



Republic of Zambia,  
Ministry of Health

# Guidelines

on the Distribution and Utilization of  
**Insecticide-Treated Nets**  
for Malaria Prevention and Control



**National Malaria Control Centre      November 2008**



## Acknowledgements

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## Guidelines on the Distribution and Utilization of Insecticide-Treated Nets for Malaria Prevention and Control

### Foreword

The Zambian Government through the Fifth National Development Plan (FNDP) 2006-2010 aspires to reduce poverty through wealth creation and sustained economic growth and ensure the equitable distribution of the benefits of growth. The FNDP encapsulates the government's multi-sectoral approach to meeting the Millennium Development Goals (MDGs). The health sector contribution to Zambia's attainment of the MDGs is envisioned in the National Health Strategic Plan (NHSP), which informs the FNDP. The theme of the NHSP is "...Towards the Attainment of the Millennium Development Goals (MDGs) and National Health Priorities..." Government recognizes malaria as a priority public health area.

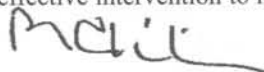
Malaria prevention and control, using multiple interventions implemented in coordination with our partners, is cardinal to achieving the vision of having 'a malaria-free Zambia' in line with the National Malaria Strategic Plan (NMSP) 2006-2011. Improving access to and appropriate use of Insecticide-Treated Nets (ITNs) is one of the most important interventions to achieve this vision.

Studies have shown that ITNs, when used widely in a community, can significantly reduce severe malaria, anaemia, and all-cause mortality, especially in young children and pregnant women. ITNs also reduce rates of preterm delivery and improve birth outcomes.

Zambia has made steady progress in improving ITN coverage. The 2001 Demographic Health Survey (DHS) indicated that 27% of Zambian households had at least one net, and that 17% of children under 5 years old slept under a net the night before the survey. In 2006, the Malaria Indicator Survey (MIS) showed that 44% of households had at least one ITN, which indicates a 60% increase in coverage. Further, the MIS showed that 23% of children under 5 and pregnant women reported having slept under an ITN the night before the survey. The delivery of ITNs to Zambian households continues to accelerate, and since the 2001 DHS more than 4 million ITNs have been delivered, which clearly shows that progress is being made.

The strategic objective is to achieve 100% coverage with at least 3 ITNs per household and at least 80% of pregnant women and children under 5 sleeping under an ITN every night. The Ministry and partners remain committed to maintaining and sustaining the progress achieved so far. I am confident that the strong partnership between the public, the private sector, and the vast network of civil society organizations in Zambia can meet this challenge and make ITNs even more accessible and utilized by our target populations. The Zambian government has shown its commitment to this effort by removing all taxes and tariffs on ITNs and their re-treatments.

To support this combined effort, I am pleased to present these guidelines on the distribution and use of ITNs for malaria prevention and control in Zambia, I believe. The guidelines will enable us, to work together more efficiently in bringing this life-saving and cost-effective intervention to more families throughout Zambia.



Honorable Brig. Gen., Dr Brian Chituwo, (RTD), OCGS, MP.  
Minister of Health

**"Studies have shown that ITNs, when used widely in a community, can significantly reduce severe malaria, anaemia, and all-cause mortality, especially in young children and pregnant women"**

## Acronyms and Abbreviations

<b>AED</b>	Academy for Educational Development
<b>ANC</b>	Ante-Natal Clinic
<b>CBMPCP</b>	Community-based Malaria Prevention and Control Programme
<b>CHAZ</b>	Churches Health Association of Zambia
<b>COMBOR</b>	Community Malaria Booster Response
<b>CRAIDS</b>	Community-based Response to HIV and AIDS
<b>DDH</b>	District Director of Health
<b>DHMT</b>	District Health Management Team
<b>DHS</b>	Demographic Health Survey
<b>EPI</b>	Expanded Programme for Immunization
<b>HCP</b>	Health Communication Partnership
<b>HMIS</b>	Health Management Information Systems
<b>HSSP</b>	Health Systems and Services Program
<b>IEC</b>	Information, Education, and Communication
<b>IRS</b>	Indoor Residual Spraying
<b>ITN</b>	Insecticide-Treated Mosquito Net
<b>JICA</b>	Japan International Cooperation Agency
<b>LLIN</b>	Long-Lasting Insecticidal Net
<b>MACEPA</b>	Malaria Control and Evaluation Partnership in Africa
<b>M&amp;E</b>	Monitoring and Evaluation
<b>MoE</b>	Ministry of Education
<b>MoH</b>	Ministry of Health
<b>NGO</b>	Non-Governmental Organization
<b>NHC</b>	Neighborhood Health Committee
<b>NMCC</b>	National Malaria Control Centre
<b>NMSP</b>	National Malaria Strategic Plan
<b>PHO</b>	Provincial Health Office
<b>PLWHA</b>	People Living with HIV and AIDS
<b>RBM</b>	Roll Back Malaria Initiative
<b>RHC</b>	Rural Health Centre
<b>UNICEF</b>	United Nations Children's Fund
<b>USAID</b>	United States Agency for International Development
<b>VAT</b>	Value Added Tax
<b>WHO</b>	World Health Organization
<b>ZABCOM</b>	Zambia Business Coalition Against Malaria
<b>ZMF</b>	Zambia Malaria Foundation

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# Guidelines on the Distribution and Utilization of Insecticide-Treated Nets for Malaria Prevention and Control

## Introduction

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

- Early diagnosis and treatment.
- Prevention, including vector control.
- Early detection, containment, and prevention of epidemics.
- Strengthening national capacity for malaria research and monitoring.

Insecticide-Treated Nets (ITNs) are a cost-effective alternative to existing vector control methods. However, like any other intervention, treated nets need to be part of the broader malaria control strategy.

ITNs, especially the Long-Lasting Insecticidal Nets (LLINs), have greater advantages over the untreated mosquito nets. It is for this reason that these guidelines are dedicated to ITNs in line with the national strategy. The advantages of ITNs include:

- Personal protection is improved because mosquitoes are repelled or killed by the insecticide before they can have access to the person sleeping under the ITNs. Therefore, this reduces the risk of malaria.
- Community exposure to mosquitoes is reduced because, where whole communities are using treated nets, the number of mosquitoes and the proportion infected with malaria parasites are reduced. In this situation, even people sleeping without an ITN are less likely to get malaria because there are fewer malaria-transmitting mosquitoes in the area. Where ITN coverage is not high enough to have this 'mass effect', people sleeping without a net in rooms where treated nets are present may receive fewer mosquito bites, thereby reducing their risk of malaria.

- The effect of ITNs on malaria illness is huge and is well-documented. ITNs also improve child survival by greater margins.

Zambia uses a mix of ITN delivery mechanisms to target different geographic, economic, and biologically vulnerable segments of our society. Mechanisms in the

**"Zambia uses a mix of ITN delivery mechanisms to target different geographic, economic, and biologically vulnerable segments of our society. "**

past have ranged from promoting commercial sales for those who can afford it to a variety of targeted subsidy mechanisms for those who cannot afford the full market price, including a discount voucher programme for pregnant women in urban areas and direct subsidized sales through antenatal clinics (ANCs) in rural areas. There has also been a variety of subsidized 'revolving fund' mechanisms managed by District Health Management Teams (DHMTs) and non-governmental organizations (NGOs) that involve free distribution to the most vulnerable populations, including people living with HIV/AIDS (PLWHA), orphans, and other especially vulnerable households. Additionally, there has been ITN distribution to boarding schools and health facilities and promotion of employer-based ITN schemes.

During a series of strategic planning reviews in 2005, three issues emerged. First, in order to rapidly scale up ITN

## Introduction

access in rural communities, mass distributions of ITNs at no cost to recipient households would be necessary, and routine systems needed to be strengthened in order to sustain ITN coverage in subsequent years. Second, ITN expansion 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 in order to make the most timely and efficient use of resources.

Third, while the emphasis of public resources for ITNs 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 will continue. As malaria rates decline in urban areas with less intense malaria transmission and greater access to clinical services, and as ITN coverage rises, environmental management improves, and epidemiological surveillance and reporting systems are strengthened, it is hoped that dependence on IRS can eventually be reduced and a malaria-free environment sustained through a multi-sector Integrated Vector Management (IVM) approach.

Segmenting the market and making ITNs 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 ITN distribution requires a framework and guidelines for planning, implementation, and monitoring. Likewise, the insecticide re-treatment activities require the wide participation of NGOs and other service groups to reach all the nets requiring re-treatment. ITNs hold great promise for the people of Zambia. It is incumbent on all of us to collaborate within this framework to ensure an equitable and sustainable malaria-free future.



## Guidelines on the Distribution and Utilization of Insecticide-Treated Nets for Malaria Prevention and Control

### 1. Goals and Objectives of the Insecticide-Treated Net Programme and the Guidelines

To provide a framework for managing implementation of ITNs and insecticides for malaria prevention and control 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 is achieved in eligible ITN areas of every district by December 2008 with an 80% utilization rate.
- Provide a framework for partnerships by clarifying the complementary roles of civil society, the commercial sector, and the public sector to ensure access to ITNs in communities, especially for vulnerable groups, through cost-effective, sustainable, and equitable ITN implementation programs.

### 2. Taxes and Tariffs

All insecticides specific for the treatment of nets are duty free, and no value-added tax (VAT) should be charged as per Statutory Instrument 15 of 16th February 2004.

#### Note to suppliers and procuring agents

- All nets (cotton, synthetic fibre and other textile materials) are duty free.
- All suppliers of ITNs shall provide accessories (extra strings, hooks etc) for each ITN supplied.
- All suppliers to label each ITN "Property of Ministry of Health - ZAMBIA, not for sale". This is a means of reducing leakages into private sector.
- Only WHO-approved nets and insecticides that have at least reached Phase II of WHO Pesticides Evaluation Scheme (WHOPES) shall be used within the nationally-sanctioned programmes. Many other types of nets, including those of substandard quality, find their way into the informal markets. While it will be difficult to control, consumers will be encouraged to purchase only quality materials. In line with the publication by Africa Fighting Malaria ([www.fightingmalaria.org](http://www.fightingmalaria.org)), WHOPES Interim Recommendation of 2004-2007 are as follows:

Name of ITN/Type	Stage of WHOPES Interim Recommendation	Manufacturer
Permanet®/LLIN	Phase III	Vestergaard Frandsen
Olyset®/LLIN	Phase III (Full)	Sumitomo Corporation
Interceptor®/LLIN	Phase II	BASF AG
Duranet®/LLIN	Phase II	Clarke Mosquito Control
Net Protect®/LLIN	Phase II	Bestnet Europe Ltd

## 2. Taxes and Tariffs

### Net specifications

The initial purchase price of recommended LLINs is higher than that of conventional nets, but requires less re-treatment as less insecticide is lost during washing. The insecticide will remain effective for 3 - 5 years, which is the life span of the net. Other insecticide formulations are currently under field evaluation to assess their ability to turn an ITN into an LLIN by users.

Inexpensive, but poor quality nets on the market should be avoided. Preferred nets are knitted, multifilament polyester/polyethylene (not monofilament like fishing lines) which are easier to treat than cotton nets. Denier is the fibre strength. All recommended ITNs shall have fibre strength no less than 75 denier, and this has guaranteed durability.

### 3. Distribution Methods

#### *Mass distribution*

Mass distribution aims at increasing nationwide access to ITNs in an effort to rapidly scale up coverage. In line with the NMSP, the objective will be to ensure distribution of a minimum of three ITNs per household in all ITN-eligible areas. All ITNs being distributed through this programme shall be accessed without cost to the households.

Micro planning for the distribution shall be facilitated at central level in collaboration with the Provincial Health Offices (PHOs) and DHMTs, and distribution will be done in stages depending on logistics and availability of ITNs until all eligible areas are covered. Detailed guidelines for the distribution processes are found in Annex 1. The most disadvantaged, hard-to-reach areas with high malaria incidence rates will be

the priority. Distributions will be supervised by partners from central level, PHO, DHMTs and Health Centres (HCs). Actual distributions is conducted by DHMTs, HCs and Neighborhood Health Committees (NHCs) upon collection of data on household requirements using registers (Annex 2). In collaboration with the DHMT, chiefs, village headmen, and NHCs shall encourage appropriate ITN utilization and discourage abuse.

### Distribution through ANC and Expanded Programme for Immunisation

Routine ITN distribution shall be undertaken through ANC and the (EPI). Target groups for this are pregnant women and children under 5 years old only.

The programme guidelines are as follows:

- Pregnant women and children under 5 years are a key ITN target group.
- All ITNs to be distributed through this programme shall be at no cost to the end user.
- The PHOs shall play a supervisory role and report to the National Malaria Control Centre (NMCC) on issues that may require their intervention.
- The District Directors of Health (DDHs) shall manage the day-to-day operation of the programme.
- The DHMTs shall ensure that there is no stock-out at the HC level and that a buffer stock is maintained at the districts to facilitate quick re-supply to the HCs.
- The districts, in partnership with Society for Family Health (SFH) shall hold annual review meetings to review progress.

## Guidelines on the Distribution and Utilization of Insecticide-Treated Nets for Malaria Prevention and Control

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### 3. Distribution Methods

#### Commercial distribution

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

#### Pricing for private sector Insecticide-Treated Nets

Direct price controls in the private sector are not feasible; low prices are achieved through competition and advertising. Individuals and commercial partners are encouraged to follow UNICEF/WHO specifications for the type of ITNs to be imported into the country. These specifications are available from NMCC, WHO or UNICEF.

#### Illegal trading of Insecticide-Treated Nets

The National Programme is working towards ensuring all ITNs are marked for identification ("Property of Ministry of Health - ZAMBIA, not for sale"). Any of these ITNs found with a retailer, wholesaler or lodging facilities will be confiscated with no compensation given. It is up to all partners to ensure these free ITNs are not abused, stolen, or sold.

#### Sustainability

The NMCP recognizes the need to ensure ITN coverage is sustained and access increased. To accomplish this, a number of sustainability programs have been put in place and these include:

#### Community Malaria Booster Response (COMBOR)

Several efforts in the malaria control programme are being implemented in Zambia currently, and with support from the World Bank, the NMCP is implement-

ing a community programme which is demand-driven and focusing on community mobilization for activities such as re-treatment campaigns, IRS campaigns, sensitization, and dissemination of malaria key messages in order to promote behavioral change and increase the rate of utilization of all malaria related services.

The Community-Based Malaria Booster Response (COMBOR) was introduced to replace the Community-Based Malaria Prevention and Control Programme (CBM-PCP), which was a programme based on a push strategy through which ITNs were allocated to communities by central level based on availability. The project is currently being implemented in four provinces (COMBOR), Western, Northern, Eastern and Luapula, which were selected on the basis of malaria prevalence. Plans are underway to expand the programme to include other provinces.

To implement the programme, trainers were trained in:

- Community-based malaria prevention and control and
- Project facilitation cycle.

The purpose of this training was to empower a group of selected district staff in each of the four participating provinces with knowledge and skills required in preparing communities to participate in the identification of anti-malaria interventions to be funded, proposal writing, and appreciating the entire project facilitation cycle from project elaboration to project funding and implementation.

### 3. Distribution Methods

#### Malaria School Health Programme

The Malaria School Health Programme (MSHP) was launched on Africa Malaria Day, 25th April 2004, at Saint Paul's Mission School in Kabwe, Central Province, and is a close collaboration between the Ministry of Health (MoH) and Ministry of Education (MoE). The MSHP is a component of the School Health and Nutrition (SHN) Programme which aims at improving the health of children. The objectives of the programme include:

- Increased awareness levels on causes, symptoms and prevention of malaria by all school children.
- Scaled up use of ITNs nationwide.
- Enhanced quality and access to education.
- Reduced rates of absenteeism.

It is the mandate of the MoE to ensure that the ITNs are being appropriately used by all boarding students. ITNs become the property of a school (MoE) once distributed and will be cared for by pupils just like any other school property. It is up to school management to come up with measures to ensure ITNs are not misused. School managers should ensure proper storage during school holidays so that nets can last 3 years before they are replaced. The MoH shall conduct periodic monitoring and evaluation (M&E) exercises in collaboration with the District Education Board Secretary's (DEBS) office.

#### School participation in commemorative days

School children are encouraged to actively participate in malaria commemorative days

Commemorative Day	Dates
World Malaria Day	25th April
Child Health Week	2nd week of June or July
SADC Malaria Week	2nd week of November
Child Health Week	2nd week of December

which are as follows:

Activities scheduled for commemorative days are:

- Mass re-treatment campaign.
- Advocacy and networking.
- Social mobilisation.
- Environmental management.

#### Health facility bednets

In 2003 all public health facilities received free ITNs to be used in the wards to promote the culture of ITN use.

Distribution of ITNs to health facilities will continue depending on availability; however, monitoring appropriate use is a priority.

Continued replacement of ITNs for health facilities should be supported through district basket funds, health facility running costs, and RBM partners when available. All health facilities are advised to ensure that the ITNs are kept clean if patient compliance is to improve. This will mean that the bed nets will be subjected to frequent washes and thus efficacy shall reduce faster than community nets. Re-treatments thus should be done as often as required and re-treatments can be accessed from DHMTs whenever available.

#### Employer-based schemes

ITNs reduce both direct and indirect costs of malaria and increase productivity. Provision of ITNs makes good business sense. Thus, employer-based schemes are strongly encouraged. Some schemes have full cost recovery, with the full price of the ITN deducted from employees' salaries; others provide partial subsidies or free ITNs.

Increased coverage of ITNs shall be supported by the expansion of employer-based schemes in collaboration with the activities of the Zambia Business Coalition against Malaria (ZABCOM).

## Guidelines on the Distribution and Utilization of Insecticide-Treated Nets for Malaria Prevention and Control

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### 3. Distribution Methods

#### **Zambia Business Coalition against Malaria**

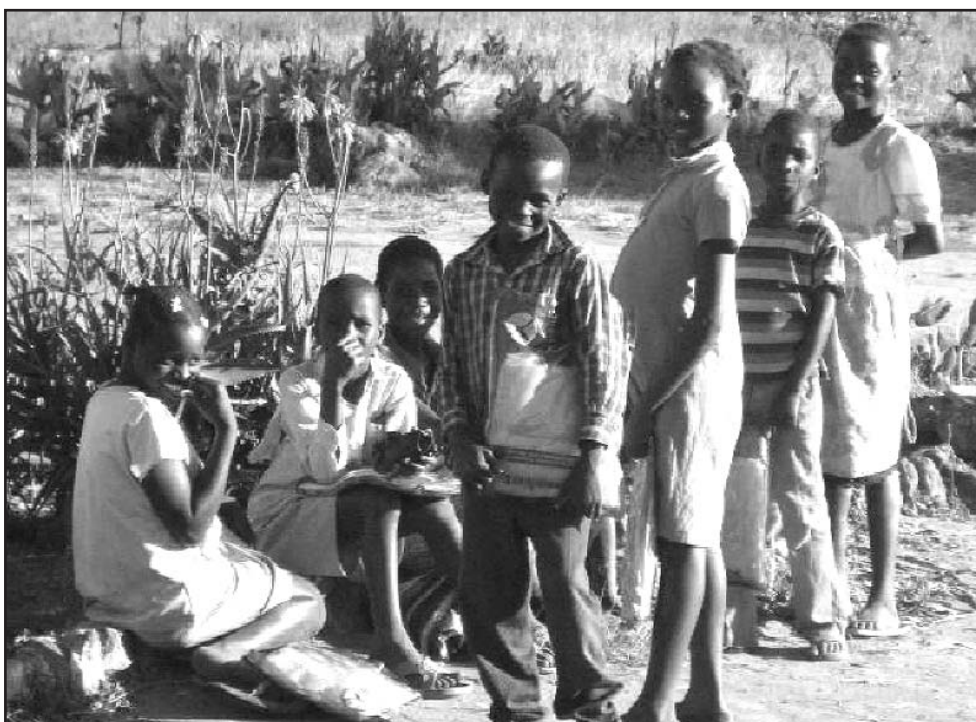
ZABCOM was launched in November 2005 and aims to strengthen the existing public-private sector partnerships as well as encourage the participation of companies that are not part of the Roll Back Malaria (RBM) Partnership in malaria prevention and control activities. The main objective of the coalition is to ensure both public and private sectors work with the RBM partnership to sustain malaria prevention, control and treatment interventions in the country in an effort to reduce morbidity and mortality rates.

#### **Equity component of Insecticide-Treated Net programme**

The ITN programme recognizes the groups of people most vulnerable to malaria because of compromised immunities or exposure to the malaria parasite. Among these groups are PLWHAs, the chronically

ill, the elderly through homes for the aged and orphans and vulnerable children. These special groups shall have increased access to ITNs through the equity programme which is being coordinated by the Zambia Malaria Foundation (ZMF), an umbrella organization for all NGOs implementing malaria control programmes.

However, it should be noted that these groups shall not be supported as individuals but through their support groups who are advised to send proposals and letters to request ITNs from the ZMF which will provide them, depending on availability, and then report to the NMCC quarterly. The distribution and utilization of these ITNs shall be followed up by stakeholders; thus requesting organizations are advised to ensure they demonstrate knowledge of distribution plans and utilization rates.



## 4. Re-treatment

Treatment of nets extends the useful life of a net even when it is torn. A mosquito which lands on a treated net is repelled and eventually killed by the insecticide. It is for this reason that an annual mass re-treatment campaign shall be conducted to ensure that all nets in the country are impregnated with an insecticide for maximum protection. These annual campaigns will be supplemented by routine re-treatments facilitated by the DHMTs, at no cost to the communities. Refer to Annex 3 for details.

## 5. Information, Education, and Communication

Information, education, and communication (IEC) for ITN acquisition, appropriate use, and re-treatment is essential, and must be included in district budgets. Key messages include:

- ITNs are a cost-effective method of malaria prevention, and worth the investment.
- If there are limited ITNs in the house, priority should be given to pregnant women, children under 5, and PLWHAs and other chronically ill persons.
- The malaria mosquito bites late at night; generally between 22:00 and 05:00.
- ITNs should be used every night of the year, not just during the rainy season.
- All nets that are not LLINs should be re-treated at least once a year.

A mixture of interpersonal communications (including drama groups, schools, and scouts) and mass media (including community radio) should be used to provide this information. Youth and young families are the primary target audience. The National Communication Strategy (available from the NMCC) provides guidance on key messages and effective communication for behavior change. NGOs shall play a major

role in the dissemination of information to communities, using messages developed in collaboration with the NMCC.

## 6. Monitoring and Evaluation

Monitoring is the routine tracking of the key elements of programme performance (usually inputs and outputs) through record keeping, regular reporting and surveillance systems, as well as health facility observation and surveys. Monitoring helps to determine which areas require greater effort and identify areas which might contribute to an improved response. Monitoring contributes greatly towards evaluation. Therefore, it is very important to select indicators to be used at district, HC, and community levels. Examples of monitoring indicators related to ITNs include:

- Number of ITNs distributed or sold.
- Percentage of net ownership by households.
- Utilisation rate of ITNs by households.

It is important to determine the source of the data, frequency of data collection, and the person responsible. This information will assist the district to manage the ITN programme well. The district may share such information with the national level through the provinces.

Evaluation is the episodic assessment of the change that the ITN intervention has brought after a period of time. Evaluations are more technical because they often require population-based surveys or other rigorous research designs. This is being undertaken by the national level.

NGOs play an essential role to help monitor the distribution and use of ITNs. M&E processes must be standardized so that information can be combined in a unified, national system.

## Guidelines on the Distribution and Utilization of Insecticide-Treated Nets for Malaria Prevention and Control

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### 6. Monitoring and Evaluation

There are two aspects of monitoring ITN programs in Zambia. The first involves compiling information on ITN and re-treatment distributions. The NMCC maintains a national database on ITN and re-treatment distributions from the national to the district level. This database, formatted in Microsoft Excel, can be easily adapted for use by provincial and district malaria focal persons and information officers. The database is also available in "Health Mapper" format for those provinces and districts working with this GIS software. Please contact the NMCC to obtain a copy of the database and technical support.

The second aspect of monitoring ITN programs in Zambia is monitoring ITN coverage and usage rates within the household. The Health Management Information Systems' HMIS/Surveillance System includes questions on household ITN coverage, but household surveys are an additional monitoring method. Questions related to ITNs must follow a standard format so that results can be comparable. Full protocols with sample questions are available from the NMCC website, [www.nmcc.org.zm](http://www.nmcc.org.zm).

#### 7. Procurement of Insecticide-Treated Nets

All ITNs for mass free distribution are procured at the central level to ensure use of recommended ITNs and update the national ITN database. DHMTs shall develop budgets to support the mass distribution and incorporate these in the District Malaria Action Plans.

All former CBMPCP districts shall use funds realized from the sale of CBMPCP nets within their accounts (ZANACO, Finance Bank, etc.) to support activities for the mass distributions, including: transport of ITNs from district level to HC and community levels, social mobilization, re-

treatment exercise (if any), training or orientation workshops, meetings with local partners to support the activity, and M&E.

#### 8.1 Stakeholder Roles Role of the Provincial Health Office

The role of the PHO is to coordinate DHMT activities and ensure that programmes are being managed as stipulated in all available guidelines through the following:

- Provide technical support to the districts in the preparation of the Malaria Action Plans and budgets.
- Conduct performance assessments to audit the interventions focused on the prevention of malaria through the use of ITNs.
- Monitor and supervise the districts in procuring, distributing and utilizing ITNs.
- Orient all stakeholders regarding the ITN guidelines and disseminate information on ITNs.
- Collaborate with all the commercial, private, public and other agencies/ sectors dealing in ITNs.

#### 8.2 Role of the District Health Management Team

The role of the DHMT is to coordinate and manage the various ITN distribution mechanisms in their district. This will include:

- Procure additional nets, in collaboration with central level, through the PHO;
- Supervise district public sector distribution schemes, as well as promotional programs, IEC, M&E.
- Expand partnerships with schools, commercial retailers, employer-based schemes, the private sector, NGOs, CBOs etc.
- Monitor and make available information on commercial pricing.

## 8. Stakeholder Roles

- Facilitate identification of most vulnerable recipients when ITNs are insufficient to cover entire district.
- Ensure adequate, steady supplies of ITNs and re-treatment kits;
- Provide regular feedback to NMCC, including an update of the ITN database on distribution and re-treatment.
- Work with NHCs to ensure proper utilization of ITNs in households.
- Assure storage and transport.

### 8.3 Role of Health Centres

The role of the Rural Health Centre (RHC) is to coordinate and manage the various ITN distribution mechanisms in their catchment area as listed above for the district. The RHC may also be more directly involved with the storage of ITNs for pregnant women and children under 5 years.

### 8.4 Role of the Neighbourhood Health Committee, Community Health Workers and other service groups

- Participate in advocacy and promote use of ITNs.
- Work with the RHC and DHMT to manage ITN distribution 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 ITNs are insufficient to cover the whole district population.
- Participate in re-treatment campaigns and routine treatments.
- Coordinate with village headmen and chiefs in ensuring that ITNs are not being abused, i.e., used for fishing or any other unintended purpose.

### 8.5 Role of Non-Governmental Organisations (NGOs)

The MoH appreciates partnership in the distribution of ITNs to communities by stakeholders such as faith-based organizations and NGOs. **However, this distribution shall, with immediate effect, be done after notifying CHAZ and ZMF, who will in turn notify NMCC.**

This process shall facilitate updating of the ITN database and minimise duplication of activities. No organization shall donate or sell ITNs to communities without the prior knowledge of the national programme. All distributions within districts, no matter the source, shall be controlled by the DHMT.

### 8.6 Role of the commercial and private sector

- Stock and sell recommended good quality nets and approved insecticides.
- Promote employer-based schemes.
- Coordinate with the DHMT, RHC and communities in planning for distribution and re-treatment M&E.
- Promote behavioral change and communication.
- Reinforce public sector IEC messages with brand advertising.
- Educate public on correct hanging of ITNs and utilization.
- Provide support by procuring hooks and strings.

### 8.7 Role of the National Malaria Control Centre

- Promote partnerships at all levels and provide secretariat functions for participants in the National ITN Theme Group.
- Provide policy, strategy, and technical information to partners.
- Ensure that ITNs fit into comprehensive IVM and malaria control strategy.

## Guidelines on the Distribution and Utilization of Insecticide-Treated Nets for Malaria Prevention and Control

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### 8. Stakeholder Roles

- Mobilize resources, materials, and support from both domestic and external sources.
- Provide M&E support to the national programme and provide feedback to national policy makers.
- Coordinate ITN activities and provide guidelines on the implementation of ITN programs to all districts.

### 9. Misuse/Abuse of Insecticide-Treated Nets

Proper utilization of ITNs has been a major challenge to the programme, and, as such, measures are being put in place to ensure that all ITN misuse or abuse (i.e., use for fishing, selling nets that are supposed to be at no cost to communities) shall be reported and proper action taken.

The MoH calls upon local leadership (chiefs, headmen, councilors, NHCs, etc.) to ensure correct use of ITNs is promoted in their communities.

### Illegal trading of insecticide-treated nets into the private or commercial sectors

Any retailer, wholesaler, or lodging facilities found with ITNs identified as part of the consignment intended for free distribution shall have those nets confiscated and no refunds shall be given. In the near future, the national programme shall ensure that all the free nets are marked for easy identification.

### 10. Approved Local Suppliers of Nets and Insecticides, 2007

For guidelines on approved ITNs/insecticides kindly refer to the World Health Organization Pesticide Evaluation Scheme (WHOPES) website at, <http://www.who.int/whopes/quality/en>

## 11. Contact Details for Technical Working Group Facilitators

Name/Organisation
Dr. Elizabeth Chizema-Kawesha, National Malaria Control Centre
Ms. Cecilia N. Katebe, National Malaria Control Centre
Mr. Boniface Chiluba, ZANARA-CRAIDS
Dr. Rodgers Mwale, UNICEF
Mr. Festus Lubinga, JICA
Mr. Charles Chinyama, Churches Health Association of Zambia
Mr. Charles Kalanga, Society for Family Health
Dr. Fred Masaninga, World Health Organization
Mr. Malama Muleba, Zambia Malaria Foundation

## Conclusion

Eventually, everyone in Zambia, especially those living in areas not covered by IRS, should have an ITN, but until there are enough, priorities have to be established.

For medical reasons, priority is given to pregnant women, children under age 5 years, and PLWHAs, as they are prone to severe illness and death from malaria.

For social reasons, priority is given to vulnerable households, and the poorest of the poor, as they are least able to cope with illness.

For epidemiological reasons, priority is given to rural households rather than urban, as the vector is more prevalent in rural environments, and some urban communities also receive IRS. Based on this, the mass distribution of free ITNs shall commence with these factors in mind but will eventually reach population in all ITN-eligible areas.

## Guidelines on the Distribution and Utilization of Insecticide-Treated Nets for Malaria Prevention and Control

### Annex 1: Mass Distribution Guidelines for Insecticide-Treated Nets

#### 1. National insecticide-treated net objective

Ensure 100% nationwide coverage with a minimum of three (3) ITNs per household in all ITN-eligible areas (non-IRS) with at least 80% utilization rates by December 2008 and sustained to 2011.

#### 2. Strategies

There will be rapid scale-up of ITN coverage using the following strategies:

- Free mass distribution campaign shall be employed in the strategic choice of ensuring access and utilization benefits of using ITNs in the country. All nets shall be distributed and accessed at no cost to the households.
- Routine ITN distribution through ANC to pregnant women and children under five shall be at no cost to the target groups.
- Commercial distribution to increase access.

#### 3. Planned schedule of activities

#### 4. Budget development

All districts are expected to have this activity in their action plans and as such, funds should be allocated accordingly. All district activities will use the funds as per action plan. Central level shall support provincial orientation workshops only.

However, note the following:

- Two people are needed at each DHMT and HC to participate in the exercise (total of 4).
- No more than 8 people are needed for the entire process of net distribution.
- Social mobilisation can include theatre groups, dance troupes, or other.
- Transportation should reflect the costs of shipping the nets from the district to the HC up to household level.
- Fuel for transporting support personnel to the HC from surrounding villages should be included in district budget.
- Equipment can include items needed for re-treatment and passing the nets (districts/HC should have some re-treatment buckets in stock if not the equipment can be procured by DHMT using funds earmarked for malaria).
- Allowances for NHCs should be standard in all districts of a province.

Task	Responsibility	When
1. Collect data on names and existing nets per household (Annex 2)	HC and NHCs	Two weeks before the distribution
2. Consolidate data at the district level to determine net and treatment kit requirements (from Form 1)	DHMT	One week before the distribution
3. Social mobilisation	DHMT	One week before the distribution
4. DHMTs deliver ITNs to HCs according to data provided	DHMT	Two days before distribution
5. HCs/NHCs supply ITNs to households and re-treat existing nets. NHCs to help with hanging of ITNs	HC/NHCs	The day of the distribution
6. Monitor presence and utilisation of ITNs at household level	DHMTs, HCs and NHCs	Two to four weeks after distribution

## 5. District distribution and storage

### Process

- All purchased ITNs should be delivered directly to the districts by suppliers. They shall be informed through the office of the Permanent Secretary on the expected delivery dates for the ITNs to enable them prepare adequate storage space.
- The bales of nets should be delivered with a delivery receipt that needs to be signed and a copy should be maintained with the district.
- Confirm that the number of bales delivered corresponds to the number indicated on the GRV from MSL or whichever partner delivers.
- If the number of bales is not the same, note the actual number of bales received on the receipt and have the delivery person sign the notation.
- DHMTs should make necessary arrangements for distribution of ITNs to HCs. Work closely with local partners, e.g., ministries, NGOs, and private sector etc. for distribution support.
- A copy of delivery note to be maintained by DHMT and copy forwarded to NMCC through the office of the Permanent Secretary.
- HCs should also be informed to prepare storage space by DHMT based on ITNs to be delivered to the particular HC.
- DHMTs to account for all ITNs within districts.
- All excess ITNs to be stored at DHMT and kept for emergency requests (epidemics) or replacements for most vulnerable populations and report forwarded to NMCC.
- Net reallocation between districts to adapt to areas with surplus and deficit.

## 6. Site preparation

### Net reception

The nets are delivered in bales of 50 or 100 nets.

- Identify a secure location in the district for storing the bales of nets.
- Nets should be stored on pallets to prevent seepage of any liquid that may be on the floor.

### Opening the bales of nets

- Each bale is tightly compacted and held together by thick, industrial grade, plastic or metal, packing string which makes opening the bales difficult, requiring time and effort.
- Bales should be opened just before the nets are to be distributed.
- A sharp cutter, scissors, pliers or razor blade is needed to open the bales.
- Before distribution begins, open enough to satisfy minimum expected demand.
- Always insure that adequate supplies of nets in open bales are available for immediate distribution so that nobody is kept waiting while bales are opened, and no long queues occur due to the bale opening process.
- The bales need to be opened carefully to avoid accidents.



## Guidelines on the Distribution and Utilization of Insecticide-Treated Nets for Malaria Prevention and Control

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### 7. Social mobilisation

- Work with local partners to organise local theatre groups, dance troupes, or other social mobilisation available to publicize the net distribution.
- Organize groups to perform before and during the distribution process.
- Messages can highlight malaria prevention and control, net usage, and re-treatment.
- Use a megaphone to announce the distribution effort. Have Neighbourhood Health Committee personnel go round communities announcing the day's events and explain the process for receiving nets.
- Households with problems in hanging the ITNs should be assisted by NHCs.
- Hang posters around the distribution area.
- Distribute malaria leaflets and brochures, if available, during the exercise.
- Use local leadership to sensitize communities.
- Schools and churches.



### 8. Registration post

- Identify at least one table and two chairs that can be used for registration.
- Place them in a shaded area in view of the distribution stations. If possible, allow for a shaded area for recipients to wait in line.
- Verify that an adequate number of forms, tickets and pens are available.



### Data collection sheets and forms

- Nets are distributed on the basis of need. Once need has been determined by the appointed individual through the DHMT, the number of nets to be distributed is communicated in writing on the data collection sheets and forms.
- Data collection sheets and forms are used for distributing the appropriate number of nets in order to assure that

## 8. Registration post

the maximum number of persons in need of one or more nets receives nets.

- The net distributor distributes only the number of nets indicated on the sheets and forms.
- The sheets and forms are only filled out by the appointed individual by the DHMT.
- If a stamp is available, the sheets and forms can be additionally validated by the appointed individual by the DHMT by putting a stamp on the back of the ticket. When nets are received, the document is turned over to the distributor in order to justify the nets given (for accountability).
- A safe place is needed to keep and hold the sheets and forms received. Keep it in a secure but accessible location. Make an identifiable mark on used documents to ensure that they can not be reused.

## ITN distribution station

Identify a secure space (lockable, with limited access) where stocks of ITN bales can be stored in security but accessed easily during distribution. This could be a room with a window or doorway through which the nets can be passed from the bales to the recipients.

## 9. Re-treatment station (for non-LLINs only)

Complete national guidelines for net re-treatment can be found in Annex 3.

Replacement of worn out ITNs

- Nets are prone to wear and tear, especially in rural settings where reed mats (impasa) are used for sleeping. Smoke and dust can also make the ITNs dirty.
- It is up to the team at the distribution point to be able to analyse and suggest that a net be exchanged for a new one during the distribution/re-treatment exercise.

- The physical state of the net must be examined to determine whether it is safe for sleeping under and keeping mosquitoes away. Nets that have holes which cannot be sewn should be exchanged.
- All old nets shall be replaced at the discretion of the NHCs who will destroy them accordingly.

## 10. Site preparation checklist for ITN distribution

Assign roles

- Review the roles and responsibilities (see below).
- Identify good candidates for each of the roles.
- Verify that they understand the roles and responsibilities and are willing to perform the designated role.
- Plan an initial meeting with members of the distribution team.

### *Team members' roles and responsibilities*

A minimum distribution team consists of the following five roles:

### *Roles at the registration post*

#### **Coordinator/team leader**

- Responsible for explaining process to recipients.
- Distribute forms for re-treatment.
- Assure client flow.
- Maintain orderly process.
- Through knowledge of the community, assures that recipients provide valid information and receive appropriate number of nets.

#### *Appointed individual by the DHMT/registrar*

- Keep track of records.
- Determine number of nets to be given and re-treated (if required).

## Guidelines on the Distribution and Utilization of Insecticide-Treated Nets for Malaria Prevention and Control

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### 10. Site preparation checklist for ITN distribution

#### *Roles at the ITN distribution station*

##### **Facilitator**

- Responsible for distribution of the nets.
- Collect sheets/forms.
- Give number of nets noted on the form to the recipients.
- Mark form to indicate that nets have been delivered.
- Assure that stock is kept secure.
- Keep form if no re-treatment needed, return form if re-treatment needed.
- Direct recipients to animators that explain net usage.

##### **Sensitisation person**

- Hang posters on walls.
- Hang sample net.
- Explain net usage, hanging, need for re-treatment.
- Support facilitator, making sure of availability of nets.

#### *Roles at the ITN re-treatment station*

Please note that national guidelines for ITN re-treatment are found in Annex 3.

##### **Re-treatment person**

- Responsible for use of re-treatment kits.
- Verify that all equipment needed for re-treatment is available and ready.
- Wear gloves.
- Know re-treatment process.
- Put wet nets into plastic.
- Collect forms and mark them as used.
- Explain drying process and need for periodic re-treatment.
- Provide support to facilitator if backups occur.

### 11. Distribution process

#### **Announcement**

- 1 Selected health post leader or NHC member uses the megaphone or stands in raised location to explain what is going to happen.
- 2 Explain the process of registering, getting a form, going to the net distribution station, and going to the re-treatment station. Subjects mentioned can include malaria control and prevention, what nets are used for, how they are used and re-treated.

#### **Registration post**

1. If a list of recipients is available begin calling out each name.
2. Fill out information required for registration on the form provided.
3. Ask for the information required on the registration form.
4. Determine the number of nets to be given and re-treated (see number of nets guidelines).
5. Fill out a form with the name and number of nets to be given and re-treated.
6. Give the ticket to the recipient and explain what they should do next.
7. Check the name off on the list when the person has been registered.

#### **Net distribution**

1. Give the number of nets indicated on the form to the recipient.
2. Mark the ticket to show that the nets have been distributed.
3. If the form shows nets to be re-treated, hand the form back to the recipient.
4. When the recipient leaves with the nets, make sure she/he visits the person explaining how to hang and use the nets.

## 11. Distribution process Announcement

### Net re-treatment (if required)

Please note that national guidelines for net re-treatment are in Annex 3.

1. Take the form from the recipient.
2. Confirm that the number of nets to be re-treated corresponds to the number on the ticket. If it doesn't, speak to the individual appointed by the DHMT.
3. Prepare the re-treatment solution.
4. Dip the net and let it soak up the solution.
5. Put the net in a plastic bag and give it to the recipient,
6. Explain the drying process and the periodicity of need for future re-treatment.

*Note:*

1. In some instances, ITNs delivered may temporarily not be sufficient to achieve 100% household coverage with three ITNs. For this reason, it is important for districts to have as much information as possible about how to locate the populations most vulnerable to malaria so that they may be targeted first.
2. Law enforcement agencies in the district should be informed of the pending distribution in case of an uncontrollable situation evolving.

## Annex 2: Registers for data collection for NHC, HC and DHMT levels

### NATIONAL MALARIA CONTROL CENTRE MASS DISTRIBUTION DATA COLLECTION REGISTER

#### COMMUNITY LEVEL

Community/ Health Centre Catchment Area:

Name of Village:

Name of Data Collector:

Date of Collection:

No.	Name of head of HH	No. of people in HH	No. of ex-isting nets in GOOD condition	No. of SLEEPING structures in HH	No. of nets to GIVE	No. of nets to RE-TREAT
1						
2						
3						
4						
5						
6						
7						
	Total					



## Annex 2: Registers for data collection for NHC, HC and DHMT levels

### NATIONAL MALARIA CONTROL CENTRE MASS DISTRIBUTION DATA COLLECTION REGISTER

#### HEALTH CENTRE LEVEL

Name of Health Centre:

Name of Data Collector:

Date of Collection:

No.	Name of catchment area	Total # of HH in catchment area	Total # of nets GIVEN	Total # of EXISTING nets	Total # of nets RE-TREATED
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
	Total				



## Annex 2: Registers for data collection for NHC, HC and DHMT levels

### NATIONAL MALARIA CONTROL CENTRE MASS DISTRIBUTION DATA COLLECTION REGISTER

#### DHMT LEVEL

Name of District:

Data Aggregator:

Date of Aggregation:

No.	Name of Health Centre	Total # of HH in HC	Total # of nets GIVEN	Total # of EXISTING nets	Total # of nets RE- TREATED
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
	Total				



## Annex 3: Guidelines on Re-treatment of Insecticide-Treated Nets

### 1. Background

The National Malaria Strategic Plan (NMSP) 2006-2011 focuses on scaling up for impact all malaria prevention and control interventions. The country targets to achieve 100% coverage with a minimum of three (3) ITNs per household with at least 80% utilisation rate by December 2008 and maintained through to 2011.

Not all nets in the country are ITNs; distribution of untreated nets has occurred previously and thus the need to re-treat these nets. National ITN coverage in Zambia is currently 44% and the NMCP has the mandate to ensure that all these nets as well as the untreated nets are treated to ensure efficacy. Studies have shown that a person sleeping under an ITN is protected twice as much as one sleeping under an untreated net. It is in line with this that measures are being put in place to ensure that all nets being used are ITNs.

A treated net not only provides a barrier for the person sleeping under it, but also repels and in some cases kills the mosquito as well as other insects. One cannot over-emphasize the importance of having nets treated if we are to reduce on the vector population as well as the number of malaria cases.

These guidelines have been developed to help districts ensure that during the planned annual mass re-treatment campaign, in line with the 2006-2011 NMSP, all the required commodities are in place and all people to be conducting the re-treatments are educated on the re-treatment process and know their roles in the campaign.

### 2. Resource mobilisation

#### *Re-treatment kits*

Kits will be sourced centrally through the NMCC and distributed through MSL to all DHMTs. Allocations are based on the number of existing ITNs within a district. The kits should reach the DHMTs a month before the campaign week. Excess kits shall be kept by the DHMT and used to conduct routine re-treatments as needed.

#### *Equipment*

Equipment for use during the campaign will be supplied by the DHMT/HCs. Such equipment includes basins, gloves, scissors/blades, measuring jugs and plastic bags for community members to carry their re-treated nets back home.

#### *Funds*

Malaria remains the number one cause of morbidity and mortality in Zambia. All DHMTs are expected to allocate funds from their grants towards malaria prevention and control including re-treatment of nets. The NMCC will mobilize funds centrally to augment the districts resources. The funds will be used to support pre- and intra- campaign activities including but not limited to planning, training, supplies distribution, social mobilization, personnel costs, M&E.

## Guidelines on the Distribution and Utilization of Insecticide-Treated Nets for Malaria Prevention and Control

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### 3. Approved insecticide formulations

Zambia only uses insecticides that have been approved by WHO for the treatment of mosquito nets. These include: deltamethrin; alpha-cypermethrin and lambda-cyhalothrin. Formulations for agriculture or indoor residual spraying (IRS), even with the same active ingredient, must never be used on nets. For guidelines on approved ITNs/insecticides kindly refer to the World Health Organization pesticide evaluation scheme website at, <http://www.who.int/whopes/quality/en>

### 4. Activities

#### *Needs assessment*

The assessment will ensure that the number of ITNs existing within a community that require re-treatment is determined prior to the re-treatment campaign. These should be ITNs that have not been treated within the past six (6) months. The district-level distribution of kits to HCs, thus to specific catchment areas, will depend on this assessment. Further, the M&E process will utilize the needs assessment data to measure progress during and after the campaign.

#### *Social mobilisation*

This is a very important activity that can actually lead to the success or failure of a campaign. DHMTs should ensure that all the necessary and most effective tools are used to inform communities about the campaign. Social mobilization should commence at least one or two months prior to the campaign, be intensified two weeks before, and continued during the campaign/exercise.

Various communication tools should be used including megaphones, community radio stations, posters, drama, mobile video units, schools, church/gathering announcements, and door-to-door communication by NHCs. Clear and brief information should be given to the community. The message should include the following details:

- Seriousness of malaria.
- Importance of using ITNs.
- Importance of treating ITNs.
- Availability of free re-treatments.
- Location of re-treatment points.
- Date(s) of re-treatment.
- Time for re-treatment.
- Washing ITNs prior to re-treatment.
- Re-hanging the nets after re-treatment.

#### *Re-treatment exercise*

DHMTs/HCs should identify an appropriate location for re-treating nets. Avoid locations near unstable walls or fences which may endanger lives in cases of poor crowd control. Try to set up at a location under shade and close to a supply of water.

Ensure that all necessary equipment and insecticides are available prior to the exercise. Community members should not be kept waiting due to lack of prior planning. Keep to the communicated time; otherwise, community members will leave. Determine how much water will be needed, and arrange for the water to be stored at the re-treatment station prior to starting the exercise. Keep all equipment and supplies in secure but easily accessible locations.

#### 4. Activities

##### *Supervision*

Each re-treatment point should have a supervisor (from the NHC) whose main role will be to ensure that all supplies for the exercise are available prior to the activity, organize trained people to conduct the exercise, collect all used sachets of insecticides, and collect data on all ITNs being brought in for re-treatment.

This person shall either be from the DHMT, HC or NHC. NHCs should be trained to provide such supervision.

##### *Waste disposal*

Insecticides used for the re-treatment of nets should be handled in a manner that will not pollute the environment. The supervisor at each re-treatment point will be responsible to make sure that all used sachets of insecticides are collected and disposed of by burying. This information should be provided to community members who may decide to re-treat their own ITNs at home. No sachets should be found lying around the re-treatment area after the exercise. Detailed guidance on environmental safeguards can be obtained from the

WHO website at [www.afro.who.int/vbc/](http://www.afro.who.int/vbc/) and the Environmental Council of Zambia developed generic guidelines under the Toxic Substances Regulations at [www.necz.org.zm](http://www.necz.org.zm).

#### 5. Roles of stakeholders

The re-treatment exercise is a huge task which will require all NMCP partners to participate. DHMTs shall collaborate with local partners and share responsibilities based on comparative advantages. Partners that have been identified by central level and can be invited by DHMT include Zambia Scouts Association, SFH, Red Cross, Reaching HIV and AIDS Affected People with Integrated Development and Support (RAPIDS), Care International, World Vision, Africare, Catholic Relief Services, Expanded Church Response, Salvation Army, Health Communication Partnership (HCP), Health Systems and Services Program (HSSP), ZMF, and all NGOs conducting malaria activities. Private sector partners available within specific districts should be approached and encouraged to participate in the exercise.



## 6. Monitoring and evaluation

### Data collection

#### *Data collection before re-treatment*

Data shall be collected prior to the activity, at least two weeks before, on the number of existing nets in each household, and this shall be done by NHCs under the supervision of DHMT/HC. HCs will compile data from all NHCs in their catchment area. The DHMT will receive and accumulate all HC data which will assist in the allocation of re-treatment kits. (Annex 2)

#### *Data collection after re-treatment*

To be able to ascertain the number of ITNs re-treated, data should be collected by the supervisor (Annex 2, community level). This activity is very important and should be done with maximum concentration. All collected data should be forwarded to the HCs who shall consolidate for the entire catchment area using the provided format (Annex 2, health centre level) then forward to the DHMT who shall in turn consolidate for the entire district using provided format (Annex 2, DMHT level).

The DHMT shall send all the collected data (Annex 2, DMHT level) together with a report to the PHO where it shall be compiled and sent to NMCC for incorporation into the database. The nationwide re-treatment rates shall be communicated through a report to all PHOs. NMCC and partners shall hold a post-campaign meeting to look into the challenges and recommendations as a way of improving planning for subsequent campaigns.

All data and reports from the DHMTs should be sent to NMCC a month after the campaign. DHMTs failing to provide this information shall be left out the following campaign as NMCC shall take it that no activity had taken place and as such that particular DHMT still has kits available.

### 7. Routine re-treatments

After the mass re-treatment campaign, DHMTs shall conduct routine re-treatments as a way of ensuring that ITNs within a district are always treated. This activity should be done when the need is identified and should be planned and budgeted for in the District Malaria Action Plans. Insecticides for this exercise shall be requested from NMCC by DHMTs through the PHO upon consolidation of requirements. Distribution shall be based on availability.

### 8. How to re-treat a net

Re-treatment procedure

1. Wear gloves.
2. Using provided plastic bag measure, fill with clean water up to 500ml mark.
3. Add contents of measuring bag to basin to be used for treating the net.
4. Tear open sachet of binding agent and add to the water (use a scissors or blade).
5. Stir the water to mix binding agent.
6. Add the tablet to the mixture in the basin.
7. Stir the mixture until the tablet is completely dissolved.
8. Dip the net into the solution.
9. Ensure the net is thoroughly wet.
10. Do not wring the net (Takuli ukukama net).
11. Lay the net flat down in a shade to dry (Do not hang on a line to dry).

**NOTE: You should only follow steps 4 and 5 if you are using a long-lasting re-treatment insecticide.**

*It is very important that the instructions in these re-treatment guidelines are followed if the re-treated nets are to provide the intended efficacious protection to community members who will sleep under them.*





## **Republic of Zambia, Ministry of Health**

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**Malaria is the leading cause of illness and death in Zambia every year. The highest incidents of malaria are found among children under the age of five, as well as pregnant women. As a result, the disease preys upon the weakest and most vulnerable to threaten healthy and productive lives. Nevertheless, malaria is a preventable and treatable disease.**

**The Guidelines on the Distribution and Utilization of Insecticide-treated Nets for Malaria Prevention and Control has been produced in order to support health workers in Zambia, as well as provide general information on the manufacture, distribution, treatment and utilization of insecticide-treated nets. Implementation of this information works to facilitate healthier living practices in Zambia, and ultimately save lives. By facilitating partnerships, sharing knowledge and working together, we can roll back malaria in Zambia.**

**These Guidelines were produced by the National Malaria Control Centre in 2008.**

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