MINISTRY OF HEALTH AND SANITATION

National Guidelines for Implementation of the Learners Treatment Kit in Malawi

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Preface

The Government of Malawi remains committed to improving the health and wellbeing of all citizens, recognizing that child health is both a fundamental right and a foundation for achieving equitable education outcomes. Malaria continues to be one of the leading causes of illness and death among school-going children. An emerging shift in malaria burden toward this age group threatens not only their right to health but also their right to quality education, as the disease contributes significantly to absenteeism and learning loss.

Given that learners spend most of their time in school, school-based management of minor illnesses, including malaria, presents a practical opportunity to enhance timely access to care. In response, the Ministry of Education, Science and Technology launched the School Health and Nutrition (SHN) Program in 2007, which introduced Pupil Treatment Kits (PTKs) containing Sulfadoxine-Pyrimethamine (SP) for presumptive malaria treatment.

Following the national policy shift to Artemisinin-based Combination Therapy (ACT) in 2008, PTKs were replaced with Learner Treatment Kits (LTKs), incorporating malaria rapid diagnostic tests (mRDTs) to ensure accurate diagnosis before treatment. The use of mRDTs enables trained teachers to provide timely and effective treatment for uncomplicated malaria within the school setting, reducing absenteeism and improving learning outcomes.

This Operational Guide provides practical guidance for the planning and implementation of LTK services. Developed through collaboration between the Ministry of Health and Sanitation, the Ministry of Education, Science and Technology (School Health and Nutrition Department), Save the Children International, World Vision International, and Catholic Relief Services, it affirms Malawi's commitment to a multi-sectoral, inclusive approach to child health and education.

Grounded in principles of equity, gender responsiveness, and social inclusion, the LTK initiative aims to protect the health and education rights of all learners particularly girls, children with disabilities, and other vulnerable groups. By addressing malaria within schools, we move closer to ensuring that every child can learn, thrive, and reach their full potential.

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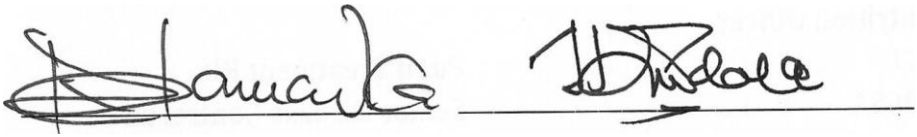

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Abbreviations and Acronyms

ACT Therapy	:	Artemisinin-based Combination
ADR	:	Adverse Drug Reaction
CHAM Malawi	:	Christian Health Association of
DCSA Assistant	:	Disease Control and Surveillance
DHIS2 System 2	:	District Health Information
EHRGE Gender Equality	:	Equity, Human Rights and
FEFO	:	First-expiry-first-out
HSA	:	Health Surveillance Assistant
LA	:	Lumefantrine – Artemether
LTK	:	Learner Treatment Kit
MoEST: and Technology		Ministry of Education, Science
MoHS Sanitation	:	Ministry of Health and
mRDT	:	Malaria Rapid Diagnostic Test
NMCP Program	:	National Malaria Control
PMRA Regulatory Authority	:	Pharmacy and Medicines
PSHNO Nutrition Officer	:	Primary School Health and
PTK	:	Pupil Treatment Kit
SDCSA Surveillance Assistant	:	Senior Disease Control and
SHN	:	School Health and Nutrition

SHNC Coordinator	:	School Health and Nutrition
SHSA Assistant	:	Senior Health Surveillance
SP	:	Sulfadoxine-pyrimethamine
SBHSP Program	:	School based Health Service

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1.0 INTRODUCTION

Malaria remains one of the major public health problems, accounting for 30% of all out-patient visits, and 40% of all hospitalizations among children under five years (HMIS Report 2016). While among the school going children, the prevalence of malaria is 58.7 and 53.1% in two study sites in Karonga district (CRS, 2022). Malaria can cause illness, long-term consequences on child development such as low birth weight, chronic anaemia and reduced growth as well as death. It is estimated that malaria causes up to 50% of all deaths in school-age children in Africa. It is suggested that among children attending school in high malaria areas such as Malawi, between 20% and 50% of children experience clinical malaria cases each year (Impact of a school-based programme of malaria diagnosis and treatment of school attendance in southern Malawi Report). An estimated 2.1 million malaria cases are experienced by Malawian school-aged children. From an education perspective, malaria is estimated to contribute between 5% to 8% of all cause absenteeism among African school children. Evidence suggests that malaria can negatively affect cognition and attention.

School children also often carry non-symptomatic malaria infection. In Malawi, for example, up to 50% of school children are infected with Plasmodium, but may not always have symptoms and therefore they do not seek treatment immediately. Malaria (both clinical and asymptomatic) is a leading cause of anaemia among school-age children. Deaths from malaria in this group are often linked to delays in seeking care, long distances to health facilities and high cost of treatment in Christian Health Association of Malawi (CHAM) and private health facilities. Recognizing these barriers, the health and education sectors are increasingly emphasizing the importance of reducing incidences of malaria among school children. Reducing

malaria incidence in schools is therefore critical, with approaches that uphold children's right to health, promote equity, and ensure gender-responsive access. This ensures that all learners including girls and those from marginalized communities can receive timely and effective prevention and treatment.

These Guidelines, together with the accompanying job aids, will enable trained teachers, implementing partners and other users to provide the LTK service safely, effectively and confidently. The guidelines will:

- Strengthen community outreach and engagement ensuring equitable demand for and utilization of LTK services by all learners.
- strengthen monitoring, reporting and continuous quality improvement in LTK service delivery with disaggregated data to track equity and gender outcomes.
- Strengthen inclusive coordination and leadership on LTK service delivery at national and district level ensuring strategic alignment with education and health sector goals.

1.1 Malaria control strategies

Several interventions are known to be effective in reducing or controlling malaria. However, none of these is entirely effective. The main control strategies in Malawi are:

- Integrated vector management (use of LLINs every night throughout the year and Indoor residual spraying)
- Case management {prompt diagnosis and treatment of malaria, Post Discharge Malaria Continuum of Care (PDMCC), Learners Treatment Kit (LTK) and Integrated Community Case Management (iCCM)}

- Intermittent Preventive Treatment in pregnancy (IPTp) through administration of SP.
- Malaria Vaccine.

2.0 LEARNERS TREATMENT KIT

2.1 Historical background

The MOHS with support from Save the Children introduced Pupil Treatment Kits (PTK), now called Learner Treatment Kit (LTK), in 2000 in Mangochi district. This initiative aimed to provide immediate in-school treatment for malaria and minor illnesses and injuries among children. It is operated within the School Health and Nutrition (SHN) programme which was designed to be implemented nationwide. The PTK included bandages, gauze and antiseptic for small wounds, tetracycline for treatment of eye infections, paracetamol for general pains and sulfadoxine-pyrimethamine (SP) to treat malaria. This initiative was accepted and widely utilized in schools. The use of the PTK was supported by teachers and community members. In 2005 the Ministry of Education Science and Technology (MoEST) scaled up the use of PTK nationwide as part of the National SHN programme as there was some evidence of reduced absenteeism among learners in schools.

In 2007, the National Malaria Control Programme (NMCP) changed the first-line malaria treatment in the country from SP to Artemisinin-based Combination Therapy (ACTs) based on scientific evidence of low SP efficacy rates in the treatment of uncomplicated malaria and strongly advocated for implementation of the test, treat and track policy to protect the ACTs from early resistance. Thus, PTK with SP was removed as the treatment was no longer recommended for uncomplicated malaria.

2.2 Introduction of mRDT and ACT

At the time of introducing the ACTs as new treatment for malaria, the country's capacity for parasitological diagnosis of malaria was weak at 25% and only used malaria microscopy. In view of this challenge and in order to protect the ACTs from early drug resistance, the ministry introduced both the test, treat and track policy and the malaria Rapid Diagnostic Test kits in 2011 to support implementation of test, treat and track policy. The Pharmacy and Medicines Regulatory Authority (PMRA) also responded to the ministry's change of malaria treatment and revised its policy to include LA to an over-the-counter drug to improve drug access in rural areas where malaria is a big challenge.

In 2013 the NMCP commissioned a study in Zomba to understand the prevalence of malaria among the school going children. The study which was done by the Malaria Alert Centre under the College of Medicine was financially supported by Save the Children International and involved 58 public primary schools under the Traditional Authority (T/A) Chikowi. The study results showed a very high prevalence (60%) of malaria among the school aged children compared with a prevalence of 33% (MMIS report, 2014) among the under-five children. Following this report, in 2015 PTK was revised to include mRDTs with the aim of testing prior to treatment and also replaced SP with LA (One of the ACTs) in line with the malaria first line treatment protocol. This therefore necessitated trained providers to start offering malaria diagnostic services to school-going children within the school premises.

National Malaria Treatment Guidelines state that in order to treat children over the age of five (5) with an ACT a diagnosis (using rapid diagnostic test for malaria (mRDT) or microscopy) must be carried out first. Therefore, in order for the new LTK to include ACT, the Kit

also needed to contain the mRDT kits so that an immediate diagnosis for malaria could be made before giving treatment or recommend for referral. With the national rollout of the mRDT in both the formal (health facilities) and non-formal health sectors (in communities - by health surveillance assistants), it was felt that the inclusion of teachers in this programme would increase equitable, gender-responsive universal and prompt access to malaria treatment thereby drastically reducing cases of malaria in Malawi. It is worth noting that the main difference between the original and the updated LTK is the replacement of SP with LA and the inclusion of the mRDT for diagnosis of malaria, Vaseline gauze and bathroom weighing scales while the rest is the same.

2.3 Strategic goal of LTK

- To ensure learners[1] enjoy good health and who are able to live a productive life and attain their optimum potential
- To strategically contribute to the health and well-being of learners through equitable and gender-responsive case management of malaria and other minor illnesses
- To contribute to reduction of severe illness and mortality due to Malaria among school going children

2.4 Objectives of LTK Implementation

- To provide equitable and gender-responsive access to prompt diagnosis and treatment of uncomplicated malaria and other minor illnesses for school going children during learning hours.
- To reduce health related absenteeism of learners with particular attention to girls and those falling under other vulnerable groups like PWDs often most affected.

1 Learners – boys and girls

- To cure the infection as rapidly as possible and prevent progression to severe disease.
- To prevent onward transmission of the infection to others and to prevent the emergence and spread of resistance to antimalarial drugs

2.5 Malaria case management and LTK

In malaria case management, treatment aims at curing the infection as rapidly as possible and preventing progression to severe disease. The public health objectives are to prevent onward transmission of the infection to others and to prevent the emergence and spread of resistance to antimalarial drugs. LTK targets all learners, from Standards 1 to 8, in schools that are provided with the Kit. As a free service, it is designed to benefit all school going-children across the country ensuring equitable and gender-responsive access to timely health care during learning hours.

Previously, when a learner fell sick at school, she or he could usually go home and only return to school when they felt better. In most cases, learners could not seek medical treatment unless the problem worsened. This age group often may not be able to make independent decisions to seek medical care as such decisions are usually made by parents/guardians. This can result in school absenteeism which disproportionately affects both girls and boys and reduces learning achievement. Most health problems experienced by school children, including malaria, are preventable and can be equitably and effectively treated at the school within the school setting

The purpose of LTK is therefore to provide equitable, gender-responsive immediate treatment to learners at school and ensure timely referral of serious health cases, thereby supporting continuity

in learning and advancing national education and health goals. All schools implementing LTK shall only handle uncomplicated cases. All serious and complicated cases must be referred to a nearest health facility.

When a learner reports, or is reported ill or injured, the trained teacher (LTK dispenser) should first assess the learner using the job aids, ensuring sensitivity to equity and gender considerations and if appropriate conduct an mRDT. Based on the diagnosis, treatment should be administered or referral should be recommended by completing the referral form. Wherever possible, simple cases should be attended to during break, lunch or at the end of the school session so as not to disturb the LTK dispensers' lessons. In the case of emergencies such as a bleeding wound from an injury, the learner should be attended to immediately. Only teachers trained to use LTK should have access to its contents and they are the only ones authorized to assess, diagnose and administer treatment. These trained teachers are referred to as LTK dispensers.

2.6 Uncomplicated Malaria

2.6.1 Case Definitions

Suspected Malaria

Malaria should be suspected in over five children and adults with fever or history of fever plus one other symptom or sign suggestive of malaria.

Confirmed Malaria

A malaria case under LTK is confirmed by a positive malaria rapid diagnostic test (mRDT) result in the presence of fever or history of fever. Clinically, malaria falls into two categories-uncomplicated and

severe, depending on the degree of symptoms. However, clinical diagnosis in uncomplicated malaria is not recommended; a confirmatory test should always be performed.

2.6.2 Diagnosis of malaria

MoHS recommends the use of mRDT to diagnose uncomplicated malaria. A patient who presents with symptoms of malaria and positive parasitological test [mRDT] but with no features of severe malaria is defined as having uncomplicated malaria. For uncomplicated malaria, treatment should only be given to those patients who test positive.

Malaria Rapid Diagnostic Test (mRDT)

All suspected uncomplicated malaria cases in all LTK sites should be tested using approved mRDT brands prior to initiating treatment. (Refer to national malaria diagnostic guidelines).

Advantages of mRDT:

- They provide a quick result.
- They are less expensive than microscopy.
- Their use is easily readily taught.
- They are accurate.
- They do not require power to be used.

Disadvantages of mRDT:

- They continue to be positive in patients who have recently (within two weeks) been treated with effective anti-malarial medicines;
- They cannot indicate parasite density or species.

- Cannot be stored for future reference.

Safety Precautions

Make sure to protect yourself and others.

- Use the appropriate PPEs (disposable apron and gloves) when you are handling blood.
- Dispose of lancets immediately into a sharp's container.
- Dispose of all non-infectious materials in a non-infectious bin.
- Dispose used mRDT cassettes, cotton with blood in the infectious waste bin.
- Any blood spills should be immediately cleaned up with clean gauze and 0.5% chlorine.

2.6.3 Bio-waste Management

Bio-waste management refers to the process of safely and effectively handling and disposing of biological materials that may contain pathogens or other harmful substances. The LTK focuses on promoting best practices and ensuring that LTK dispensers have the knowledge and tools to manage infectious waste safely and responsibly, thereby upholding the right to health and a safe learning environment while protecting fellow workers, pupils and the wider community.

Bio-waste is solid or liquid waste generated from medical activities and it is suspected to contain infectious material and harmful to humans/animals because of biological or physical properties.

Bio-wastes include any contaminated materials, for example:

- Blood products/human tissue products
- Used gloves/ cotton wool/alcohol swabs/gauze

- Discarded sharps - needles, razors, lancets, scalpels
- Used packaging which may contain traces of blood

At LTK site, three categories of waste are generated. These categories are:

- Sharps (lancets)- should be disposed into a sharps' container.
- Infectious waste (mRDT cassettes, cotton wool with blood)- should be disposed in the infectious bin.
- Non-infectious waste- should be disposed in a non-infectious bin.

Waste disposal at LTK school will adopt IMCI protocol for waste management.

2.6.4 Treatment of Uncomplicated Malaria

Proper history and physical examination are important in the management of malaria. For uncomplicated malaria, treatment should only be given to those patients who test positive. MoHS recommends the use of multiple first-line (MFT) in the treatment of uncomplicated malaria. Currently, DP and LA are part of MFT in Malawi. The clinical objectives of treating uncomplicated malaria are to cure the infection as rapidly as possible and prevent progression to severe disease. 'Cure' is defined as elimination of all parasites from the body. The public health objectives are to prevent onward transmission of the infection to others and to prevent the emergence and spread of resistance to antimalarial drugs. All complicated cases (refer to danger signs in LTK manual) should be referred to the nearest facility using the recommended referral form and in collaboration with the parents/ guardians.

2.6.4.1 First–line Treatment

Artemisinin based Combination Therapy

Artemisinin based Combination Therapy [ACT] is a combination of rapidly acting artemisinin derivative with a longer acting drug [more slowly eliminated partner drug]. The artemisinin component rapidly clears parasites from the blood [reducing parasite numbers by a factor of 48-hr asexual cycle] and is also active against the sexual stages of parasite that mediate onward transmission to mosquitoes. The longer acting partner drug clears the remaining parasites and provides protection against resistance to artemisinin derivatives. Partner drugs with longer elimination half-life also provide a period of post treatment prophylaxis.

Dihydroartemisinin-Piperaquine (DP)

DP is one of the two first line treatments for uncomplicated malaria in Malawi. The dosing regimen currently recommended by the manufacturer provides adequate exposure to piperaquine and excellent cure rates (>95%), except in children < 5 years, who have 3 times risk of treatment failure because of lower plasma piperaquine concentrations. Children weighing < 25kg should receive at least 2.5 mg/kg dihydroartemisinin and 20 mg/kg piperaquine to achieve the same exposure as persons > 25kg. DP should be given daily for three days.

For learners who test negative for malaria with mRDT, LTK dispensers should refer the learner to the nearest health facility for proper management.

When severe malaria is suspected, LTK dispensers should refer the learner to the nearest health facility immediately.

If symptoms of malaria persist within 4 to 14 days after taking LA, LTK dispensers should refer the learner to the nearest health facility for further management. Similarly, if symptoms persist within 4 to 28 days after taking DP, LTK dispensers should refer the learner to the nearest health facility for further management. Additionally, LTK provider should observe the learner on any adverse effect after taking medication. In cases of any adverse reactions detected, the learner should immediately be referred for further management at the health facility. In these cases, mRDT should not be repeated. Referrals should be made with consideration of biological differences among learners such as age, sex, and individual health status to ensure equitable, timely, and appropriate care, thereby safeguarding every child's right to health

2.7 Management of other conditions in LTK

2.7.1 Diarrhoea

Diarrhoea is when there are 3 or more loose or watery stools in a 24-hour period. Frequent passing of normal, formed stools is not diarrhoea.

A learner with diarrhoea should be given Oral Rehydration Salts (ORS) solution that has been prepared by the LTK dispenser before referral to the nearest health facility

For both dysentery (bloody diarrhoea) and cholera (diarrhoeal disease manifested by sudden onset of severe diarrhoea that may be accompanied by vomiting as well); give the patient ORS and refer to the nearest health facility staff immediately.

2.7.2 Red Eye

Red eye refers to redness of the eye, or pus discharge or swollen sticky eyes. LTK dispensers should refer the patient to the nearest health facility.

2.7.3 Traumatic Wounds

Traumatic wounds are injuries to the skin and underlying tissues caused by external forces, ranging from minor cuts and scrapes to severe injuries including burns. LTK dispensers should control the bleeding (if any), provide pain relief and refer to the nearest health facility.

2.7.4 Nosebleeds

A nosebleed is the loss of blood from the nose. LTK dispensers should provide first aid. If bleeding persists, refer to the nearest health facility.

2.7.5 Skin rash

A skin rash is a change in the appearance, colour, or texture of the skin. It can be a localized area of redness, bumps, itching, or swelling, or it can affect the entire skin. The LTK dispenser should refer all learners with skin rash.

2.7.6 General Pains

These include headache, abdominal pains, toothache and earache. For headache and abdominal pains, LTK dispensers should provide pain relief. If the pain persists after 24 hours, the learner should be referred to the nearest health facility. For toothache and earache, LTK dispensers should provide pain relief and refer the learner to the nearest health facility immediately.

2.8 Rationale of LTK by school teachers

In Malawi Community Health refers to the basic package of preventive, promotive, curative, rehabilitative and surveillance health services delivered in rural and urban communities with the participation of people who live there. This package of services consists of the community components of the Essential Health Package (EHP), as defined by the Health Sector Strategic Plan (HSSP) 3.

LTK is a community-based intervention well aligned with the community health strategy in both preventive and curative health services. It emphasizes the national health policy objective "to improve service delivery ensuring universal health coverage of essential health care services with particular attention to the vulnerable population." School going children are part of the most vulnerable population and are thus prioritized in this intervention to ensure equitable and gender-responsive access to care. .

The national school health and nutrition policy ensures that learners maintain good health at school through targeted interventions including malaria treatment. A study by KUHeS in Zomba (Mathanga et al, 2015) found that the prevalence of malaria among the school going children was at 60%. Despite these high prevalence rates, children living in hard-to-reach areas remain underserved, with limited access to health services due to long distances to formal health facilities and the fact that village clinics run by HSAs primarily serve children under five. The LTK intervention is designed to address these inequities, ensuring equitable and gender-responsive access to health services for school going children including those most marginalized.

School teachers are trustworthy and reliable within their communities. Therefore, utilizing them in this initiative inspires confidence among learners and parents alike. The current policy landscape provides an opportunity for teachers to safely dispense Malaria treatment as LA has been classified as an over-the-counter drug by the Pharmacy and medicines Regulatory authority. WHO guidelines recognise MRDT as a simple to perform and interpret test that requires limited training and can be operated at a community level. The readily available infrastructure enables the provision of LTK service within the safe and secure premises of the school. This approach is cost effective and facilitates equitable access to timely treatment for learners including girls and boys, and those from marginalized or hard-to-reach households, advancing their right to health and reducing gender and socio-economic barriers in malaria response. Building on the existing School Health and Nutrition policy, this programme being a school-based health initiative will adopt the use of school health and nutrition parental consent form which will be administered to every parent with a child in an LTK implementation school to express their acceptance of their children to access LTK services.

The LTK box is a first aid box, similar to that used by Disease Control and Surveillance Assistants (DCSAs) in the communities. It has two padlocks on the front, which are to remain locked at all times, unless a trained LTK dispenser is administering treatment to a learner. The kit should have a two-lock system, whereby a set of keys for one lock should be kept by the school administration and the other set should be kept by the LTK dispenser.

The kit should be opened in the presence of both. Only trained LTK dispensers should have access to the keys and become accountable for all the supplies in the kit.

2.9.0 Eligibility Criteria

2.9.1 Selection of Districts and Schools

LTK will be delivered through public primary schools located in rural and hard to reach areas. The MOH through the NMCP will select implementation districts based on malaria burden stratification with priority given to those experiencing high burden transmission. This approach ensures geographical equity by directing resources and services to underserved regions where the need is greatest, reducing disparities in access to timely malaria treatment among school-going children. The selection of schools for LTK implementation shall be the mandate of the District Health Management Team in liaison with the District Education Office. The selection process shall take into account the following eligibility criteria:

- Health facilities within the district with high malaria transmission burden
- Health facility catchment areas or T/As with high malaria burden
- Schools within the catchment area of health facilities with high malaria burden and located in hard-to-reach areas.

Hard to reach areas (HRA) are defined as schools situated more than 5km from a nearest health facility, or in locations where there are physical barriers such as impassable rivers, inadequate road infrastructure or challenging terrain significantly limit access to health services.

2.9.2 Selection of Dispensers for LTK Implementation

Any school selected for implementation of LTK shall select at least four (4) teachers as LTK dispensers, ensuring gender balance (two males and two females) and actively promoting the inclusion of teachers with disabilities. This approach reinforces equity,

inclusivity, and representation in the delivery of school-based health services. Selection of these LTK dispensers shall consider the following criteria:

- Qualified teachers.
- Reliable teachers with a consideration to the four sections of primary school i.e., p-grade, infant, junior and senior.
- Age of not more than 55 years
- Commitment by the head teacher and PEA/QAO not to transfer LTK provider from the school for a period of not less than 3 years after training
- Inclusion of at least one teacher with a disability (where feasible)
- Gender balance across all school sections

2.10 Protocol for introducing LTK into a district

Before introducing LTK into a district, normal district entry procedures shall be followed. The NMCP in coordination with MOEST shall pay a courtesy call to the Director of Health and Sanitation Services (DHSS) and Director of Education and Sports (DES), before meeting the DHMT of the selected district to brief them on the plan to introduce LTK in the district. The national team, together with the DHSS and DES will then meet the District Education Technical Working Group before meeting the District Executive Committee (DEC). After the DEC meeting, the District Council Health and Education Service committees will be oriented on the plan to introduce LTK. The Area Development Committee of the selected schools will also be met to sensitise them on the proposed LTK intervention.

2.11.0 Training and Delivery

Based on malaria data from District Health Information System 2 (DHIS2), a health facility with a high malaria burden shall be identified. Schools under the identified facility shall be targeted for LTK training. A minimum of 4 teachers should be identified per school with equal representation on gender, of whom one of them should come from the school administration. Only qualified teachers who are trustworthy, aged not more than 55 years, and committed to serve at the same school for at least three years are eligible for LTK training. The training will run for a total of seven days. Five days for theory and classroom practice and two days for clinical practice at a health facility.

The training venue should be located near the health facility to facilitate clinical practice. The training should be delivered by a qualified professional who has completed the LTK training-of-trainers course. At the district level, a pool of certified facilitators will have to be maintained, from which trainers for any session will be drawn. In addition, participants who were involved in the development of the national LTK Operational Guide shall be national trainers. For quality assurance, every training shall consist of two national trainers. Each session shall have a ratio of one trainer to four participants (teachers) in order to provide enough attention to participants. A class shall have a maximum of 28 participants. Teachers shall attend the training for a total of 7 days while health centre staff, namely; facility in-charge, pharmacy technician/assistant, laboratory technician/assistant, senior disease control and surveillance assistant also known as SHSA and data clerk, and from education, primary education advisor (PEA) and the Chief Education Officer shall all attend the training for three days only. The training consists of theory and practical sessions. At the end of the LTK providers training, the teachers shall be provided with the

following equipment for each school to aid the teachers in their operation: 1) Medicine box (similar to the standard of the HSAs for the integrated community case management (iCCM) 2) two pails with taps 3) two digital thermometers 4) Five plastic cups 5) One bathroom weighing scale and 6) One push bike to ease transportation for drugs and supplies ordering from their nearest health facility. Each school shall also be provided with various M&E tools including LTK treatment registers, drug and supplies ordering and monthly reporting forms.

This Guide shall be used alongside job aids. Assessment of learning including knowledge, skills and attitudes will be conducted through written pre-test and post-test, practical assessment, problem solving case studies and attendance of at least 90% of all sessions. The job aids provide step-by-step instructions on using various aspects of the LTK. They include both words and pictures and serve as a quick reference. At the end of the training, each school will receive laminated copies of the job aids, which should be kept in the LTK box. Participants should consult the job aids whenever performing an mRDT. The Guide will be discussed during the training sessions with the facilitator providing guidance to ensure active participation and understanding. Thereafter, the Guide will serve as a reference material for all trained LTK dispensers in the schools, supporting equitable and inclusive use.

2.11.1 Quality Assurance

2.11.1.1 Supportive Supervision and coordination

Supervision will be conducted at national and district level to identify strengths and challenges in programme implementation and service delivery, ensure timely course corrections for sustained programme quality and maintain motivation among service providers. The supervision team will use supervision and

mentorship checklists covering all aspects of service delivery, supply chain management and data management and reporting by the teachers while ensuring that services remain equitable, inclusive, and gender-responsive.

The objective of the national level team is to conduct biannual visits to the districts to support the district level teams. The district level teams will provide quarterly visits to the schools in coordination with the facility team representatives (from facilities within the school vicinity). At the area level, a team of extension workers from health and education sectors will coordinate monthly supportive supervision to the schools implementing the LTK. All supervision activities will ensure equitable, inclusive, and gender-responsive service delivery. The following is supervisory team composition at each level:

National Level:

The following will be responsible for supervision from the national level:

- School Health and Nutrition Department (Ministry of Education, Science and Technology)
- School Health and Nutrition- Nursing Directorate
- Education Planning MEAL Section
- MOHS Planning Department
- CSO member
- National Malaria Control Program; Case Management, Novel Thematic Areas and MEAL
- Health Technical Support Services; Pharmacy, Laboratory
- Central Monitoring and Evaluation Department
- Digital Health Department

- Implementing partners

District Level:

- District Commissioner
- District Health Management Team
- Director of Education and Sports
- Director of Planning and Development
- School Health and Nutrition Office - Health and Education
- Advisory and Inspectorate Section – Basic Education department
- District Malaria Coordinators
- Health Promotion Office
- Pharmacy and Laboratory
- 1 member of Education Technical Working Group

Community Level:

- Primary Education Advisor
- Health Centre In-charge
- Assistant Environmental Health Officer
- Senior Health Surveillance Assistant (Senior Disease Control & Surveillance Assistant)
- Community Health Nurse

2.11.1.2 Monitoring Evaluation Accountability Learning and Reporting

The generation and analysis of quantitative data from LTK implementation schools and qualitative data (from the school learners, LTK teacher dispensers, community and supervisory checklists) enables the LTK programme from the national, district and sub district level to make strategic decisions and more effective

changes to the LTK implementation. MOHS and MOEST MEAL teams will facilitate standardization of indicators guided by LTK registers, with attention to gender and equity to ensure inclusive and equitable monitoring and reporting.

Monthly reporting flow

Routine programme data will be captured through the LTK register during service delivery at the school. The LTK service provider will consolidate a monthly report from the registers and submit the data to the nearest health facility and TDC by the second day of every month for the data to be captured under the facility Malaria Data.

A recommendation is to move from paper-based data documentation to digitalization. To this effect, as services are being provided via the digital platforms, data will be generated and automatically synced into the Digital Health Information System into the LTK module in DHIS2. LTK indicators have been developed and customized into DHIS2 to facilitate separation of LTK data from the routine Malaria Data.

Reporting programme outcomes will be reported through analysis of LTK registers, monthly reports, and comparisons with expected treatment standards. Supervisors at all levels should calculate and review programme indicators monthly, ensuring attention to gender and equity in service delivery and outcomes."

Complaints, Feedback, Redress Mechanism

The complaints, Feedback, and Redress Mechanism for the program will be integrated within the routine government accountability structures. Learners and parents will be sensitized to report complaints and provide feedback through the suggestion boxes, or by reporting to the school head, SHN teachers, mother groups, male

champions or female teacher role models, school management and the Parent Teacher Association. Interface meetings with school learners will be conducted to provide opportunities for child friendly reporting mechanism that respect their rights and ensure confidentiality.

Learning

Review meetings will be conducted to track critical lessons learnt, best practices and challenges which will be used to inform the program during its implementation. The review will not only involve the LTK dispensers and government stakeholders but will also consider perspectives that promote rights and equity in service delivery. Best performing schools will be engaged to mentor low performing schools through school visits, promoting gender-responsive and equitable practices. Field visits will be conducted to offer a learning platform for other relevant stakeholders ensuring inclusivity and equity in knowledge sharing.

2.11.1.3 Coordination

The table below summarises the roles and responsibilities for various departments and offices in the implementation of Learners Treatment Kit.

Level	Department/ Office	Roles and Responsibilities
National	National Malaria Control Program-Ministry of Health and Sanitation - MoHS	Provides strategic direction in the implementation of LTK services with NMCP leading

	Directorate of School Health and Nutrition- MoEST	
	Directorate of Nursing and Midwifery - Community Health Department- MoHS	
	National LTK Core team	Facilitate engagements among the stakeholders and provide a platform for inclusive and improved communication
District	District Commissioner	Controller of all social programs including health service provision
	District Health Management Committee	Overall leadership in implementation of all health programs including LTK
	District Education Office	Overall leadership and quality assurance
	District Core Team	Conduct training of teachers Supportive supervision and mentorship Reporting to relevant offices
Community	PEA, HSA, Health facility in charge, community health nurses	Monitoring and Evaluation of the health aspects of school health programmes

2.12 Supply chain and stock management

The LTK contains medicines and medical supplies, that must be properly handled, monitored, and stored. This is important to protect learners from potential harm and to ensure that the medicines remain safe and effective for their intended purpose. After the training, the targeted schools are provided with a wooden LTK box for storage, requisition issue voucher (RIV), LTK register, monthly reporting forms, and stock cards.

2.12.1 Ordering

The trained teacher in liaison with the community nurse prepare the order using RIV the health facility in charge approves and the pharmacy personnel issues. At school level, one of the trained teachers verifies and signs for the supply collected from the health facility. Each item is recorded on a separate stock card using a red pen indicating date, quantity and source. Each school will have different requirements, but in general, supplies should be collected on a monthly basis.

Do not request quantities exceeding the recommended amounts. For a list of the minimum quantities of medicines, drugs, and supplies to be kept on hand see table 1.

It is the role of the LTK dispensers and the School Management Committee (SMC) to decide when to request for supplies/medicines and the quantities. When the decision has been made, the SMC and LTK dispenser shall order medicines through the Ministry of Health and Sanitation (the nearest government health facility) by submitting the supply order form.

Each health centre has two days per week (morning hours) when the supplies can be collected by the LTK dispenser. When ordering

supplies bring two copies of RIV order forms to the facility, one copy will remain at the health centre.

When collecting supplies, always remember to check the following:

- Condition: Are the supplies damaged?
- Dates: Have the supplies already expired, or do they have less than two months shelf-life remaining?
- Quantity: Have you been given a different quantity of units as compared to what was ordered.
- Temperature and humidity: Some of the LTK supplies are sensitive to extreme temperatures, high humidity, and excessive vibration. They should be transported carefully to minimize the risk of damage and to ensure continuous availability of LTK at schools.

When transporting the LTK supplies, ensure they are protected from heat, moisture, and vibration. Travel early in the morning to avoid high temperatures and sun exposure. Protect the supplies from the rain and direct sunlight. If travelling by bicycle or motorbike, make sure the cartons are securely and safely tied down.

Where access to a health facility is difficult, for example, if the school is far away or the route is impassable during the rainy season, it is recommended to maintain at least a one-month supply of drugs and other supplies. As soon as stocks of any medicine or supply, start running low, they should be restocked. Do not wait until the supply is completely exhausted. Remember, the selection and quantities of the drugs to be ordered will depend on:

- The number of learners you expect to assist over the next month.

- The time it takes to prepare the supply order form and collect the supplies – this may be longer during the rainy season or busy periods during school time (e.g. exam sessions).

2.12.2 Storage

The supplies are stored in a six-component box. The box is stored in a well secured room identified by the school administration. Keep all medicines and medical supplies together in a safe, clean, dry and cool place free from insects and rats. This is especially important as the mRDT and LA are sensitive to heat and humidity. Though the LTK has a secure padlock, it must still be stored in a secure location. It is recommended that the box should be kept in any of the following places:

- Locked storeroom: As long as the dispensers are always guaranteed access to the key for the room the LTK should be stored in such locked rooms when not in use.
- Head teacher's office: Dispensers must ensure that they are able to access the kit whenever they want to use it, even if the head teacher is not within the school.
- Lockable cupboard: In the classroom where it can be safely locked when not in use.

If none of these options are possible for your school, you can consult the LTK task force team. Although the LTK will be stored in a secure location, it is strongly recommended to use a double lock system. In this system, the two sets of keys are kept separately by two different LTK dispensers. This ensures that the box can only be opened when both dispensers are present, enhancing security and preventing misuse of the contents.

On working days, the supply box should be kept in the LTK room. The LTK box must be regularly audited (physical inventory) at the end of the month, after receiving new supplies, at the end of the term, at the beginning of a new term and whenever deemed necessary. Keep supplies of essential medicines for emergency cases readily available at all times; and replace those used up as soon as possible. This is especially important as the mRDT, DP and LA are sensitive to heat and humidity.

2.12.3 Dispensing

The LTK box contains medicines and medical supplies that must be properly handled, monitored and stored. It is recommended to use supplies with the earliest expiry dates (FEFO principle), first to expire first out. This ensures that the medicines remain safe, effective, and do not cause harm to people. All contents must be kept out of reach of children. LTK dispensers must ensure that all precautionary measures are observed at all times by adhering to the following guidelines:

- All medicines should be kept out of reach of learners.
- All medication administration should be supervised to prevent any learner from taking high doses of any medicine, as this can be dangerous.
- Making sure that all medicines are well labelled and that directions for use are kept with each medicine. Keep copies of such directions within the kit.
- Use of job aids is paramount when dispensing any medication

2.12.4 Reporting

All the dispensed supplies must be recorded in the LTK register. Daily consumption should be noted on the stock card using a black or blue pen and both page and monthly summaries should be completed. At

the end of each month, the information on the LTK register is used to compile the monthly report which includes the number of learners reached disaggregated by gender where possible with disability and the supplies used to ensure that reporting reflects equitable service delivery. The monthly report should be submitted to the respective health facility by the second day of the following month. Estimation of mRDT and first line treatment requirements is based on the monthly consumption reports. The quantity of medicines to be kept in the kit will depend on the size of the school and the total number of learners it serves. It is advisable to maintain sufficient medicines to effectively manage all common injuries and illnesses at all times.

2.11.1.3: Community Engagement and Mobilization

To facilitate effective community engagement and promote service utilization, NMCP in collaboration with other partners at central level will collaborate with the district councils and all relevant stakeholders to conduct a series of community engagement activities at different levels targeting different structures both at the schools and the community.

At the schools, the programme will engage various school committees including the Parent Teachers Associations, school management committees, mother groups as a platform to create community awareness and support programme implementation for continued accountability and implementation progress.

At the community level, the programme will deliberately engage traditional and religious leaders as community gate keepers, village health committees, community health action groups as key actors in facilitating community sensitization leveraging on existing community platforms to directly engage with caregivers and school children to explain the purpose and scope of the intervention in

collaboration with the Community Health Workers of the Ministry of Health and Sanitation i.e. Health Surveillance Assistants (HSAs) and other health workers from the Health Facility serving the school communities. At these meetings, it is emphasized to caregivers that the intervention is not a replacement for routine health facility-based care but an additional service that can be accessed during school hours for school children who fall ill whilst attending classes being assisted by teachers trained as LTK providers.

Accountability

Community awareness and sensitization meetings in surrounding communities around schools implementing LTK will be conducted before commencing LTK services focusing on LTK program, teachers as providers of the service and its importance. The School Health and Nutrition Consent form will be used for parents/ guardians to provide consent for their dependants/ wards to access LTK services at the beginning of each academic year or any time within the school calendar.

Table 1: LTK Supplies

S/N	No: Item:	Unit:	Quantity
	General care		
1	Bed sheet	Each	2
2	Gloves	Box	3*50
3	Water cups	Each	3
4	Bin liners	Roll	20
5	Plastic waste bin	Each Pack	1
6	Pill bags		1*1000 pcs

7	Plastic aprons	Roll	1*100 pcs
8	Bench mat	Each	5
	Small injuries		
9	Gauze bandages	Pack	2*12 pcs
10	Cotton wool	Roll	1
11	Gauze squares	Roll	2*100 pcs
12	Elastoplast Sticking plasters	Pack	1*20 pcs
13	Scissors	Each	1
14	Dressing tape	Each	2
15	Antiseptic solution	Bottle	500 ml
16	Vaseline gauze	Packs	1*10 pcs
17	Weak Iodine Solution	Bottle	500 ml
	Aches and pains and eye infection		
18	Paracetamol	Bottle	1*1000
	Diarrhoea		
19	Oral rehydration salts (ORS)	Sachet	100
	Malaria Specific		
20	Rapid diagnostic tests	Boxes	4*25 pcs
21	Methylated spirit	Bottle	500 ml
22	Chlorine	grams	500 g
23	Thermometer	Each	1
24	Sharps box	Each	2
25	Timer	Each	1
26	Weighing scales	Each	1
27	LA (lumefantrine Artemether) – 2x6 tablets	Box	2*30
28	LA (lumefantrine Artemether) – 3x6 tablets	Box	2*30

29	LA (lumefantrine Artemether) – 4x6 tablets	Box	2*30
30	DP (Dihydroartemisinin+Piperaquine) 20 mg/160 mg Dispersible (3 Blister Pack Tablets)	Box	2*25
31	DP (Dihydroartemisinin+Piperaquine) 30 mg/240 mg Dispersible (3 Blister Pack Tablets)	Box	2*25
32	DP(Dihydroartemisinin +Piperaquine) 40 mg/320 mg Non dispersible (6 Blister Pack Tablets) –	Box	2*25
33	DP (Dihydroartemisinin +Piperaquine) 60 mg/480 mg Non dispersible (6 Blister Pack Tablets)	Box	2*25
34	DP (Dihydroartemisinin +Piperaquine) 80 mg/640 mg Non dispersible (6 Blister Pack Tablets)	Box	2*25

3.0 PHARMACOVIGILANCE

3.1 Definition

Pharmacovigilance is the science and activities relating to the detection, assessment, understanding and prevention of adverse effects or any other drug-related problem. A harmful and unintended response to a medicine administered at therapeutic doses is known as Adverse Drug Reaction (ADR). Serious ADRs may be fatal, life-threatening, or cause permanently/significantly disabling. ADRs may also require or prolong hospitalization; result in a congenital anomaly; or necessitate an intervention to prevent permanent impairment or damage. Adverse Drug Reactions (ADRs) may impact

boys and girls, or males and females, differently due to biological and physiological differences, which can affect how medicines are metabolized and the severity or type of reactions experienced

3.2 Importance of reporting adverse drug reactions

- Continuous evaluation of medicine safety and efficacy helps to ensure safer and more effective treatments are available to patients.
- Information about rare but serious adverse reactions, chronic toxicity, medicine interactions and use in special groups (such as children or PWDs) is often incomplete or unavailable.
- Monitoring is required for the effects of accidental use of contraindicated medicines.
- Data derived from the surveillance will be used by the regulatory authorities to make evidence-based decisions on medicine use.
- Early detection of ADRs may prevent or reduce ADR related morbidity and mortality, Treatment of ADR can also impose a significant financial burden.
- Malawi has introduced a number of new medicines for the management of various diseases, including HIV/AIDS, TB and leprosy and malaria for which safety data is insufficient. It is therefore imperative to monitor the safety of these new medicines.

3.3 Reporting adverse drug reactions

Who should report?

Teachers will be capacitated to identify and refer any adverse reactions following administration of drugs in schools. This will then be reported through the routine reporting mechanisms at the nearest health facility.

3.3.1 ADR form to be completed at the health facility:

Suspected ADR Reporting Form

CONFIDENTIAL

Suspected Adverse Reactions to Medicines and Vaccines

A. Patient Details

Surname	First Name(S)	Hospital & Patient Reg. No.
Address:		Date of birth or Age
		☐ ☐ ☐ Sex M or F Weight in Kg _____

B. Medicine History (include OTCs Traditional, herbal & cosmetics); Use Asterisk (*) for the suspect medicine

Name of Medicine(s) or Vaccine	Manufacturer	Batch Number	Route	Dosage	Date started	Date stopped	Reason/Indication for use

Source of suspected medicine(s)

Hospital ☐ Private Pharmacy ☐ Traditional Healer ☐ Vendor or Other (specify) ……

C. Suspected Adverse Event and its outcome

Date of onset of ADR ☐ Day ☐ Month ☐ Year

Description of suspected medicine reaction (use overleaf for additional information)

Outcome of Reaction

Recovered ☐ Hospitalization needed ☐ Recovered with disability ☐ Life Threatening ☐

Congenital abnormality Fatal (date of death) ……..)
Other (specify) ……

D. Other Relevant Medical History

Known allergies (specify) ☐ …….. Tobacco use ☐ Renal disease ☐

other medical conditions (specify)…….. Hepatic disease ☐
Pregnancy Alcohol use

E. Report compiled by

Doctor ☐ Pharmacist ☐ Clinical Officer ☐ Medical Assistant ☐ Nurse ☐

Other (Specify) ……

Name……Address…… Phone ……

Signature…….. Date……..

F. Notes to the Reporter of ADR

1. *ADR reporting is very critical for a well-managed Medicine supply system and in particular for the promotion of Safe use of medicines. All reporters must actively participate in this scheme*
2. *All medicines suspected to cause ADR must be reported (medicines, vaccines and other Biological, Medical devises and traditional herbal remedies*
3. *Identities of Patients and Reporter will remain strictly confidential and cannot be used in a court of law for whatever reasons*
4. *Completed forms should be forwarded without delay.*

Remember: your correctly completed Form may make a difference is somebody's well-being to day

G. Dispatch of completed Form: address

PHARMACY AND MEDICINES REGULATORY AUTHORITY

PHARMACOVIGILANCE DESK OFFICER (PDO)

PO BOX 30241 LILONGWE 3

Fax: 01 755 204 Phone: 01 752 652 E-mail: admin@pmra.malawi.net

APPENDIX 1: CONSENT FORM

A. STUDENT INFORMATION

Learner's Full Name: _____

Sex:

Learner's Date of Birth:

Class: _____

School Name: _____

Zone:

District:

B. PARENT/GUARDIAN INFORMATION

Parent/Guardian Name(s): _____

Relationship to Student: _____

Phone Number(s): _____

Email Address: _____

Physical address:

Emergency contact information for two people

Name:

Phone number:

Physical address:

Name:

Phone number:

Physical address**:**

C. HEALTH INFORMATION

Known Allergies: _____

Medical Conditions: _____

Medication: _____

D. CONSENT STATEMENT

I hereby grant permission for my child to receive health and nutrition services provided by the school and its partners. I understand that participation is voluntary, and I can withdraw my consent at any time by providing written notice to the school.

School health and nutrition services

- Health education: Yes [ ] No [ ]
- Routine care and first aid: yes [ ] No [ ]
- Health screenings: yes [ ] No [ ]
- Mental and behavioral health assessment: Yes [ ] No [ ]
- Medication administration: Yes [ ] No [ ]

- Immunizations: yes [ ] No [ ]
- Nutrition services e.g. Deworming, Vit A, IFA supplementation: yes [ ] No [ ]
- Counselling services: Yes [ ] No [ ]
- Treatment of Malaria and other minor ailments Yes [ ] No [ ]

E. EMERGENCY MEDICAL CARE

In case of an emergency, I authorize the school to seek medical attention for my child.

F. AUTHORIZATION FOR SHARING INFORMATION

I authorize the school to share necessary medical information with relevant parties to ensure my child's health well-being.

I can be reached at […… *Phone Number*] or [……... *Email Address*] for any further clarification or to discuss my child's participation.

I acknowledge that I have read and understood the terms of this consent

Signature of Parent/Guardian: _____

Date: _____

APPENDIX 2: LTK REFERRAL FORM

LTK REFERRAL FORM

Date: _____ School name: _____

Zone: _____District: _____

Learner's name: _____

Age: _____ Sex: _____ Std: _____

Address:

_____

_____

Health facility referred to:

_____

URGENT REFERRAL DUE TO DANGER SIGN?	YES NO

Reason for referral:

_____

_____

PRE-REFERRAL MEDICINE (FIRST AID) GIVEN

Medicine		Quantity	Strength
LA	YES NO		
DP	YES NO		
Paracetamol	YES NO		
ORS	YES NO		

Referred by: _____ Position: _____

Signature: _____.

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HEALTH FACILITY FEEDBACK FORM (please, return this part to the school)

Date: _____ H/Facility name: _____

District: _____

HEALTH FACILITY FEEDBACK FORM (please, return this part to the school)

Date: _____ H/Facility name: _____

District: _____

Learner's name: _____Age: _____

Sex: _____ Std: _____

Referred from (school):

_____

Diagnosis / problems identified:

_____

_____

_____

_____

_____

Treatment given:

_____

_____

_____

_____

Treated by: _____Position: _____

Signature: _____