot of heat. ITN will be transported from the central Medical stores to the regional stores to the district storages for ANC and EPI. Nets can also be transported directly from the central stores to the districts. Health facilities will provide storage for their monthly supply of ITN.

7.5.1 STORING REQUIREMENTS

Bales of ITN can be stacked up to 5 metres without damage to the nets. However practical stacking height will depend on the type of a store. In a large national warehouse, ceiling heights, facilities for stacking and safety maybe sufficient to allow high stacks. Storage capacity at national, regional and district can be easily verified. The capacity available at the stores should inform the amount of ITN allocated to the storage at each point in time. An assessment of health facility and Community Health Planning Services (CHPS) compound storage at the district level will ensure the estimated amount of stocks to be stored fit without disrupting other storage schedules.

7.5.2 STORAGE CONDITIONS

- The storage facility must be clean and dry
- The storage facility must have a functioning security system
- In small health facilities, ITNs must be locked and access to the ITNs controlled.
- The storage must be rodent-free as they can cause substantial damage to ITNs in a short time.
- Prolonged storage should be avoided as ITNs are pesticide products and therefore have a limited (though, long) shelf-life
- ITNs can be stored against the wall if there are no leaks.

7.5.3 STORAGE LOCATIONS

Storing of ITNs for all channels of distribution is organized at four different levels in the system. The Central Medical Stores will provide storage space when required by the international procurement arrangement. The nets will be moved to the regional

medical stores or directly to the district stores for delivery to health facilities for distribution to beneficiaries. When arranging for storage, the quantities including the buffer stock likely to be stored at each level (regional, district and facility).

7.5.4 ACCOUNTABILITY AND SECURITY OF ITN

Adequate security measures must be in place at all levels to safeguard the security of ITNs during storage, transportation and distribution. Documentation must ensure tracking of ITNs from central warehouses to the point of distribution. The use of bin cards, stores issue and received vouchers/waybills and service delivery reporting tools such as registers and tally sheets must strictly be used.

7.6 SUPPLY CHAIN FOR ANC AND EPI DISTRIBUTION

7.6.1 QUANTIFICATION AND PROCUREMENT

Ghana has attained almost universal attendance of ANC. Therefore, the number of expected annual pregnancies will be used to estimate the number of ITN required for ANC ITN distribution. The quantification of ITN for ANC will be determined in collaboration between the national Reproductive and Child Health unit and the NMCP.

All children turning up for the new measles booster/rubella vaccination will receive an ITN. Measles vaccination at nine months has in the previous years achieved 90% success rate. Though it is expected that the new measles booster at 18 months may not achieve the same success initially, for purposes of quantification, the same success rate of 90% will be used to estimate ITN required for EPI annually. The quantification for EPI will be determined through collaboration between the EPI unit and the NMCP. Overall flow of data for forecasting and the distribution to the facility level is presented in Diagram 1.

The procurement contract at the national level will be established to guarantee that suppliers deliver ITN twice a year to the regional stores for ANC and EPI. ITNs will be stored at regional medical stores or district stores. Request form the facilities based on consumption will be made every month to the district stores and quarterly if nets are stored at the regional medical stores.

DIAGRAM 1: FLOW OF ITN DISTRIBUTION AND FORECASTING DATA FOR HEALTH FACILITIES AND SCHOOLS

National Level Procurement

NMCP

National SHEP

Regional Medical Stores

Regional Malaria Focal Persons (MFPs)

Regional SHEP Coordinator

District Stores

Circuit Supervisors/ District MFPs

Health Facility Store

Pregnant women or mothers

School children in basic school

7.6.2 Allocation and Requisition

The allocation of ITNs for each health facility will be based on the following factors:

- the number of first-time ANC attendees in the past three months, or
- the number of children coming for measles booster vaccination at 18 months
- the number of ITN given out in that month
- Current balance of ITNs in storage

A buffer stock of an average of one-month consumption is always maintained in calculating the need.

Monthly reports on ITNs distributed and stock at hand from the health facility shall be sent to the district through the sub-district, as part of regular monthly reporting of ANC and EPI activities. Requisition for ITN shall be made alongside the report. Scheduled monthly requisition and supply of ITN to the health facility will institutionalise the process and reduce chances of health facilities running out of stocks. A District Malaria Focal Person will review the districts' requests and provide approval for supply.

7.6.3 Storage

At the health facility the ITN will be stored in the facility store and issued to the ANC clinic on ANC days and on CWC days. If the health facility is a small unit, for example a CHPS compound, the ITN will be stored in a safe place by the ANC nurse and issued out to beneficiaries on ANC clinic day. On average, each health facility will need between 20 and 55 ITN per month for ANC and EPI needs. Additional storage needs to be made available for the annual CHPW as the number of ITN required for that month is nearly five times more than the usual.

7.7 Supply Chain for School-based Distribution

7.7.1 Quantification and Procurement

ITN for the school-based distribution will be procured annually and delivered based on the pre-arranged bi-annual supply of ITN to the regional stores. Nets for schools will be procured and stores at the central level. As the school-based distribution will take place in May of every year, ITN should be procured and received to reduce storage costs as much as possible but ensure timely delivery to districts and health facilities before May.

The estimated quantities of ITNs required for school-distribution nationwide should be determined by the Ghana Education Service through the Education Management Information System (EMIS) and provided to the NMCP for inclusion into the national forecast of ITN required. Estimated quantities should be made available at least two years before the intended year of distribution to enable inclusion in the national procurement of ITN.

The quantity of ITN required for a region should be based on the enrolment history for P2 and P6 of the schools over the previous two years. The Regional SHEP Coordinator will validate the estimated number of children in the eligible classes at the regional level.

7.7.2 Storage and Transportation

ITNs procured at the national level will be delivered to the district education stores at least one month before the agreed time of the year for school-based distribution. The ITNs will then be transported to the district store at least two weeks before distribution.

Third party logistics (3PLs) vendors will be responsible for the transportation of ITNs from district education stores to schools. The Head Teachers will receive assigned ITNs from 3PLs for safe keeping awaiting distribution to the eligible children. The Circuit Supervisor will carry out an orientation for the head-teacher and staff and supervise the distribution to the eligible children in each school.

8. Social and Behavior Change Communication

Effective SBCC is a vital element to any ITN distribution programme. For ANC and EPI it is expected that SBCC will occur at the following venues:

- health facility (when the ITN is given, included in health education sessions with waiting mothers/caregivers),as part of service delivery.
- community (through community volunteers) and
- mass media (radio and television).

Key messages will include information on where nets are available and to which target populations, and the importance and benefits of net use. SBCC should build on recent mass distribution campaigns to encourage community use of nets, care and repair, and to reinforce intra-household allocation of nets to cover available sleeping spaces within the household.

For school-based distribution, SBCC will be part of the training curriculum for the Circuit Supervisors, and a leave-behind job aid (such as a poster or reference document) will be provided to the teachers in the eligible classes. The Circuit Supervisors will make a presentation in each class on net use, care and repair, and general malaria information. Teachers especially the SHEP representative for the school will be instructed to follow up on these messages throughout the year.

Presently, school head teachers and school-based SHEP coordinators have been trained on malaria prevention and ITN use and care and have been tasked to form school health teams in schools to lead in planning and implementation of school health activities. Children are important agents of change within their households, and can serve as advocates for their siblings for net use and other malaria prevention and treatment actions. Communication should also be made to inform schools of distribution dates so that head teachers can send messages home to parents and/or via the PTA about the upcoming distribution and who is eligible to receive nets.

9. COORDINATION AND SUPERVISION

Coordination of actions and efforts significantly contributes to a harmonized, efficient and successful implementation process. For ITN distribution, at regional level, a coordinating committee should be established consisting of the Regional Director, SHEP, RCH, EPI, Malaria, Regional Coordinating Council (political). The committee should hold quarterly meetings to review data and discuss implementation issues.

Supervision is an important element to ensure implementation is done correctly and to identify problems and bottlenecks in time to address them. Supervision from the national level to the regional and district shall occur on a regular basis and continued to the facility level as supportive supervision, which is a process of helping staff to improve their own work performance continuously. Regional teams must be part of the national-level supervision visits and work with the district teams to systematize supportive supervision at health facilities. Below are recommended responsibilities for ITN distribution supervision at all levels of the Ghana Health Service:

Supervision from national to level to regions

NMCP and partners from the national level should visit every region at least once every three months. Tasks are:

- To discuss and review progress
- To /check accuracy of previous period’s data
- To review regional supervision reports from previous periods and discuss findings, actions taken and needed
- Check supply chain records and stocks to ensure the buffer system is working and being passed on to the district level.

Supervision from region to district

Regional malaria focal person should visit every district at least once every quarter (three months). Tasks are:

- To check availability and accuracy of supply chain records
- To discuss and review progress, challenges and needs
- To check accuracy of previous period's data
- To review district support supervision reports from previous periods and discuss findings, actions taken and needed

Supportive supervision from district to health facilities

Supportive supervision from the district or sub-district to the health facility should take place monthly. Tasks should include:

- To check availability and accuracy of supply chain documents
- To check availability of stock and adequacy of storage
- To discuss and review progress, challenges and needs with relevant health staff
- To conduct exit interviews with ANC clients regarding their experience with ITN distribution
- To check and ensure that IEC materials and job aides are available and being used
- View ANC consultation records to ensure that:
    - Every woman on first visit is given an ITN unless known to have received one
    - Data is being recorded correctly
    - Counselling (including information on net care and use) is being done appropriately
    - Questions are being answered properly
- To document any staff changes for follow-up with on-the-job training
- To provide orientation to new staff
- To provide guidance to existing staff where activities can be improved

10. MONITORING PLAN

Progress against specific monitoring indicators will be measured in line with the national monitoring and evaluation plan of the Policy Planning, Monitoring and Evaluation Division of GHS, and will be led by the NMCP with the support of stakeholders. Monitoring will be made up of several components:

- Collation of monthly DHIMS2 reports going up to national level
- Supervision visit reports
  ISS and malaria specific OTSS will provide information on ITN distribution through ANC and CWC channels.
- Quarterly steering committee and ITN sub-committee meetings at regional and national level. Malaria Vector Control Oversight Committee meetings will be used as a platform to report and discuss overall progress with the ITN distribution activities that fall into the review period. The committee members should provide general recommendations and make decisions to steer the activities in the right direction. ITN sub-committee will hold monthly meetings to monitor and coordinate activities that are being implemented or plan and prepare for upcoming work and evaluate completed tasks
- Periodic household surveys (GDHIS, GMIS, MICS etc.) or other verification of coverage levels (DHIMS2)

Table 6 includes indicators that will be tracked through the listed data sources.

TABLE 6: ITN DISTRIBUTION-RELATED INDICATORS

Indicator	Data Source
Impact Indicators	
Percentage of households with at least one insecticide-treated net	MIS
Percentage of households with at least one insecticide-treated net for every two people	MIS
Percentage of de-facto household population who could sleep under an ITN if each ITN in the household were used by up to two people(Access)	MIS
Percentage of children under 5 years old who slept under an insecticide-treated net the previous night	MIS
Percentage of pregnant women who slept under an insecticide-treated net the previous night	MIS
Percentage of individuals who slept under an insecticide-treated net the previous night among households with at least one ITN	MIS
ITNs Use- Access Ratio	MIS

Number of Long Lasting Nets (LLNs) distributed to mass delivery points, health facilities, schools (Routine)	School health reports, DHIMS2 and campaign reports
Progress Indicators	
Percentage of pregnant women (registrants) who received ITNs monthly through ANC	DHIMS2
Percentage of children 18 months and above who received ITNs monthly through CWC	DHIMS2
# of ITNs distributed through the primary school channel	Annual school distribution report
# of ITNs distributed through private sector channels	Commercial ITN partners Institutional and retail sales report

NMCP together with regional teams and implementing partners will use gathered data to inform future planning, guide net quantification and needs assessments as well as funding requirements. Results collected for progress indicators will help identify gaps that require greater support and high-performing areas that can contribute to improving the implementation.

11. BUDGET AND COSTING

The parameters for costing continuous distribution include procurement, transportation, storage, training, reporting and supervision and monitoring. Estimated costs should be determined at the regional level and then collated into a national budget.

ANNEX 1: MONTHLY MIDWIVES RETURNS (FORM A)

MONTHLY MIDWIVES RETURNS

Facility Name		District		Region		Month		Year	

EMONC Service			Blood Transfusion services		PMTCT		EID Services		Conduct Delivery		Baby Friendly Services	
None ○	Basic ○	Comprehensive ○	Yes ○	No ○	Yes ○	No ○	Yes ○	No ○	Yes ○	No ○	Yes ○	No ○

ANTENATAL

# Registrants	#Attendances	Making 4th visit	Making 8th visit	TD2+	Mothers below 150 cm/5ft	# Pregnant women seen at 36 weeks	IPT						IFA SUPPLIMENTATION		Duration of pregnancy at resgistration		
							IPT1	IPT2	IPT3	IPT4	IPT5	with reaction	IFA3	IFA6	1st trimester	2nd trimester	3rd trimester

Age of mother at registration						Parity				Syphillis screening			TB Screening			# ITN Distributed
10-14	15-19	20-24	25-29	30-34	≥35	0	1-2	3-4	5+	# Tested	# Positive	# Treated	# Screen	# Positive	# Treated	

Anaemia at Registration and 36 weeks								PMTCT								
Hb Checked at registration	<11gm/dl at registration	<7 gm/dl at registration	Hb Checked at 36 weeks	<11 gm/dl at 36 weeks	<7 gm/dl at 36 weeks	Primigravidae Hb checked at 36 weeks	Primigravidae with Hb <7 gm/dl at 36	# Mothers Counseled at Reg	# Mothers Tested at Reg	# Mothers Positive at Reg	# Mothers on ARV	# Mothers Retested at 36 weeks	# Positive Mothers at 36 weeks	# Babies on ARV	# Babies EID at 6 wks	# Positive at 6 wks

Deliveries

Age group of mother at delivery						Essential Newborn Care					Birth weight				Primigravidae outcomes		
10-14	15-19	20-24	25-29	30-34	≥ 35	Breastfeeding within first 30 minutes	# of Babies Receiving Chloramphenicol/Tetracyclin Eye drops at birth	# Babies receiving cord care with Chlorhexidinde	# Babies receiving cord care with Methylated spirit	Exclusive breastfeeding at discharge	Below 2.5 kg			2.5kg and above	Live Brths to Primigravidae		Primigravida still births
											Primipara	Multipara	Total		Male	Female	

Outcome of delivery	Mothers	Children	# Eligble Women Receiving Corticosteroids at 28-34 weeks	Morbidities							Total birth				
				Vesico-vaginal fistula			Drop foot cases	Puerperal psychosis	Endometritis	Mastitis	Live		Still		
				seen	Repaired	Referred					Male	Female	Macerated	Fresh	Total
Single															
Twins															
Triplet															
others															
Total															

Age group of maternal death						Total Maternal deaths	Maternal deaths audited	Early Neonatal deaths (birth to 7days)	Late Neonatal deaths (8 to 28days)	Total Neonatal deaths (<1 month)	Post natal deaths (1-11months)	Baby's weight (6-10 days)	
10-14	15-19	20-24	25-29	30-34	≥ 35							< 2.5 kg	≥ 2.5 kg

Type of delivery		
Normal		
C/section		
Vacuum		
Forceps		
Total		

Postnatal

Registrants			Age group of postnatal registrants						Post Partum FP Acceptors	Mother/Infant Baby pairs Exclusively Breastfeeding at Discharge	IFA SUPPLIMENTATION No. with IFA given
1st PNC on day 1 or 2	1st PNC on day 3-7	1st PNC from day 8 and above	10-14	15-19	20-24	25-29	30-34	≥ 35			

Site of Delivery									Male involvement				
TBA (Trained/untrained)	Government HC and HP	Teaching Hospital	Government Hospital (Region/District)	Private Hospital	Private Midwife	CHAG	Quasi Govt Instritution	Mines	ANC	Delivery	PNC	FP	CWC

ANNEX 2: EPI TALLY SHEET

GHANA EPI TALLY SHEET (SIDE A): CHILDREN IMMUNIZATIONS

DATE: ..../............/............ REGION:.. DISTRICT:.. HEALTH FACILITY:.. OUTREACH (Village/Town)..

ANTIGENS/ ITEMS	0 - 11 MONTHS	TOTAL	12-23 MONTHS	TOTAL	24 MONTHS & ABOVE	TOTAL	TOTAL CHN VACCINATED
BCG	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
OPV 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
OPV 1	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
OPV 2	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
OPV 3	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
Rotavirus 1	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
Rotavirus 2	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
DPT-HepB-Hib 1	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
DPT-HepB-Hib 2	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
DPT-HepB-Hib 3	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
Pneumococcal 1	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
Pneumococcal 2	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
Pneumococcal 3	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
Measles 1	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
Measles 2			0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
Long Lasting Insecticidal Net			0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
Yellow Fever	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
Fully Immunized	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
Vitamin A (starting from 6 months)	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		

Page 1

ANNEX 3: MONTHLY VACCINATION REPORT

MINISTRY OF HEALTH/GHANA HEALTH SERVICE
EXPANDED PROGRAMME ON IMMUNIZATION
MONTHLY VACCINATION REPORT

Region: ____________________ **District:** ____________________ **Name of Reporting Facility:** ____________________

Month: ____________________ **Year:** ____________________

1. Demographic data

Total Population		A
Infants 0-11 months: annual target		B
Iinfants 0-11 months: monthly target		C = (B / 12)
Expected Pregnancy		D
Expected deliveries: monthly target		E = (D / 12)
Children 12 - 23 months: annual target		
Children 12 - 23 months: monthly target		

2. Completness & Timeliness of reports

2.1 No. of health facilities in the District	
2.2 No. of vaccination posts (Fixed and outreach)	
2.3 No. of reports received during the month	
2.4 No. of reports received on time during the month	

3. Vaccination coverages

	BCG	Penta-1	Penta-3	Measles	YF	TT 2+	PCV-3
3.1 Monthly coverage (%)							
3.2 Cumulative coverage (%)							

3.3 Dropout rate (%) — Cum (Penta-1 - Penta-3) *100 / Penta-1: ______ ; Cum (BCG - Measles) * 100 / BCG: ______

4. Monthly vaccinations given by strategy

Vaccine doses		Number Given (By age group) 0 - 11 months	12 - 23 months	> 24 months	Total Administered
BCG					
Hepatitis B					
OPV-0					
OPV-1					
OPV-2					
OPV-3					
Rotavirus - 1					
Rotavirus - 2					
Penta-1					
Penta-2					
Penta-3					
PCV-1					
PCV-2					
PCV-3					
Measles / Rebella					
Measles 2					
LLIN - Children					
YF					
Fully Immunized					
		Pregnant Women	Non-Pregnant		Others
TT-1					
TT-2					
TT-3					
TT-4					
TT-5					
TT-5+ (Not vaccinated)					
LLIN - Pregnant Women					
		6-11 months	>=12 months	Post-Partum	
Vitamin A					

5. Information Education and Communication

No. of IEC sessions conducted	
No. of participants at sessions	
No. of radio/TV spots conducted	
No. of home visit sessions conducted	

6. A.E.F.I.

No. of cases reported	

7. Waste management

No. of safety boxes used during the month	
No. of safety boxes disposed during the month	
No. of hub-cutters used during the month	
No. of hub-cutters disposed during the month	

8. Cold chain temperatures at Health Facilities

No. of facilities that have reported temp. status:	
No. of health facilities with temperature <+2°C	
No. health facilities with temperature >+8°C	
Minimum temperature recorded	
Maximum temperature recorded	

9. Stocks of safe injection equipment

Safe injection equipment	Stock levels Beginning	received	stock at end
ADS_0.05ml			
ADS_0.5ml			
Sdilution_2ml			
Sdilution_5ml			
Safety boxes			
Hub-cutters			

Annex 4: School ITN Distribution Form – School Level (Form A)

FORM A

PRIMARY SCHOOL ITN DISTRIBUTION

To be completed by **class teacher** during the distribution.

(This form should be kept with school head teacher as evidence of distribution of ITNs)

Name of school:	Public (tick):	Class:
Circuit:	Private (tick):	District:
Period of distribution (Date): From:	To:	

Name of pupil as written in class register (to be written by class teachers)		Gender (tick)		Received (tick)	
		Boy	Girl	Yes	No
1					
2					
.					
.					
28					
29					
30					
	Total				

Summary

Number of pupils on roll	
ITNs received for class	
Number of pupils supplied with ITNs	
Number of ITNs remaining	

I hereby certify that the above information is correct

Name of class teacher.. Signature:.................................... Contact tel..

Name of Head teacher ....Signature:.................................. Contact tel..

NB: IF CLASS ENROLMENT IS MORE THAN SPACES PROVIDED PLEASE CONTINUE ON ANOTHER FORM A

DISTRIBUTION OF LLINs TO PUPILS IS STRICTLY BASED ON ENROLMENT AND NOT QUANTITY DELIVERED. EXCESS LLINs OVER ENROLMENT WILL BE RETRIEVED.

ANNEX 5: SCHOOL ITN DISTRIBUTION FORM – CIRCUIT LEVEL (FORM B)

FORM B

PRIMARY SCHOOL ITN DISTRIBUTION

To be completed by **circuit supervisor** after the distribution campaign.

(A copy of this form should be kept at the circuit and another submitted to the D/SHEP)

Region:	District:
Circuit:	Date:

	Name of School	Indicate PB=Public PV=Private	ITNs Received	No. on Roll		ITNs distributed to				Total ITNs distributed
				P2	P6	P2 (Boys)	P2 (Girls)	P6 (Boys)	P6 (Girls)	
1										
2										
3										
4										
5										
6										
7										
8										
	Total									

Summary

Number of ITNs received for circuit campaign	
Number of pupils supplied with ITNs	
Number of ITNs Remaining in the Circuit	

I hereby certify that the above information is correct

Name of circuit supervisor... Signature:.................................... Contact tel.:......................................

Name of D-SHEP Coordinator………………………………………… Signature:…………………………………. Contact tel:………………………………….

ANNEX 6: SCHOOL ITN DISTRIBUTION FORM – DISTRICT LEVEL (FORM C)

PRIMARY SCHOOL ITN DISTRIBUTION

FORM C

To be completed by **District SHEP Coordinator** after the distribution campaign

(A copy of this form should be kept at district and another submitted to the Reg. SHEP Coordinator.)

Region:							District:				
Name of Circuit		Total Number of Schools		ITNs Received	No. on Roll		ITNs distributed to				Total ITNs distributed
		PB	PV		P2	P6	P2 (Boys)	P2 (Girls)	P6 (Boys)	P6 (Girls)	
1											
2											
3											
4											
5											
6											
7											
8											
9											
	Total										

Summary

Number of ITNs Received by Circuits in District	
Number of ITNs Remained in Circuits in District	

I hereby certify that the above information is correct

Name of District SHEP coordinator... Signature:.............................. Tel:..

Name of District Director of Education.. Signature:.............................. Tel.:...

Annex 7: Schoos ITN Distribution Form – Regional Level (Form D)

FORM D

PRIMARY SCHOOL ITN DISTRIBUTION

To be completed by **Regional SHEP Coordinator** after the distribution campaign

(**A copy of this form should be kept at Region and another submitted to the National SHEP Coordinator)**

Region:											
	Name of District	Total Number of Schools		ITNs Received	No. on Roll		ITNs distributed to				Total ITNs distributed
		PB	PV		P2	P6	P2 (Boys)	P2 (Girls)	P6 (Boys)	P6 (Girls)	
1											
2											
3											
4											
5											
6											
7											
8											
	Total										

Summary

Number of ITNs Received by Circuits in District	
Number of ITNs Remained in Circuits in District	

I hereby certify that the above information is correct

Name of R-SHEP coordinator...Signature:.......................................Tel:.....................................

Name of Regional Director of Education..Signature:.......................................Tel:...