Republic of Zambia

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Republic of Zambia

Ministry of Health

Guidelines on the distribution and utilisation of long-lasting insecticide-treated nets for malaria prevention

National Malaria Elimination Programme

2017 EDITION

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Acknowledgments

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I wish also to acknowledge and pay tribute to the Honourable Minister of Health, Dr. Chitalu Chilufya and the Permanent Secretary of Health, Dr. Jabbin Mulwanda (Health Services) for their leadership and priotizing malaria as a public health concern.

Finally, I would like to thank the editing team.

Dr. Elizabeth Chizema-Kawesha
Director, National Malaria Elimination Programme
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Foreword

Malaria still remains a major health challenge in Zambia. The Government of the Republic of Zambia recognizes the central role of malaria prevention implemented in collaboration with partners in achieving the country's development goals as articulated in the Seventh National Development Plan (NDP), through the attainment of ***'a malaria-free Zambia'***. This is also in line with the National Malaria Elimination Strategic Plan (NMESP) 2017–2021. Improving coverage and access to vector control interventions such as Long Lasting Insecticide Treated Nets (LLIN), Indoor Residual Spraying (IRS) and Larval Source Management (LSM) is key to the achievement of this vision.

In this regard, studies have shown that LLINs, when used widely in a community, can significantly reduce malaria, severe anaemia, and all-cause child mortality. LLINs are a key strategy for the prevention of malaria in pregnancy, and have been shown to reduce rates of preterm delivery and to improve birth outcomes. At the household level, the protective effect of LLINs is maximized when all household members sleep under an LLIN every night.

Zambia has made steady progress in improving LLIN coverage, and expanding access to this life-saving intervention for vulnerable populations. Results from the Malaria Indicator Survey (MIS) of 2015 show that overall ownership of nets has risen since the 2012 MIS: 77.0 percent of households have an LLIN and 46.9% of households own more than one LLIN. The average number of LLINs per household is 1.6. Ownership of LLINs is fairly similar in rural and urban areas, and poorer households are just as likely to own at least one LLIN as wealthier households, suggesting that current distribution strategies are providing equitable distribution throughout the country. Overall, in households with an LLIN, 63.9 percent had enough LLINs to cover every sleeping space. Almost every province increased their LLIN-to-sleeping-space ratio between 2012 and 2015.

The Ministry and partners remain dedicated to maintaining and sustaining the progress achieved so far in the quest of attaining one of the key strategic objectives of the NMESP which is to achieve 100 percent coverage, and at least 80 percent of pregnant women and children under five years of age sleeping under an LLIN every night. The Zambian Government has shown its commitment to this effort by removing all taxes and tariffs on ITNs.

I am confident that with the strong partnership among the public and private sector, civil society organizations and most importantly the community, Zambia will be able to expand LLIN access along with utilization.

To support this combined effort, I sincerely welcome the revisions made in the ***guidelines on the distribution and use of LLINs for malaria prevention in Zambia***, to reflect the

guidelines on the distribution and use of LLINs for malaria prevention in Zambia, to reflect the policy direction which I believe will facilitate a more effective and efficient national partnership to bring this life-saving and cost-effective intervention to more families throughout Zambia.

Dr. Jabbin L. Mulwanda
Permanent Secretary - Health Services
Ministry of Health

List of acronyms

ANC	Antenatal care
CBV	Community-based volunteer
CD	Continuous distribution
CHAZ	Churches Health Association of Zambia
DHIO	District health information officer
DHO	District Health Office
EHT	Environmental health technician
EPI	Expanded Programme for Immunization
HMIS	Health Management Information System
IEC	Information, education, and communication
ITNs	Insecticide-treated nets
LLINs	Long-lasting insecticide-treated nets
MACEPA	Malaria Control and Elimination Partnership in Africa
MOH	Ministry of Health
NCH	Net coupon holder
NGOs	Nongovernmental organizations
NMEC	National Malaria Elimination Centre
PAMO	Programme for the Advancement of Malaria Outcomes
PHO	Provincial Health Office
PMI	President's Malaria Initiative
SBCC	Social behaviour change communication
SHN	School health and nutrition
SNDP	Sixth National Development Plan
TOT	Training of trainers
UNICEF	United Nations Children Fund
USAID	United States Agency for International Development
WHO	World Health Organization
WHOPES	World Health Organization Pesticide Evaluation Scheme

1. Introduction

The Zambia National Malaria Elimination Programme relies on the widespread distribution and utilization of Long Lasting Insecticide Treated Nets (LLINs) as a core vector control intervention. LLINs offer barrier protection, repellency and knock-down action against the common *Anopheles* vectors that transmit malaria. LLINs have been the backbone of malaria prevention in malarious rural areas of the country for several decades. Despite widespread reports of pyrethroid resistance, LLINs remain an essential tool for vector control in the malaria programme since it still provides protection against malaria. Ensuring their widespread availability and use remains a key priority in the malaria control and elimination efforts.

The World Health Organization (WHO) has defined the key elements of malaria control as:

- Early diagnosis and treatment.
- Prevention through vector control.
- Early detection, containment, and prevention of epidemics.
- Strengthening national capacity for malaria research, monitoring and evaluation;
- Social Behavior Change Communication (SBCC).

LLINs are a cost-effective alternative to other existing vector control methods. However, like any other intervention, LLINs need to be part of a broader malaria control and elimination strategy.

Insecticide-treated nets, especially LLINs, have greater advantages over the untreated mosquito nets. It is for this reason that these guidelines are dedicated to LLINs in line with the national strategy. The advantages of LLINs include:

- Improved personal protection because mosquitoes are repelled or killed by the insecticide before they can have access to the person sleeping under the LLINs. This reduces the risk of malaria,
- Reduced community exposure to mosquitoes where whole communities are using treated nets, as the number of mosquitoes and the proportion infected with malaria parasites are reduced (mass effect). In this situation, even people sleeping without an LLIN are less likely to get malaria (thereby reducing their risk of malaria) because there are fewer malaria-transmitting mosquitoes in the area,

The effect of LLINs on malaria illness is significant and is well-documented; LLINs have also been associated with significant improvements in child survival rates.

Zambia uses a mix of LLIN delivery mechanisms to target different geographic, economic, and biologically vulnerable segments of our society. The WHO recommends that countries should strive for universal coverage using a combination of mass distribution complemented by continuous distribution through under five clinics and Ante Natal Clinics (ANC), schools and community voucher programmes.

Expansion of routine distribution channels for LLIN has been severely hampered by supply chain management problems, from the initial procurement to the final point of distribution; these systems need to be strengthened to make the most timely and efficient use of resources. Reviews in Zambia show that having multiple delivery channels can aid in sustaining high LLIN coverage, especially among vulnerable populations, in periods between mass distributions. Both mass and routine distributions of LLINs at no cost to recipient households improve access in rural communities.

While the emphasis of public resources for LLINs is on rural communities not covered by indoor residual spraying (IRS), other existing schemes in urban areas targeting vulnerable groups and promotion of commercial sales should continue. Zambia envisions, maintenance of a malaria-free environment through the use of effective and sustainable multi-sector integrated vector management (IVM) supplemented by improved environmental management, epidemiological surveillance and reporting systems.

Segmenting the market and making LLINs available on an equitable and sustainable basis depends on close collaboration among all partners, which in turn is based upon a strong monitoring and information management system. This balance of commercial sales and free LLIN distribution requires a framework and guidelines for planning, implementation, and monitoring.

Purpose of the Guidelines

The purpose of these guidelines is to provide a coordinated, quality assured and standardized mode of implementing LLINs activities and promote their effective use in the country. The guidelines therefore provide a framework within which the strategy can be managed and effectively executed; the guidelines articulate issues related to LLIN specifications, procurement and logistics, taxes and tariffs, distribution channels, health promotion, as well as monitoring and evaluation.

Target Audience

The target audience is implementers of the malaria Programme at all levels of health

service delivery (Provincial, District, Health Facility and Community), partners and policy makers.

Review of the Guidelines

The guidelines will be reviewed periodically at least every three years to incorporate new innovations and best practices reported at local, national and global levels.

2. Objectives of the LLIN Guidelines

General Objectives

The objective of the LLIN guidelines is to provide a framework for managing implementation of LLINs for malaria elimination in Zambia through a broad range of partnerships, in line with the vision of equity of access to quality-assured, cost-effective and sustainable malaria prevention and control services as close to the family as possible.

Specific objectives

- Ensure that 100% of household coverage defined as 1 LLIN per 1.8 persons is achieved with an 80% utilization rate among all household members, especially vulnerable populations of children under age five and pregnant women.
- Provide a framework for LLIN partnerships by clarifying the complementary roles of civil society, the commercial sector, and the public sector to ensure access to LLINs in communities, especially for vulnerable groups, through cost-effective, sustainable, and equitable LLIN implementation programs.

3. Specifications, Procurement and Use of LLINs

Specifications for LLINs

- LLINs procured for use in Zambia will follow the recommendations of approved LLINs from the WHO Pesticide Evaluation Scheme (WHOPES)
- The LLINs yarns shall be of denier (fibre strength) 75 to 100 and above (see Table 1); mesh size 25cm^2.
- The choice or preference of LLINs in terms of sizes, shapes and color will be based on local evidence. Table 1 provides information on LLINs specifications.

Insecticides for use on ITNs

- All ITNs shall be treated with WHOPES-approved insecticides for ITNs
- Currently, the pyrethroid class of insecticides is recommended. However, other classes shall be considered as and when they become available and recommended by WHOPES.

- All insecticides for use shall be registered and approved by relevant national regulatory authorities in Zambia.

Procurement Procedures and Logistics

- National tendering procurement procedures will be as follows:
    - The NMEP LLINs Technical Working Group will provide specifications to the national tendering committee and will be part of the evaluation committee for the tenders.
    - All partners including the private sector participating in the procurement of LLINs shall follow the specifications provided by NMEC.
    - The procurement will consider WHO recommended specifications and quality of the LLINs and other international procedures/good practices.
    - Procurement will follow national guidelines and regulations as prescribed by Zambia Public Procurement Authority (ZPPA).

Taxes and Tariffs

All LLINs are duty free, and no value-added tax (VAT) shall be charged as per Statutory Instrument (SI) 15 of 16th February 2004. Following the revision of the guidelines and adoption of LLINs terminology (instead of LLINs), the current guidelines call for the amendment of the SI to use of LLINs. The Term LLINs will be used in these guidelines but LLINs will be reserved or used in reference to previous decisions and in reference to the MIS indicators.

Note to suppliers and procuring agents

- All LLINs to be supplied in Zambia are duty free and shall be made of Polyethylene, Polyester, and Polypropylene.
- All suppliers of LLINs shall provide accessories such as extra strings, hooks for each LLINs supplied
- Each individual non-commercial LLINs to be supplied in Zambia shall be labelled as **"Property of Ministry of Health - ZAMBIA, NOT FOR SALE".**
- Only WHO-approved nets and insecticides that have at least reached Phase II of the WHO Pesticides Evaluation Scheme (WHOPES) shall be used in the national malaria programme to protect consumers against the use of substandard LLINs that might be found the informal markets.

Pricing for private sector LLINs

These guidelines note that direct price controls in the private sector will not be feasible but will be achieved through competition and advertising.

Individuals and commercial partners shall follow WHO specifications for the type of ITNs to be imported into the country. These specifications are available from the NMEC or through the WHO.

Table 1: Technical Specifications for a standard Long Lasting Insecticidal Treated Net (LLIN).

SPECIFICATION	NET SHAPE:	
	RECTANGULAR	**CONICAL**
Material:	Polyethylene, Polyester, Polypropylene	Polyethylene, Polyester, Polypropylene
Active ingredient:	Permethrin, Deltamethrin or Alpha-Cypermethrin	Permethrin, Deltamethrin or Alpha-Cypermethrin
Dimensions:	W160cm x L180cm x H150cm	850cm x 56cm x 220cm
Denier:	Minimum 75 - 100 +/ - 5%	Minimum 75 - 100 +/ - 5%
Bursting strength:	Minimum 250 Kpa	Minimum 250 Kpa
Seam strength:	250 Kpa	250 Kpa
Colour	White*	White*
Effective Life:	≥ 3 years	≥ 3 years
Ministry Logo	Ministry of Health Logo on each net	Ministry of Health Logo on each net
Packaging	Individually packed in a plastic bag with six (6) hooks and strings for hanging.	Individually packed in a plastic bag with six (6) hooks and strings for hanging.
Bales size	Shipped in bales containing 50, 40 or 100 pieces protected by a polyethylene bag	Shipped in bales containing 50 or 100 pieces protected by a polyethylene bag
Labelling	Each nets to be labeled with indelible ink with manufacturers name; date of production; Lot number; Size in cm (width, length, height); Washing and drying instruction	

Note:

1. *The Goods shall comply with following Technical Specifications and Standards and must be WHOPES Approved:*
2. *In case of Combination LLINs the Bidder must provide the following evidence; (a) Increased efficiency of the LLIN offered with a minimum of published studies/village scale field trails for Sub-Saharan Africa. (b) Past performance of at least three projects where Pyrethroids insecticide plus synergist have been used.*
3. *Colour * - White is most preferred but other colours shall be adopted based on local evidence on community preference.*

Distribution Channels

LLINs should be distributed through multiple channels including;

- Periodic mass distribution campaigns targeting all individuals,
- Routine continuous distribution channels including focused antenatal and immunization distribution targeting pregnant women and children,
- School-based distributions targeting youth and school-age children
- Routine community-based distributions by community health workers targeting all community members.
- Commercial markets for LLINs should continue to be developed to provide wider access for consumers who wish to protect themselves.

Each of the distribution channels is described in more detail below.

Mass distribution

Mass distribution aims at increasing nationwide access to LLINs to rapidly scale up coverage. In line with the NMSP, the objective will be to ensure universal coverage (100%) and at least 80% utilization of LLINs in all LLIN-eligible areas not covered by IRS. All LLINs being distributed through this programme shall be accessed without cost to household.

- Micro planning for LLIN distribution shall be facilitated at central level in collaboration with provincial health offices (PHOs) and district health offices (DHOs).
- Distribution will be done in stages depending on logistics and availability of LLINs until all eligible areas are covered.
- Detailed guidelines for the distribution processes are in Annex 1. Actual distributions will be based on household requirements using registers taking into account availability and age of LLINs (Annex 2).
- In collaboration with the DHOs, chiefs, village headmen, and NHCs shall encourage appropriate LLINs utilization and discourage misuse.

Antenatal Care (ANC) and Expanded Programme for Immunization (EPI)

- Pregnant women who visit health clinics for their routine antenatal care (ANC) will receive a free LLIN for the first time for each pregnancy. Health care providers will provide guidance on the importance of sleeping under an LLIN every night and the benefits of malaria prevention during pregnancy. Provision of these LLINs will be noted on ANC cards and will assist in providing an additional routinely delivered LLIN for those households with growing families.
- Children receiving first dose of measles vaccination as part of their routine immunization visit at health clinics will also get a free LLIN. Providing a free LLIN during immunizations will encourage guardians/ caregivers to have their children vaccinated. LLINs targeted to children during immunization will also

routinely encourage high coverage among this especially vulnerable population group.

- LLIN distributed to children and pregnant women will be documented in the health facility register and also in the pregnant woman's ANC card and the child's immunization card. Consequently, the registers will be edited to provide space for capturing this data. Standard tools shall be available at all points providing the service. Detailed guidelines for the distribution processes for ANC and EPI are found in Annex 1.

School Distribution

With high primary and secondary school attendance rates, school-based distribution will be an affective channel for getting more LLINs to households to improve LLIN coverage. Data shows that in Zambia, the primary school gross attendance ratio is high and therefore distribution through primary schools can contribute to improving and sustaining LLIN coverage.

A School Health and Nutrition month is organised once every year in the month of July. During this month;

- One week will be designated for LLIN distribution and education about malaria in primary schools in provinces or districts that choose to implement school-based distribution.
- All children in primary grades 1 and 4 (adding additional classes if needed to sustain coverage in a given area) will receive one free LLIN each year during the designated week.
- Existing school systems that have been used for the implementation of health interventions or distribution of health and other commodities will be used.
- Supervision of the LLIN distribution will be conducted by members of the education and health units at district, provincial and national levels. Detailed guidelines for the school distribution processes are found in Annex 1.

Community-Based Distribution

Households who may not be able to access an LLIN through ANC, EPI or school channels will be able to obtain an LLIN by contacting a net coupon holder (NCH). The list below summarizes some of the criteria for LLIN issuance through the community-based channel:

- Did not receive any net during the mass campaign
- Household has a pregnant woman or a child under 5 but was not able to obtain a net from ANC or measles 1 visit
- Newly married
- Uncovered sleeping space

- Torn or destroyed net(s)

Each community will select a trusted literate individual (net coupon holder, or NCH) to dispense coupons based on agreed-upon criteria. NCHs are volunteers who are part of the neighbourhood health committees and are based or live in the community. NCHs will assess household's eligibility for a LLIN and issue eligible households with coupon(s). Household members who are issued coupons can then redeem these coupons for a LLIN at the nearest health facility.

For communities that are more than 5 kilometres radius from a health facility, trusted community leaders will be identified to store the LLIN in their homes (community LLIN hubs) in the communities. Each identified community hub will serve communities within a 5 kilometres radius. For communities that are further than 5 kilometres from the nearest community hub, a community hub will be identified to serve these communities. Community leaders whose houses may be used as hubs may include village headsmen, religious leaders, neighbourhood health committee members, and other trusted opinion leaders. These persons must have secure and appropriate space in their household for LLIN storage. Detailed guidelines for the distribution processes are found in Annex 1.

Commercial distribution

Commercial distribution of ITNs will continue to be promoted to ensure wider, long- term access and replacement of old nets among consumers with access and the means to afford commercially-available ITNs. Partners distributing commercial ITNs should work through and in line with the NMEC guidelines and ensure that only NMEC recommended ITNs are distributed.

5. Health Promotion

Health Promotion will focus on conducting advocacy and social behaviour change communication (Advocacy/SBCC) to increase correct and proper LLINs utilization, net care and repair.

5.1 Advocacy

To achieve this, the following processes will be conducted before, during and after the LLINs distribution;

- Convene meeting with decision-makers and policy makers to lobby for resources for LLINs procurement,
- Conduct meetings with policy makers and influential leaders to solicit their support

towards ensuring increased utilization of LLINs , halt misuse of LLINs and reinforce regulations,

- Conduct community engagement activities targeting traditional, religious and political leaders,
- Conduct media launches of mass LLINs distribution by senior government officials to enhance political leadership in fostering utilization of LLINs at household level, avert abuse/misuse of LLINs and encourage broader stakeholder participation,
- Conduct National, Provincial, District and community launches of mass distribution campaigns,
- Hold orientation and dissemination meetings for private sector (retailers, wholesalers, transporters) and other institutions to ensure adherence to national guidelines,
- Orient all stakeholders including, the media to advocate for support and increase knowledge of LLINs utilization,
- Procurement of LLINs by the private sector, hospitality industry and other institutions according to the national guidelines and encourage use by their clients.

Social and Behavior Change Communication

The purpose of social behaviour change communication (SBCC) in LLINs distribution is to influence behaviours and mobilize communities to create long term normative shifts towards correct and consistent use of LLINs, and to sustain enabling behaviours to halt malaria transmission in the general population and the most vulnerable groups.

Behavioural Objectives:

1. To increase the number of people who sleep under LLINs every night throughout the year,
2. To stop the use of LLINs for other purposes other than malaria prevention, and
3. To promote good care and repair minor damages of the LLINs at home.

To achieve this, the following processes will be conducted before, during and after the LLIN distribution campaign in combination with other distribution channels;

- Use of the national and local media to create awareness and increase knowledge about utilization of LLINs.
- Social mobilization in the communities using various strategies to promote LLIN utilization, halt abuse/misuse and encourage good LLIN care through drama performances, meetings, health talks and group discussions.
- Focused education by health care providers during routine FANC and immunization

visits on the important of regular LLIN use, LLIN care and repair and the associated health benefits.

- Instructional guidance by teachers in schools, especially around school-based distribution opportunities, on the important of sleeping under LLINs regularly by all household members and the entire community.
- Provision of health talks at health facility level to promote LLIN use.

6. Monitoring and Evaluation

Standardized tools, household-community and facility-based registers shall be used to monitor the LLIN distribution through the various channels. MIS and DHS will provide access, coverage, and utilization indicators during national household surveys. Community registers shall be especially important to maintain information on households, LLIN availability, needs and gaps.

The LLINs distributed by all partners to districts including the schools programme shall be tracked using the LLIN database at the National Malaria Elimination Centre, while the Health Management Information System (HMIS) using the Health Information Aggregation Form 2 (HIA2) shall be used to capture all LLINs distributed through the ANC, EPI and community distribution on a monthly basis. The LLIN data reported through the HMIS shall be assessed regularly for quality and completeness by the district, provincial and national levels.

The HMIS/ surveillance system shall include questions on household LLIN to facilitate the monitoring of LLIN coverage and usage rates within the household. Household surveys will provide additional source of data on coverage of LLINs. Survey questions on LLINs shall use standardized forms/format so that results can be comparable. Protocols with sample questions will be accessed for reference at the NMEC website. The following of examples monitoring indicators related to LLINs that shall be used; *Number of LLINs distributed or sold; Number of household members; Number of sleeping spaces in the household; Percentage of households with LLINs; Utilization rates of LLINs by households; Number and type of Social Behaviour Change Communication (SBCC) activities conducted.*

The NGOs and other local stakeholders shall play a critical role in monitoring the distribution and use of LLINs at all levels.

The table below shows the different data collection and reporting tools for continuous and mass LLIN distribution (see Annex 2 for details)

Table 2 : Data collection and reporting tools for continuous and mass distribution of Long Lasting Insecticidal Nets (LLINs).

Continuous Distribution	Mass Distribution campaign
Antenatal Clinic Register	Form A: Household LLIN Data Collection Register
Under Five Clinic Register Distribution Form	Form B: Health Centre Aggregation Report
School - Class LLIN	Form C: District Data Aggregation Report
District School Summary Form	Form D: Provincial Data Aggregation Report
Provincial School Summary Form	Form E: Community Daily Activity Form
Community Distribution Coupon	Coupon
Community LLIN Distribution Register	
Facility Monthly Summary Form	
District MonthlySummary Form	
Provincial Monthly Summary Form	
Checklist for Monitoring of LLIN Distribution in Schools	
Checklist for Monitoring of Community LLIN Distribution	

Note: Additional data collection tools are available in MIS reports.

7. Stakeholder roles and Responsibilities

The following are the roles and responsibilities of each of the stakeholders.

National Malaria Elimination Centre (NMEC)

Coordinate all LLINs activities and provide guidelines on the implementation of;

- LLINs programs to all districts.
- Provide policy, strategies, and technical information on LLINs to stakeholders and partners.
- Promote partnerships at all levels and provide secretariat functions for the National
- LLINs Technical Working Group.
- Plan, quantify, procure and supply LLINs to the districts.
- Ensure adequate, steady supplies of LLINs.
- Advocate and mobilize resources for LLINs procurement and distribution.
- Review, produce and distribute IEC materials to all districts.
- Monitor and evaluate the LLINs program and activities.
- Integrate LLINs into Integrated Vector Management (IVM) and other malaria control and elimination strategies as described in National Strategic Plans.
- Collaborate with WHO on specifications and technical issues.
- Undertake operational research, surveys and special studies on LLINs.
- Monitor the quality and efficacy of LLINs at various stages of distribution and utilization.

Provincial Health Offices (PHOs)

- Provide technical support to the districts in the preparation of the annual Malaria Action Plans and budgets.
- Conduct performance assessments to audit the interventions focused on the prevention of malaria using LLINs.
- Monitor the distribution and utilization of the districts in the provinces.
- Orient all stakeholders on the LLINs guidelines and disseminate the guidelines to the stakeholders and districts.
- Collaborate on adherence to specifications and use of LLINs with both the public and private sectors within the provinces.
- Report regularly to the NMEC on all LLINs activities.

District Health Offices (DHOs)

- Monitor and supervise district public and private sectors distribution schemes, as well as promotional programs, Social Behavioral Change and Communication, and monitoring and evaluation.

- Plan, quantify and supply/distribute LLINs to the health facilities.
- Orient health facility staff on malaria prevention and best practices of LLINs distribution and utilization.
- Expand partnerships with schools, commercial retailers, the private sector,
- Non-Governmental Organizations (NGOs), Community Based Volunteers (CBVs), etc.
- Report to the PHOs on all LLINs activities monthly.

Health Centres (Hcs)

- Plan, quantify and issue out LLINs to intended beneficiaries.
- Be directly involved with the receipt and storage of LLINs.
- Orient the Community Based Volunteers (CBVs) on malaria prevention and the best practices of LLINs distribution and utilization.
- Monitor and supervise the CBVs in the catchment areas.
- Orient the Community Based Volunteers (CBVs) on malaria prevention and the best practices of LLINs distribution and utilization.
- Record the LLINs related data on the standard collection tools.
- Report monthly to the DHO on all LLINs activities every month.

Community Based Volunteers (CBVs)

- Participate in advocacy and promote use of LLINs.
- Work with the HCs to manage LLINs distributions up to community level.
- Help identify vulnerable groups, such as those registered with home-based care, or other social welfare programs in cases where free LLINs are insufficient to cover the whole district population.
- Collaborate with village headmen and chiefs in ensuring that LLINs are not misused, i.e., used for fishing or any other unintended purpose.
- Report monthly to the HCs on all LLINs activities every month.

ANNEX 1: Distribution guidelines

Annex 1A: Mass distribution

Mass campaigns aims to achieve full (100%) coverage of one LLINs per 1.8 persons with at least 80% utilization. Two distribution channels that are available include; fixed and door-to-door distribution.

Fixed distribution:

- This distribution strategy will involve transportation of LLINs from a health center on a specific predetermined day and time, specified predetermined existing points such as outreach posts, church or school in the community.
- LLINs will be distributed to pre-registered households by Community Based Volunteers (CBVs).
- Households will be shown how to aerate and hang their LLINs over each sleeping space on the distribution day.
- CBVs will follow up households within a week after the distribution and ensure that all LLINs are hanging and in use.

Door to door distribution:

- This distribution strategy will involve transporting LLINs from a health center to a households, aiming to cover all sleeping spaces supported by Community Based Volunteers.
- The CBVs will ensure that LLINs are left hanging over the sleeping space on the day of distribution.
- CBVs will also make follow ups on households within a week after the distribution and ensure that all LLINs are still hanging and in use.

Coordination of the Mass Distribution:

- The planning and coordination of LLIN distribution shall be done at all levels; national, provincial and districts, involving existent structures such as ITN TWGs, Provincial and District Malaria Task Force (MATFs).
- To allow procurement of LLINs, micro quantification will be done at the national level based on Central Statistical Office projected population taking into account the WHO guideline of distributing one LLINs per 1.8 persons.

Implementation of mass campaigns.

To achieve implementation of mass distribution campaigns effective preparation, household registration and managing the distribution process shall be critical.

The preparation stage; Training and orientation shall be an integral part of mass distribution. This shall be conducted at all levels to ensure a common understanding of the mass campaign. The national trainers will conduct Training of Trainers (TOTs) for provinces who will cascade it to districts. The districts then train facility staff who then orient CBVs. The training will aim to create awareness on the mass distribution process, house registration, quantification, distribution and community social mobilisation. Training/orientations shall:

a. Provide information on timelines and modalities of implementing the mass campaign.

b. Provide district and facility staff and CBVs with information on data collection and distribution tools, roles and responsibilities as well as messages related to LLINs use/hanging.

c. Provide information on monitoring the mass distribution process at all levels.

Household registration: will facilitate the collection of information on demographics on household owners, number of persons in the household and number of sleeping spaces for planning, qualification (based on standard tools shown in Annex 2). The data shall be summarized by health centre in the Health Centre Aggregation Form and submitted to districts for aggregation and transmission to central level.

Distribution stage; This stage aim at ensuring that nets are made available to the beneficiary timely using agreed upon distribution channel/s.

The different stages of the mass campaign i.e., preparation, registration and distribution shall be supported by social behavioral change communication and monitoring and evaluation activities.

Annex 1B: Antenatal and Expanded Programme for Immunization

Pregnant women who visit the ANC for the first time for each pregnancy will receive a free LLIN after ANC services are provided, to add up to LLINs available in her household. Also, if the pregnant woman does not have an LLIN, this will help ensure that pregnant women receive LLIN and sleep under an LLIN early in their pregnancy to reduce maternal and neonatal malaria morbidity and mortality.

Similarly, each child will receive a free LLIN when receiving measles 1 vaccination at the routine immunization clinic and at three years after the first LLIN. This will encourage guardians/ caregivers to bring their children to complete their vaccinations since they will receive a free LLIN upon completing vaccination. This will in turn increase the fully immunised coverages. The LLIN received will add to the stock of LLINs available in the recipient's household.

The LLINs issued to children and pregnant women will be documented in the health facility register and also in the pregnant woman's ANC card and the child's immunization card. Standards tools shall be available at all points providing the services (Refer to Annex 2 for the Tools)

The LLIN quantification and supply, training, supervision and reporting for LLIN continuous distribution through ANC and EPI channels are described below:

Initial LLIN supply required per health facility, district and province will be quantified as follows:

- Using average monthly first ANC attendance and measles 1 vaccination records over the past 2 years, a monthly LLIN stock for each health facility will be quantified. Based on this quantification, a **3-month LLIN stock will be maintained and stored at each health facility**
- These LLINs quantified at Health Facility level will be aggregated at district level for all health facilities in each district and validated by the District Health Director (DHD)
- Information on initial stocks of LLIN required for each province will be calculated based on aggregated quantification from all districts within the provinces. Quantifications for each district will be validated by the Provincial Health Director (PHD). Province-level quantifications will then be submitted to the National Malaria Elimination Centre (NMEC).

- An **initial district-level LLIN stock of 6 months** will be sent directly to the district stores. Documentation of LLIN supplied to each district within the province will be made available to the provincial-level authorities accordingly. The district stores will then supply the **approved supply (2-month LLIN need) to all health facilities** within the district. Stocks of LLIN will be monitored at health facility level using Stock Control Cards.

Restocking of LLIN (to initial stock levels) at health facilities will be done based on LLIN consumption data at health facility level and this will be done **every month** as is the case for supply chain management of other commodities. To enable health facility restocking, the following will be done:

- Health facilities (In-charges) will report stock on hand, receipts, issues, losses and adjustments to the DHD each month.
- The Malaria Focal Point Person and the District Information officer will review the monthly reports for the district for decision making. The Provincial Malaria Focal Person and the Provincial Health Information Officer will review the monthly reports for decision making.
- Every month, the district stores will supply each health facility one month's stock of the required LLINs so as to bring stock levels up to the two months' worth of LLINs

District level stores will be supplied with LLIN twice a year i.e. **the initial 6-month district stocks and then another 6-month stock every 5 months**, as required by the district as per LLIN quantifications aggregated from all health facilities in the district.

Districts will have capacity for the proper storage of LLIN and for monthly delivery of LLIN to health facilities to prevent stock outs.

Orientation

For an effective facility-based continuous distribution, it is important that health facility storekeepers and health workers in charge of ANC and EPI clinics (MCH Coordinator, EHT and HC in-charge) are well trained in the use of stock control cards for the proper documentation of LLINs received, stock on hand and the processes for request for LLINs restocking based on an agreed stock threshold at each level. Also, it is important that health workers at ANC and EPI clinics are well-versed in the proper documentation of LLINs issued to beneficiaries using the clinic registers and reporting of monthly

summaries of LLINs distribution. Only Standard training materials will be used for the orientations.

The following should be done to ensure that LLINs distribution and reporting is well done:

- National Level:
    - The Continuous Distribution Coordinating Committee will hold a 1-day orientation for the national trainers and representatives from Medical Stores Limited. The national trainers shall provide trainings on distribution, overall logistics, reporting, and roles and responsibilities, including supervision, and malaria messaging in the fourth quarter to the Provinces. The orientation meetings will be held every two years.
- Provincial Level:
    - The provincial level will hold 1-day orientations on distribution, overall logistics, reporting, and roles and responsibilities, including supervision, and malaria messaging in the fourth quarter of the year to the Districts. The orientation meetings will be held every two years.
- District level:
    - The district level will hold 1-day orientations on distribution, overall logistics, reporting, and roles and responsibilities, including supervision, and malaria messaging in the fourth quarter of the year to Health facilities. The orientation meetings will be held every two years.
- Health facility Level:
    - The health facilities will organise orientations for the health facility staff. The orientation meetings will be held every two years.

Participants for each training session should not exceed 30 (for effective learning).

Reporting

Provider reporting

During a pregnant woman's first visit to the ANC:

- Health worker should go through all the usual steps for ANC 'booking' and record all the required information in the ANC register
- Health worker should educate the pregnant woman on the causes of malaria,

malaria prevention, and the proper use and care of LLIN

- Health worker should issue an LLIN to the pregnant woman and mark a Y for YES in "ITN issued" column in the ANC register appropriately
- Health worker should **stamp the pregnant woman's antenatal card** with an existing authentic stamp

When a caregiver/ guardian brings her child to the routine immunization clinic for measles:

- Health worker should go through all the usual steps for routine immunization and record all the required information in the 'under 5' register and the LLINs distribution register.
- Health worker should educate the caregiver/ guardian on the causes of malaria, malaria prevention, and the proper use and care of LLIN.
- Health worker should provide an LLIN for the caregiver/ guardian and record the LLIN given in the 'under 5' register appropriately.
- Health worker should **stamp the child's clinic card/ book** with an existing authentic stamp.

At the end of each month, the total number of LLINs issued in the ANC and EPI clinics (both static and outreach) should be correctly entered on the **Health Facility (HF) Monthly LLIN Summary Form (Annex 2)** for each channel. The HF Monthly LLIN Summary Form will be submitted along with the HIA-2 form to the District Health Information Officer (DHIO) by the 7th day of each month.

Summaries of LLINs issued at ANC and EPI clinics in all health facilities in each district will be reviewed for accuracy and completeness and then be tallied on the **District Monthly LLIN Summary Form (Annex 2)** for each channel. The District Monthly LLIN Summary Form will then be entered into HMIS.

Every month all levels must review HMIS data for decision making.

Supervision

The mentoring concept will be used in continuous distribution of LLINs as a method for effective supervision and mentorship. Tools developed for mentorship should include continuous distribution of LLINs and integrate CD mentorship into the on-going mentorship programs.

Roles and Responsibilities - ANC and EPI

Person	Roles and Responsibilities
National Malaria Elimination Program	• Plan, quantify and procure LLINs. • Coordinate overall Continuous Distribution (CD) activities at national level • Form a national CD coordinating committee and to convene regular meetings • Facilitate the training of trainers (TOTs) at provincial level • Monitor the implementation of CD activities nation-wide • Review and approve initial requests and restocking of LLINs to districts • Develop, review and communicate the CD strategy to all provinces and districts • Hold annual review meetings
Medical Stores Limited	• Provide storage and distribution of LLINs
Provincial Level	
Provincial Health Office	• Communicate the CD strategy to all districts • Coordinate and quantify the province's LLIN needs and advice on procurement planning • Integrate CD activities in mentorship programs • Hold quarterly review meetings (PIMS)

District Level	
District Health Office (District Health Director) Officer, MCH Coordinator, Environmental Health Technician/Malaria Focal Person, Health Information Officer; District IEC/BCC committees or Officer)	• Coordinate CD activities at district level • Communicate the CD strategy to all health facilities • Ensure that CD is a standing agenda item on the MATF meetings district level • Support training of health workers at health facility level • Monitor, supervise and provide technical support implementation of CD activities in district. • Ensure that appropriate and secure storage spaces are available at district and health facility stores for LLIN. • Ensure that periodic data review and data audits are conducted. • Ensure timely restocking of LLIN to health facilities • Hold quarterly review meetings (DIMs)
DHIO	• Re ceive, review and validate LLIN distribution data from health facilities. • Ensure reporting in HMIS by facilities are submitted.

Facility Level	
In-charge	• Supervises LLIN CD implementation at ANC & EPI clinic, • Enter validated LLIN distribution data into the monthly LLIN distribution summary form for submission to district • Register pregnant woman on first visit and properly document LLIN (net) given (register & card) • Properly document LLIN given to child at measles 1 immunization • Sensitize recipients about CD and net use through health talks • Follow up to check utilization of LLINs and state of LLINs • Receive, monitor and manage LLIN stocks for health facility • Report issues, receipts, stock on hand and losses and adjustments data to the In-charge and District Medical Officer every month • Maintain stock control cards • Hold monthly review meetings

Annex 1C: School distribution

School-based distribution is one of the distribution channels in getting more LLIN to households to improve LLIN coverage in Zambia.

The School based distribution shall be conducted once every year during the school Health and Nutrition week which falls in the month of July. During this week, all children in primary grades 1 and 4 (adding additional classes if needed to sustain coverage in a given area) will receive one free LLIN. Existing school systems that have been used for the implementation of health interventions or distribution of health and other commodities will be used. Supervision of the LLIN distribution will be conducted by members of the education and health units at district, provincial and national levels. However, Careful planning of timing, with conservative buffers for delays (particularly for LLIN arrival in country) is vital given the fixed school calendars for exams and holidays.

Quantification, Logistics and Supply Chain

- Ministry of Education will provide the number of children in participating districts enrolled in the selected grades the previous year as documented in the Education Management Information System (EMIS) to National Malaria Elimination Center for Procurement and Quantification of LLINs.

- Copies of class registers for selected grades will be submitted within a week by primary school head teachers to their zonal heads. Zonal heads will tally the number of children in their zone that are earmarked to receive LLIN and then submit within a week the tally to the district School Health and Nutrition (SHN) Focal Person.

- District SHN Focal Person will validate the tallies received from each Zonal Head. The District SHN Focal Person will select schools with more than 3 percent variance which shall be visited to confirm with the class registers submitted. The numbers of children in the selected grades received from each zone will be added up and the district's total number of children in the designated classes will be submitted within 3 weeks to the Provincial SHN Focal Person.

- The Provincial SHN Focal Person will validate all data received from district level within a week and then forward the province's quantification of LLIN for school distribution to the National SHN Coordinator and the NMCC. Provincial quantifications will be validated using the EMIS data to identify possible over-quantification for further investigation. No LLIN will be transported to the

schools without the process of validation being complete.

- LLIN will be transported from the central level to the district education stores based on the LLIN quantification data received from each district.
- Based on the number of registered children in each school for the designated classes for distribution, LLIN will be provided for each school from the district stores.

Training/Orientation

For school-based LLIN distributions, it is important that Environmental Health Technologist and all School Head teachers, Class Teachers, and SHN Focal Persons in schools are well oriented for their role in the school-based distribution processes. Trainers from the national level will provide training at provincial level for education authorities at provincial and district level. Trainers from national level will include personnel from MOH, and MOE. Trainees at provincial level will include provincial and district SHN coordinators, Malaria Focal Persons and Planners (formerly known as school supervisors).

These persons should be trained in:

- The school-based distribution process and rationale,
- Quantifying LLIN needed for each level,
- Issuing stocks of LLINs for each level and the use of stock cards and other tools(e.g validation tool),
- Documentation of LLIN distributed at all levels,
- Education of children and Teachers on causes of malaria, malaria prevention, proper net use, care and repair,
- Monitoring school distribution activities and addressing challenges that will arise, and
- Validation process.

The provincial trainers will then conduct orientation for School Head teachers, Class Teachers and SHN Focal Persons in schools as well as the EHTs in Heath Centres where schools are located.

These persons should be trained in:

- Overview of the school channel and rationale
- Documenting and submission of class registers for LLIN quantification
- Storage, documentation and distribution of LLIN to designated school children
- Documentation of LLIN distributed to designated school children
- Education of children and Teachers on causes of malaria, malaria prevention, proper net use, care and repair
- Use of the provided job aids for education of children on malaria and net use

Distribution and documentation

LLIN received from the district will be distributed to children in all schools in designated grades on a designated distribution day. LLIN given to children will be documented on the **Class LLIN Distribution Form (Annex 2)** that will be provided to all schools. Children will be required to write their own names on the distribution form after receiving a LLIN under the supervision of their class teachers. For those children who are unable to write will be required to thumb print and their names shall be written by their class teachers.

Reporting

- Teachers will submit their class distribution forms to the School Head teacher and SHN focal person for verification
- Each school will submit their distribution forms and any undistributed nets to the Zonal Head teacher. Zonal Head teacher will compile all distribution forms for their zone and submit to the District SHN Coordinator. Distribution forms and undistributed LLIN are due to the district within 7 days after distribution
- The district SHN Coordinator will compile the report on LLIN distributed in schools for their district, using a **District LLIN Distribution Form for Schools (Annex 2)**, and submit the report to the provincial SHN Coordinator and District Health Director
- The Provincial SHN Coordinator will compile and share the provincial report for school-based LLIN distribution with the Provincial Directors of Health. The Provincial Directors of Health will then submit the report to the National Malaria Elimination Centre. **(Annex 2)**
- The NMEC ITN focal person will review the reports and share the results with stakeholders during the ITN Technical Working Group

Supervision

A supervision team will comprise of personnel from both the education and health sectors at provincial and district level including the District Education Officer, SHN Focal Person, the district planners, personnel from the district community medical office and Provincial Malaria Focal Person. This team will ensure that all distribution activities at school level are conducted as expected during the agreed period for LLIN distribution.
Supervisors will ensure that LLIN have been received and well accounted for, children in designated grades have received their LLIN, and the distribution forms are being completed correctly, and address any challenges encountered.

Annex 1D: Community Distribution

The community distribution channel shall provide LLINs to households who may not be able to access a net through ANC, EPI or school channels. But will be able to obtain an LLIN by contacting a net coupon holder (NCH). The reasons listed below and others to be agreed by communities will serve as the criteria for LLIN issuance through the community-based channel:

- Did not receive any net during the mass campaign
- Household has a pregnant woman or a child under 5 but was not able to obtain a net from ANC or measles 1 visit
- Uncovered sleeping space
- Torn or destroyed net(s)

Each community will select a trusted literate individual (net coupon holder) to dispense coupons based on agreed-upon criteria. NCHs are volunteers who are part of the neighbourhood health committees and are based or live in the community. NCHs will assess households' eligibility for an LLIN and issue eligible households with coupon(s). Household members who are issued coupons can then redeem these coupons for an LLIN at the nearest health facility.
For communities that are more than 5 kilometres radius from a health facility, trusted community leaders will be identified to store the LLIN in their homes (community LLIN hubs) in the communities. Each identified community hub will also serve communities within a 5 kilometres radius. For communities that are further than 5 kilometres from the nearest community hub, a community hub will be identified to serve these communities. Community leaders whose houses may be used as hubs may include village headsmen, religious leaders, neighbourhood health committee members, and other trusted opinion leaders. These persons must have secure and appropriate space in their household for LLIN storage.

The process of LLIN quantification and supply, training and orientation, documentation and reporting, and monitoring/ supervision for LLIN continuous distribution through the community-based channel is described below.

Logistics and Supply Chain

LLIN for community-based distribution will be stored at health facilities and identified community hubs, and coupons for redemption for LLIN will be issued by designated NCHs. LLIN and coupons for community-based distribution will therefore follow the same procedures as for ANC and EPI nets.
Initial LLIN and coupon supply required per health facility for the communities they serve will be quantified as follows:

- All health facilities will submit information on the total population they serve to the DHO and DHIO. The DHO and DHIO will then quantify the annual LLIN need for each health facility for community-based distribution, based on each health facility's catchment area population. The district's total LLIN quantification for community-based distribution will be aggregated and submitted to the PHO, PHIO, and Provincial Malaria Focal Person for validation,

- All district summaries for the province will be compiled and submitted to the NMEP and Central Stores for LLIN quantification for community distribution,

- Annual quantification of LLIN and coupons for all districts in each province will be done as above. About 50% of the quantification for each district will be calculated as the initial 6-month LLIN stock required for each district. The same amount of **LLIN coupons (Annex 2)** as the quantified number of LLIN will also be calculated for each district,

- The initial 6-month LLIN stock quantified and accompanying coupons will be supplied to the district stores. Based on the LLIN quantification done for the health facilities, each health facility will be provided with an initial 4-month LLIN stock and accompanying coupons,

- LLIN will be stored at health facilities and distributed to beneficiaries as needed. An initial coupons supply for 1 month will be given to designate NCHs by the Health Facility In-charge for issuance to community members as required. Also, an agreed stock of LLIN will be provided to each community LLIN hub for storage and distribution, and

- Documentation of LLIN and coupons supplied to each district within the provinces will also be made available to the provincial level authorities accordingly. Stocks of LLIN and coupons for community distribution will be monitored at health facility level using inventory control cards.

Districts will be resupplied with LLIN (another 6 month's supply) **5 months after initial supply**.

Replenishment of health facility's LLIN and coupon stock will be done based on distribution data and agreed stocks threshold. All health facilities LLIN and coupons stock will be replenished by the **end of every 3 months after the last stocks supply**. To enable health facility restocking for LLIN for community-based distribution, the following will be done:

- All health facilities will tally the monthly number of LLIN distributed to community members using data from the **Community LLIN Distribution Register (Annex 2)**. Coupons redeemed for LLIN will be kept at the health facility for future verification.
- All LLIN distributed through the community-based channel shall be collated by the Health Facility In-charges and included in the number of LLIN reported as distributed by the health facilities using the Monthly LLIN Distribution Form. Health facilities shall submit their Monthly LLIN Distribution Summary Form to the respective DHOs and DHIOs for review and collation, along with a copy of the Community LLIN Distribution Register.
- Summary data on LLIN distributed at health facilities (which will include LLIN distributed through the community channel) will be monitored at district level by the District Stores Officer.
- Health facility LLIN restocking for community-based distribution will be done based on data for facility community-based LLIN distributed in the past 3 months. This will be done along with replenishing for ANC and EPI clinic distribution. The same amount of coupons as the quantified number of LLIN for replenishment for community-based LLIN will also be calculated and provided for each health facility.
- Health facilities can be restocked before the planned 3-month restocking cycle if LLIN stock at health facility storage reaches below a 1-month supply before the restocking period.

During regular monthly meetings at health facilities, designated NCHs and Community LLIN hubs will be restocked with coupons and LLIN respectively. The following shall be done:

- NCHs will submit their coupon booklets to their supervisors (Health Facility In-charge) for verification of coupons issued. Based on confirmed and approved figures of coupons issued, NCH's coupon stocks will be replenished to the initial quantities provided.
- Community Storage Hub Keepers will submit their Community LLIN Distribution Register to the supervisor for verification of LLIN issued. Based on confirmed and approved figures of LLIN distributed, community hub's LLIN stocks shall be replenished to the initial quantities provided.

Training/Orientation

For community-based continuous distribution, it is important that all Health Facility In-charges (supervisors of NCHs and Community Storage Hub keepers), Environmental Health Technicians (EHTs), are well trained for their individual roles in the distribution processes. Health Facility In-charges and other health facility personnel shall be trained on their roles and responsibilities and also trained as trainers for NCHs and Community Storage Hub Keepers for the community-based LLIN distribution.

Supervisors (Health Facility In-charge)

- Should be well versed in the community -based distribution process, rationale and agreed criteria for a beneficiary to qualify for a LLIN.
- Should be well versed in monitoring the issuing of coupons for community distribution, monitoring of community hub LLIN distribution, using stock sheets, before providing required restock.
- Should be well versed in entering information from net coupons submitted by beneficiaries, into the LLIN register.
- Review and validate community LLIN registers and coupons redeemed for nets at health facility.
- Monitor NCH's and Community Storage Hub Keeper's activities in the communities and address challenges as they arise.

EHTs

- Should be well versed in the community -based distribution process, rationale

and agreed criteria for a beneficiary to qualify for a LLIN

- Review and validate coupons issued by NCHs and LLIN distributed by Community Storage Hub Keepers in the communities.
- Monitor NCHs and Community Storage Hub Keepers activities in the communities and address challenges as they arise.

Health Facility In-charges and EHTs will then train all NCHs and Community Storage Hub Keepers in the communities they supervise and are affiliated to the health facilities. NCHs and Community Storage Hub Keepers will be trained on the following:
Designated NCHs and Community Storage Hub Keepers

- Both should be well versed in the community -based distribution process, rationale and agreed criteria for a beneficiary to qualify for a LLIN.
- NCHs should be well versed in assessing household LLIN need.
- NCHs should be well versed in filling and issuing the LLIN coupon properly and accurately for prospective community LLIN beneficiaries based on agreed criteria.
- Community Storage Hub Keepers should be well versed in entering information from net coupons submitted by beneficiaries, into the LLIN register.
- Both should be well versed in educating community beneficiaries on the causes of malaria, how community members can prevent getting malaria, and how to properly use and care for LLIN.

Health Facility In-charges and EHTs will conduct training at the health facilities for all identified NCHs and Community Storage Hub Keepers in all communities in their catchment area. Training should not be more than one day and should cover the processes and use of tools above. There should be no more than 30 trainees for each training, so NCHs from a number of communities will have to be clustered and a number of trainings will have to be conducted for each health facility's communities that they serve.

Distribution, Documentation and Reporting

If a community member will need a LLIN for his/her household, (s)he will approach an identified NCH in his/ her community to request for a LLIN coupon to be redeemed for a LLIN at the closest health facility or at a Community Storage Hub. The NCH will be required to do the following:

- NCHs will visit requester's household to assess household LLIN gap/ need based

on agreed criteria and processes, using an LLIN household gap form.

- Based on the household assessment done, the required number of LLIN coupon(s) needed will be provided to the requester by the NCH and requester will be directed to the nearest Community Storage Hub or health facility to redeem the coupon for an LLIN .
- NCH will fill the LLIN coupon with all the information required. Information to be filled include NCH's name, the name of the requesting household head, date of issuance, village name, ward name, name of supervising health facility, and the criteria for eligibility that the requesting household met. NCHs will retain one copy of the triplicate, and give 2 copies of the triplicate to the requester.
- NCH will educate requester and his/ her household on the causes of malaria, how they can prevent getting malaria, and how to properly use and care for LLIN.

The requester will then take the LLIN coupon(s) to the nearest Community Storage Hub or health facility to redeem the coupon(s) for LLIN. The Community Storage Hub Keeper or health worker will be required to do the following:

- Review information recorded on the coupon(s) by the NCH and then enter this information from the LLIN coupon(s) submitted by beneficiaries, into the LLIN register correctly.
- Retain one copy of the coupon(s) submitted and give requester the required number of LLIN. Requester will also keep a copy of the triplicate coupon.
- Educate requester on the causes of malaria, how they can prevent getting malaria, and how to properly use and care for LLIN.

At the end of each month, all NCHs and Community Storage Hub Keepers will meet their supervisors (Health Facility In-charges) to report on the community distribution process, and challenges being faced. Health facility In-charges will do the following:

- Review and validate data, reports and documentation of coupons issued, coupons redeemed, LLIN distributed, and LLIN stock on hand.
- Replenish LLIN and coupon stock for each Community Storage Hub Keeper and NCH will be done at these meetings as described in the logistics and supply chain section above.

The total tally of LLIN distributed in the month in the health facility's catchment area will be calculated and documented on the Health Facility Monthly LLIN Summary Form (Annex 2), the numbers of nets issued through the coupon system will be added to the

numbers of nets distributed through ANC and EPI and record the number in the field "Total nets distributed." The difference between the total nets distributed and number distributed through ANC and EPI should equal the number of nets distributed through the community channel.

Health facility level LLIN restocking for community-based distribution will be done along with restocking for health facility-based distribution. This is also described in the logistics and supply chain section above. Health facilities will keep tallies of the numbers of coupons issued and redeemed and submit these tallies to the district. Tallies will be submitted and compiled at the district, province and national level and shared with stakeholders.

Supervision

In the first 3 months after the training for Community Storage Hub Keepers and NCHs, monitoring visits by the Health Facility In-charges, EHTs and Neighbourhood Health Committee members, should be conducted to all communities. The purpose of these initial 'intensive monitoring' visits is to ensure that:

- All Community Storage Hub Keepers and NCHs are conducting LLIN distribution in communities as expected, including educating beneficiaries on malaria prevention, net use and care accordingly
- Community Storage Hub Keepers are filling LLIN registers as they should, filing LLIN coupons redeemed accordingly, documenting LLIN stocks as required, and stocks at hand is as recorded (physical count of LLIN) on stock sheets
- NCHs are assessing household LLIN gap/ need correctly, and are filling LLIN coupons fully and correctly as required

Supervisors will provide on-the-job training for Community Storage Hub Keepers and NCHs that are not conducting distribution processes and the accompanying documentation/reporting as expected.

Beyond the first 3 months of 'intensive supervision', the Health Facility In-charges, EHT and Neighbourhood Health Committee members will incorporate the supervision of community-based LLIN continuous distribution activities into their bi-annual performance assessment of districts to health facilities. A Supplementary Community Supervision Checklist (Annex 2) for assessing LLIN storage and documentation, reporting of LLIN distributed in the communities will be developed. This checklist will be used in addition to other tools during the quarterly technical assessment visits.

Person	Responsibilities
National Level	
National Malaria Elimination Centre	• Coordinate overall community- based CD activities at national level • Monitor and supervise implementation of community-based CD activities nationwide • Review and approve monthly distribution of nets to provinces • Communicate the comprehensive CD strategy to all provinces
Medical Stores Limited– Central Warehouse	• Work in close coordination with the NMEC to accurately package all LLIN and coupon orders • Ensure timely and secure distribution to district hubs • Ensure the safe storage of nets at national and district levels
Ministry of Health	• Ensure inclusion of the comprehensive CD strategy in the national malaria strategic plan and vector control policy • Coordinate and supervise operations research on the community based CD strategy
Provincial Level	
Provincial Health Office (Provincial Medical Officer, Sr. Nursing Officer, Malaria Focal Person, Health Information Officer)	• Communicate the community- based continuous distribution strategy to all provinces and district authorities • Monitor and supervise community-based LLIN CD activities province-wide
Provincial MSL Hub Storekeeper	• Review LLIN quantification received from districts for community-based distribution • Ensure timely initial supply and restocking of LLIN to districts for community -based distribution
District Level	
District Health Office (District Community Medical Officer MCH Coordinator, Environmental Health Technician/Malaria Focal Person, Health, Information Officer; District IEC/BCC committees or Officer)	• Coordinate community - based CD activities in district • Communicate the community-based CD strategy to all relevant authorities in all district • Validate population data received from all health facilities in the district • Monitor and supervise implementation of all CD activities in district
Facility Level	
In-charge	• Host monthly meetings with NCHs and Community Storage Hub Keepers • Review Community Storage Hub Keeper's register for LLIN distributed and validate with LLIN coupons received • Review Community Storage Hub Keeper's LLIN inventory control card for stocks documentation and provide LLIN replenishment • Review and validate NCH's coupons issued

	• Replenish coupon stocks for NCHs • Facilitate discussions on best practices and issues so as to foster learning amongst NCHs and Community Storage Hub Keepers • Conduct periodic visits to communities to assess success of community-based LLIN CD implementation
Environmental Health Technician	• Conduct field supervision visits to Coupon Holders and Community Storage Hub Keepers • Collect records of coupons and nets from NHCs and TCLs and submit them to the district
Neighbourhood Health Committee members	• Monitor activities of Coupon Holders and Community Storage Hub Keepers within their communities
Community Level	
Neighbourhood Health Committee Chair	• Supervise implementation at community level • Assist EHTs with providing technical assistance to NCHs and Community Storage Hub Keepers • Assist Neighbourhood Health Committee members with sensitizing communities about LLIN CD and net use.
Net Coupon Holder	• Sensitize community members about LLIN CD • Assess households for eligibility for a coupon(s) • Properly fill and issue LLIN coupons • Sensitize recipients on malaria prevention, net use and care
Trusted Community Leader	• Store LLIN securely • Properly document and distribute LLIN • Sensitize LLIN recipients on malaria prevention, net use and care • Submit data on LLIN distribution to In-charges at monthly meetings and receive LLIN resupplies

Annex 2: LLIN Data Collection and Reporting tools

MASS DISTRIBUTION TOOLS

LLIN Mass Distribution
Ministry of Health – National Malaria Elimination Centre
Form A: Household Data Collection/ LLIN Distribution Register

Province: .....
Health Centre.....
Community/Village: .....
NRC No......

District.....
NHC/Zone.....
Name of Data Collector:.....
Mobile No. .....

Form A: Household Data Collection/ LLIN Distribution Register

Household = A person or a group of people living in the same compound, answerable to the same household head and sharing a common source of food and/or income

Quantification for Odd numbered household = (B+1)/2; Quantification for Even numbered household = B/2

	Data collection/HH registration						LLIN Distribution (Not to be filled during HH registration)			
No.	Name of Head of Household (A)	No. of People in Household			Bed Spaces (C)	No. of LLINs Required (D) = B/2 or (D) = (B+1)/2	Date of Issue	No of LLINs Issued	NRC no. of Recipient	Signature of Recipient /Fingerprint
		Total (B)	Females	Males						
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
					Total of LLINs					

Verified by.....

Designation.....

Date.....

Date.....

LLIN Mass Distribution
Ministry of Health – National Malaria Elimination Centre
Form B: Health Centre Data Aggregation Report

Province: ..... **District:** .....

Health Centre: .....

No.	Name of Neighborhood	Name of community /village	Total number of HH in community/village	Total No. People in community	village No of bed spaces in community village	No. of LLINs required in community/ village	No. of LLINs supplied to community/village	No. of LLINs Issued at community /village
1.								
2.								
3.								
4.								
5.								
6.								
7.								
8.								
9.								
10.								
Total								

Compiled by:..... **Mobile Number**.....

Designation:..... **Date of Compilation:**.....

LLIN Mass Distribution
Ministry of Health – National Malaria Elimination Centre
Form C: District Data Aggregation Report

Province: ..... **District:** .....

No.	Name of Health Centre	No. NHCs/ Zones	No. of communities/ villages in Health Centre Catchment Area	No. of HH in Health Centre Catchment Area	Total No. People in Health Centre Catchment Area	No of bed spaces in Health Centre Catchment Area	No. of LLINs Required Health Centre Catchment Area	No. of LLINs supplied to Health Catchment Area	No. of LLINs Issued in Health Centre Catchment Area
1.									
2.									
3.									
4.									
5.									
6.									
7.									
8.									
9.									
10.									
Total									

Compiled by: ..... **Mobile Number:** .....

Designation: ..... **Date of Compilation:** .....

LLIN Mass Distribution

Ministry of Health– National Malaria Elimination Centre

Form D: Provincial Data Aggregation Report

Province: .....

No.	Name of District	No. of Health Centers	No. of LLINs Required	No. of LLINs Supplied	No. of LLINs Issued
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
Total					

Compiled by: .....

Mobile Number: .....

Designation: .....

Date of Compilation: .....

Continuous Distribution Tools

LLIN Mass Distribution
Ministry of Health – National Malaria Elimination Centre
Community Level - Daily Distribution Activity Form (*This form should be used at distribution point for LLIN distribution*)

Province:..... **District:**.....
Health Centre:..... **NHC/Zone Community:**.....

No.	Date	No. of LLINs issued to beneficiaries	Balance of LLINs on hand
1.			
2.			
3.			
4.			
5.			
6.			
7.			
Total			

Name of CHW/ CBV:.....

Date:.....

Continuous Distribution Tools

LLIN Mass Distribution
Ministry of Health – National Malaria Elimination Centre
Community Level - Daily Distribution Activity Form (*This form should be used at distribution point for LLIN distribution*)

Province:..... **District:**.....
Health Centre:..... **NHC/Zone Community:**.....

No.	Date	No. of LLINs issued to beneficiaries	Balance of LLINs on hand
1.			
2.			
3.			
4.			
5.			
6.			
7.			
Total			

Name of CHW/ CBV:.....

Date:.....

Routine Distribution- Under Five Clinic
Ministry of Health – National Malaria Elimination Centre
Long-lasting Insecticide Treated Nets (LLINs) Distribution Register

Province:						
District:						
Facility:						
S/N	**Under 5 Card No.**	**Name**	**Address**	**No. LLIN Given**	**Signature**	**Date**
Total						

Routine Distribution- Class LLIN Distribution Form

Ministry of Health – National Malaria Elimination Centre

Long-lasting Insecticide Treated Nets (LLINs) Distribution Register Schools Programme

Province:..... District:.....

Name of School:..... Name of Head Teacher:.....

Name of Class Teacher:.....Grade/ Class: .....

No.	Name of Pupil	Sex (M/F)	Signature/ Thumbprint

TOTAL NUMBER OF LLIN DISTRIBUTED IN GRADE/ CLASS

NUMBER OF LLIN RETURNED TO HEADTEACHER

Signature of Head Teacher:_____ Date: _____/_____/_____

Routine Distribution- District School Summary Form

Ministry of Health – National Malaria Elimination Centre

Province:.....District:.....

Name of DEBS:..... Date:..... /...../.....

No.	Name of School	Grade 1			Grade 4			Total Boys	Total Girls	Total LLIN Distributed	No. of LLIN Returned
		Boys	Girls	Total	Boys	Girls	Total				

TOTAL NUMBER OF LLIN DISTRIBUTED IN ALL SCHOOLS IN DISTRICT | | |

NUMBER OF LLIN RETURNED TO DISTRICT | | |

Routine Distribution - Provincial School Summary Form
Ministry of Health – National Malaria Elimination Centre

Province:.....

Name of PEO: .....Date:..... /...../.....

No.	Name of District	Grade 1			Grade 4			Total Boys	Total Girls	Total LLIN Distributed	No. of LLIN Returned
		Boys	Girls	Total	Boys	Girls	Total				

TOTAL NUMBER OF LLIN DISTRIBUTED IN ALL DISTRICTS IN PROVINCE ☐☐

NUMBER OF LLIN RETURNED TO PROVINCE ☐☐

Signature of PEO: _____

COMMUNITY CONTINUOUS DISTRIBUTION

Ministry of Health– National Malaria Elimination Centre

LLIN Coupon template

Coupon no: SERIAL NUMBERED

Province: **District:** **Community/Village:**

Name of recipient: **Name of head of household:**

Recipient's relation to head of household:

□ Head of household □ Spouse/Partner

□ Daughter/Son/Child under guardianship □ other member of the household

Eligibility: □ Uncovered sleeping space

□ new in the community/ village

□ Big holes in the mosquito net

Date:_____ **Name of Coupon Holder** _____ **Signature of Coupon Holder:** _____

Community LLIN Distribution Register

Ministry of Health – National Malaria Elimination Centre

Register for Community LLIN Redemption at Health Facility

Name of Province:---------- District: ---------- Community: ----------

Name of Health Facility: ---------- Date: ---------- Month: ----------

No	Date	Name of Community	Name of person collecting LLIN	Thumb print	Relation to head of household					Eligibility					Advice checklist					
					Head of household	Spouse/Partner	Daughter/son/child under guardianshop	Other member of household		Uncovered sleeping space	New to community	Big hole(s) in the net			Malaria education	Other ways to obtain LLINs	How to air and hang LLINs	How to sleepunder LLINs	How to care for LLINs	Other
1																				
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				

District LLIN Monthly Summary Form

Province:..... District: .....

Name of DHO:..... Month/ Year:.....

No.	Name of Health Facility	No. of LLINs distributed at ANC	No. of LLINs distributed at EPI	No. of LLINs distributed at Community	Total No. of LLIN Distributed
TOTAL					

TOTAL NUMBER OF LLIN RECEIVED BY DISTRICT | | | | | | |

TOTAL NUMBER OF LLIN DISTRIBUTED BY DISTRICT | | | | | | |

TOTAL NUMBER OF LLIN STOCK ON HAND AT DISTRICT | | | | | | |

Signature of DHIO:_____ Date: _____ /_____ /_____

Appendix III: Draft Monthly Summary Form for LLIN Distribution in Province

Provincial LLIN Monthly Summary Form

Province: _____

Name of PHIO: _____ Month/ Year: _____

No.	Name of District	No. of LLINs distributed at ANC	No. of LLINs distributed at EPI	No. of LLINs distributed at Community	Total No. of LLIN Distributed

TOTAL NUMBER OF LLIN RECEIVED BY DISTRICT | | | | | | |

TOTAL NUMBER OF LLIN DISTRIBUTED BY DISTRICT | | | | | | |

TOTAL NUMBER OF LLIN STOCK ON HAND BY PROVINCE | | | | | | |

Signature of PHIO: _____ Date: _____/_____/

Annex 3. Key messages

	Core intervention area	Key messages
1.	**Background**	• ITNs are one of the most effective ways to prevent malaria. • The mosquitoes that transmit malaria can bite anytime but usually at night when people are sleeping. • An ITN is effective if you sleep under it every night; it acts as a physical barrier between the person sleeping under it and the mosquito. • The ITN repels and kills mosquitoes. • Sleeping under ITNs protects you and your family from mosquito bites that cause malaria.
2.	**Net use**	• ITNs are comfortable. They do not cause suffocation. They are designed in such a way that allows for easy breathing while sleeping. • ITNs are safe to use. The chemical is not harmful to children or adults. • Before using an ITN, hang the ITN in the shade outside in order to air it for 24 hours. • Hang ITNs correctly; everybody should sleep under ITNs consistently. • The whole community should use ITNs in order to prevent malaria.
3.	**Misuse of ITNs**	• ITNs should not be used for fishing or any other purpose other than for malaria prevention. • It is an offence to use an ITN for purposes other than for malaria prevention. When you use ITNs for their intended purpose, you avoid being in conflict with the law. The law prohibits use of mosquito nets for fishing. • ITNs should be used for preventing mosquito bites. Every community member has a role to play in ensuring that there is no misuse .Community leaders should take the lead and enforce the correct use of ITNs.
4.	**Net care**	• Tie up the ITN every morning to protect it from damage. • New ITNs should not be washed before use. • ITNs should not be washed frequently. At most, once in three months or when it becomes dusty or dirty.

		• Wash ITNs in a basin or bucket with gentle motions. • ITNs should be washed with mild soap and clean water. • Hang ITNs to dry in the shade only and away from direct sunlight.
5.	**Net repair**	• Inspect ITNs regularly for holes. If an ITN is damaged, repair immediately. • ITNs with minor damages should be repaired by sewing with needle and thread. • ITNs should be kept away from lit candles and paraffin lamps (koloboyi).
6.	**Mobile and migrant populations**	• Tourists, truck drivers, and traders should be encouraged to carry and sleep under ITNs when travelling to prevent malaria. • People travelling to malaria-prone areas should ensure that they carry and sleep under ITNs to prevent malaria (local and international). • If free ITNs are not available, people should be encouraged to buy from commercial outlets.
7.	**Hospitality industry and other employers**	• Hotel, hostels, rest houses, and lodge owners should provide and ensure ITNs are hung in all rooms and on every bed space to protect clients from malaria. • Employers should procure/purchase ITNs for their employees (officers on peacekeeping missions, construction workers) to protect them from malaria while on duty. • Hotel, lodge owners, and employers should procure ITNs according to national ITN guidelines.
8.	**Private sector**	• Retailers and wholesalers should procure ITNs according to national guidelines.
9.	**Institutions (Ministry of Education, refugee camps, road construction companies, health facilities, and other organisations)**	• The Ministry of Education should include an ITN as one of the requirements for pupils in boarding schools. • Institutions of higher learning (universities and colleges) should encourage students to purchase and sleep under ITNs every night to prevent malaria. • Health facilities should ensure that all patients' beds have an ITN. • Health care providers should encourage admitted patients to sleep under ITNs.

References

WHO Pesticide Evaluation Scheme: http://www.who.int/whopes/en/

http://www.who.int/whopes/recommendations/wgm/en/