SCHOOL HEALTH PROGRAM: MALARIA AWARENESS AND ACTION

Manual for Malaria Education Program Development and Implementation

ADD LOGOS

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# LIST OF ACRONYMS

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>ACT</td>
<td>Artemisinin-based Combination Therapy</td>
</tr>
<tr>
<td>GOU</td>
<td>Government of Uganda</td>
</tr>
<tr>
<td>HA</td>
<td>Health Assistant</td>
</tr>
<tr>
<td>IPTp</td>
<td>Intermittent Preventive Treatment of Malaria in Pregnancy</td>
</tr>
<tr>
<td>IRS</td>
<td>Indoor Residual Spraying</td>
</tr>
<tr>
<td>LLIN</td>
<td>Long Lasting Insecticide-treated Net</td>
</tr>
<tr>
<td>MOH</td>
<td>Ministry of Health</td>
</tr>
<tr>
<td>RDT</td>
<td>Rapid Diagnostic Test</td>
</tr>
<tr>
<td>SMP</td>
<td>Stop Malaria Project</td>
</tr>
<tr>
<td>VHT</td>
<td>Village Health Team</td>
</tr>
</tbody>
</table>
I. INTRODUCTION

1. Program Background

From 2008 through 2013, the Stop Malaria Project (SMP) supported national activities in Uganda to reduce the morbidity and mortality caused by malaria. The SMP approach included a community mobilization program based on malaria education in schools, health facilities, and among community groups. The school health component uses malaria education in primary schools to build competence among pupils, teachers and school management to reduce malaria in their communities. Through this manual, the Stop Malaria Project looks to sustain its school education approach by assisting schools in developing and implementing malaria education programs.

SMP’s use of primary schools as a conduit for malaria awareness and action in the community is based on the methodology of *children as change agents*. Children are powerful carriers of messages taught in schools. They openly share material with their families, peers, and the surrounding community. Consequently, when malaria education is included in the school curriculum, the malaria messages permeate the community by way of communication from pupils.

The approach makes use of these communication lines to introduce three key malaria messages (see “Malaria Background” section) into the households through pupils at school. Once spread by the pupils, the messages are intended to promote health behaviors at the household level, thereby decreasing the malaria presence in the community.

This manual is intended for use by schools to establish and sustain a comprehensive malaria education program. In this manual you will find the following information:

- Background on malaria in Uganda and the MOH’s three key messages for malaria control,

- Guidelines for initiating the program with the head teacher, school management committee, and school staff, and

- Suggested small group, school-wide and community level activities for implementing and sustaining malaria education.

SMP’s target is to eliminate malaria in Uganda through an integrated approach, including this school-based program. By adopting this method in your own school, you will be joining the cadre of school officials who provide this health service to their communities and their country.
2. Testimonials

These testimonials are from people who have implemented the program in their own schools. They will give you a better understanding of what the program can accomplish and how malaria education can change lives.

Adam Jamila, Health Assistant in Soroti District:

“After beginning the program in schools last year, children are now aware of malaria and have mastered the messages.”

Gorretti Nabawesi, P6, of Huntington Primary School in Mukono District:

“When [Health Assistant] Mr. Kasozi taught us a poem on malaria and its effects, it touched me and I realized that back at home we weren’t doing enough to prevent ourselves from malaria.”

Ezama Luiji, headmaster of Ndandamwre Primary School in Buliisa District:

“A student’s father thanked me for talking about malaria prevention in school. That is how I discovered that the student had been bringing the message home. The girl also talked to a lot of the people in the community, and the father is telling others to use nets.”
II. GETTING STARTED

The process of developing and implementing the malaria education program in your school is described below with attention to the roles of the head teacher, supporting staff, and pupils.

Figure 1 Work Plan Developed in Nakatunya Primary School in Soroti

1. Head Teacher Role

The motivation for the malaria education program should come from the head teacher and school management committee. Collectively, they should read the manual to ensure that they:

- Recognize the importance of malaria awareness and action in the school and community,
- Understand the strategy of working with children to be agents of change in the household, and
- Are prepared to integrate the malaria education program into the existing school education structure.
When the school directors have elected to initiate the program, the head teacher will take a management role to consist of:

- Meeting with all staff to introduce the malaria program and convey the importance of strengthening malaria education,
- Reassuring staff that program activities do not increase teacher responsibilities because malaria education is already included in the science curriculum,
- Selecting a patron or matron for the malaria club,
- Collaborating with or establishing the malaria club,
- Developing a work plan to launch program, and
- Supervising program activities and encourage all teachers to be continually involved in the program.

2. Establish a School Health Club

A school health club is one of the best mechanisms through which the malaria program functions in schools. The school health club provides leadership for the program to be planned and run in a cohesive way. The malaria program can be implemented through a school club in one of two ways:

1. *Integrated into an existing club.* If a school health club or malaria club already exists in the school, the malaria program can be integrated into its existing activities and responsibilities.

2. *Establish a new club.* If a school health club or malaria club does not already exist, one can be established. Generally, the most effective malaria programs operate through a malaria club dedicated to malaria teaching and learning.

3. Malaria Club Patron/Matron Role

The school staff should work together to select a club patron or matron from among the school's science teachers. The malaria club matron/patron will be responsible for heading the club, planning activities, coordinating with the head teacher, and advocating for program facilitation from outside sources. The head teacher should coordinate with the club’s matron/patron to establish the club and recruit members.
4. **Identify Community Resources**

Your community contains are likely to have people and their resources that can provide support to the malaria education program. The head teacher and malaria club patron/matron should identify possible resources and build relationships. Resources’ that may be available include:

a. **Health Assistants.** Health Assistants (HAs) are sub-county level health officials with a background in malaria and extensive experience working on health and sanitation education in primary schools. The HAs can support the program by meeting with the malaria club, giving education sessions and facilitating joint activities with the community.

b. **Village Health Teams.** Village Health team (VHT) members are community-based health workers with a background in malaria who can assist with malaria education sessions and targeted household visits as described in the ‘Monitoring of Activities’ section.

c. **Religious Organizations.** Religious organizations such as churches may provide opportunities for the pupils to meet with community members to discuss malaria.

d. **Health Facilities.** Health workers can provide opportunities for pupils to visit health facilities to learn about malaria from hands-on experience as well as perhaps being willing to be a guest speaker at the school.

e. **Local Organizations.** There may be organizations such as Stop Malaria Project that are working in your area and could provide educational material and other support.

f. **Pharmacists and People Selling Malaria Products.** There may be people in your community who are selling LLINs, RDTs, ACTs and other malaria products. They may be willing to be guest speakers and do demonstrations.
III. How to use this manual

The manual was developed to help you at each step of the cycle of assessing needs, planning, implementing and monitoring your program. This is a similar process with teaching. You have to find out what the students know and do not know (assess needs) so that you can plan your lesson. After the lesson you need to see if the lessons worked to improve the student’s understanding (monitoring and evaluating) so you know what the next steps should be.

This section gives an overview of this process. The next section of the manual provides detailed information split into lessons plans for your easy reference. The following section provides information about suggested activities that can be used to teach the content in the lesson plans. The final section provides suggestions about how you can monitor your activities and evaluate whether or not they have been successful.

1. Assess Needs
As a school you likely have a good idea of the problem. Maybe you have students out of class because of being sick with malaria. Or maybe there are many misconceptions in the school community. As a School Health Club you may be able to decide on what the biggest problems are in terms of malaria. Then, you will be able to identify the objectives for your program.

The overall objective should be a statement like:
- To decrease the number of children who miss school because of malaria

The statement is specific and it is measurable. You could calculate how many children miss school because of malaria before you start your program and then again at the end. If you are already tracking causes of student absenteeism that would be easy. If you are not, it might be harder, but you could start.
You may want to have a broad objective such as the one above and then smaller ones:

1. To increase the number of children who sleep under a net
2. To increase the number of children who know that they need to get tested before treating malaria
3. To increase the number of children who get tested for malaria within 24 hours of treatment.

Again, all of these could be measured. However, you might need to do a quick survey. For instance, maybe in assembly you could ask the kids who sleep under a net to put their hands up and you count them. Then, toward the end of the program timeframe, you could do that again. It would not be perfect, but it would give you an idea of whether your program had increased the number of children sleeping under a net.

If you wanted to be even more scientific, you could conduct a household survey where you would go to each household and find out if the children have nets and are sleeping under them. Then you could then do the same survey again. Although this might be a lot of work, it might be an interesting activity in itself for the pupils to help with.

2. Planning
After setting your overarching objectives, the group will select malaria education activities to be conducted and a timeline for implementation. Each objective would require different types of activities. The work plan will be written on a grain sack or blackboard and displayed in the school.

A sample work plan is provided here:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Objectives</th>
<th>Target Group</th>
<th>Date</th>
<th>Location</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drama skit</td>
<td>Create awareness of malaria prevention</td>
<td>Whole school</td>
<td>Monday</td>
<td>Assembly</td>
<td>Completed</td>
</tr>
<tr>
<td>Poems</td>
<td>Learn key malaria messages</td>
<td>Class members</td>
<td>Wednesday</td>
<td>Classes</td>
<td>Completed</td>
</tr>
<tr>
<td>Debate</td>
<td>Clarify malaria myths and misconceptions</td>
<td>Whole school</td>
<td>Thursday</td>
<td>Classes</td>
<td></td>
</tr>
</tbody>
</table>
3. Implementing

The rest of this manual provides information and suggested activities for teachers and schools to employ in the program.

The “Malaria Background” section of the manual provides background information to guide these activities. The program is designed for the content of the activities to reflect SMP’s three key messages and the malaria topic areas found in the “Malaria Background” section.

Head teachers should encourage all participating staff to read this section to ensure they have a thorough understanding of malaria, the most effective prevention and treatment options, and SMP’s three key messages. By following this approach, the program activities will reflect the most useful and up to date malaria information in Uganda, thereby maximizing the success of the program in changing attitudes and behaviors in the pupils and your community.

The content is split into ‘lesson plans’. You will need to decide how to teach the content, but each ‘lesson plan’ has a specific set of important information.

4. Record Keeping and Monitoring

Good recordkeeping is crucial to its success and sustainability. Records and are evidence that the program exists, activities are implemented on a regular basis, and the program has succeeded in achieving its goals. This type of evidence is necessary to advocate for funding, resources, and facilitation from the district and other programs and donors.

Monitoring of the program should occur alongside activity implementation. Successful monitoring can be accomplished through three processes: recordkeeping, self-evaluation, and household visits. These will be described in detail in the “Monitoring” section later in the manual.

The head teacher should keep the school management committee apprised of the program activities on a regular basis. She/He can coordinate with the malaria club matron/patron and school staff to report activity records and monitoring results to the school management committee. By making the management committee aware of the program activities and successes, the committee can advocate on behalf of the school for the resources and funding needed to support and sustain the program.
IV. MALARIA BACKGROUND

In this section, you will find background information on malaria in Uganda for schools. Teachers should carefully review this information for use in their malaria lesson plans. All of the malaria messages and topic areas covered in this section can be reviewed with pupils using the suggested activities in the next section. The program centers on SMP’s three key messages:

1. Consistent use of Long Lasting Insecticide Treated Nets (LLINs) in households,
2. Early testing and treatment seeking behavior, and

These messages were chosen by SMP because they target the most vulnerable populations (children under five and pregnant women) and use evidence-based interventions that have been proven effective in highly endemic areas such as Uganda. Because SMP’s approach centered on these three key messages, other activities – such as clearing the bush and IRS – are not included in this manual. The additional malaria background information in this section provides the biological and medical context from which SMP’s three key messages are drawn. Knowledge of this background information is necessary to fully comprehend the significance and use of the key messages.

What do SMP’s three key messages really mean?

LLIN use

When LLINs are used correctly by every member of the family, every night of the year, they are the cheapest and most effective way to prevent malaria.

Early testing and treatment seeking behavior

For treatment to be most effective, it must be administered early in the illness. When a person of any age shows symptoms of malaria, he/she should seek a test for malaria at a health center, clinic, pharmacy or through a VHT, and if positive, should seek treatment from a health facility right away. Children are especially vulnerable to malaria and should seek testing and treatment within 24 hours of the onset of the fever.

IPTp

Pregnant women are especially vulnerable to malaria, which can be severe and have bad consequences for the mother and unborn baby. Pregnant women, even if healthy, should get two doses of SP/Fansidar during pregnancy to prevent malaria infection.
Lesson 1: Malaria Infection and Transmission

Malaria is a life threatening disease. In Uganda, 320 people die of malaria every day. While malaria affects all age groups, pregnant women and children are the most vulnerable because they are the greatest risk of infection and severe disease.

Malaria caused by a parasite called *Plasmodium falciparum*. It is transmitted to people by the bite of the female Anopheles mosquito. These mosquitoes bite at night, usually between 10 pm and 5 am. They do not make noise.

Malaria is not contagious. You cannot get malaria through contact with an infected person. You can only get malaria from the bite of an infected mosquito.

"The Basic Life Cycle of a Malaria Infection" (Replace with SMP diagram)

Source: http://rbm.who.int/cmc_upload/0/000/015/372/RBMInfosheet_1.htm
Lesson 2: Symptoms of Malaria

It is important to recognize the symptoms of malaria so that sick people can go for treatment immediately. Malaria can be managed if it is recognized early, but may cause serious disease and death if not treated quickly.

What are the most common signs and symptoms of malaria?

- Feelings weak and dizzy
- High fever
- Failure to eat or drink; children refuse to breastfeed
- Abdominal pain
- Headaches

- A bitter taste in the mouth
- Feeling weak in the joints
- Nausea and sometimes vomiting
- Diarrhea or generally loose stool

Severe malaria also has the following signs and symptoms:

- Convulsions
- Not able to eat/drink or breastfeed for children
- Continuous vomiting

- Difficulty breathing
- Very pale tongue and eyes (severe anemia)
- Sunken eyes (dehydration)
Lesson 3: Prevention

Everybody in Uganda can do their part to prevent malaria. Use of a Long Lasting Insecticide Treated Net (LLIN) and Intermittent Preventive Treatment of malaria during pregnancy (IPTp) are simple steps that each person can take to help protect themselves against malaria.

**LLINs**
Sleeping under an LLIN every night is the cheapest and most effective way to prevent malaria. **It is cheaper to prevent malaria than treat it.**

**How do LLINs prevent malaria?**
- An LLIN is a net that acts as a barrier between mosquitoes and the person under the net, stopping mosquitoes from reaching the person and biting.
- LLINs contain very low amounts of insecticides that kill mosquitoes but do not harm people, including babies and children.

**Who should sleep under an LLIN?**
- **Everyone** should sleep under a net to protect against malaria.
- It is especially important that children under 5, pregnant women, and people living with HIV/AIDS sleep under an LLIN since they are most likely to get malaria.

**How can I get an LLIN?**
- LLINs can be bought in shops and supermarkets.
- LLINs cost about 10,000-15,000 Ush. Although this may sound like a lot, the cost of malaria treatment may be 18,000 Ush plus the cost of transport to the health facility and work missed from being sick or taking care of someone who is sick.

**IPTp**
Pregnant women have a high risk of getting malaria and can have malaria parasites without showing any symptoms. There are medicines to prevent malaria in pregnancy that protect the woman and unborn child. This medicine is SP/Fansidar and its uptake by pregnant women is called intermittent preventive treatment of malaria during pregnancy, or IPTp.

**At least two doses of IPTp are given during pregnancy:**
- **Dose 1** is given between the 4th and 6th months of pregnancy
- **Dose 2** is given between the 7th and 8th months of pregnancy

IPTp is only given at a health facility and is observed by a health professional. Pregnant women should go for 4 antenatal visits starting early in the pregnancy to maintain a healthy pregnancy and receive the doses of IPTp.
Lesson 4: Net Use, Care, and Repair

Use of Long Lasting Insecticide Treated Nets (LLINs) is the cheapest and most effective way to prevent malaria. Although using the LLIN is simple, there are steps that should be taken to care for the net and ensure its effectiveness over time.

LLIN Use

- LLINs are most effective at preventing malaria when used correctly every night.
- **Hang your net properly.** Nets come in many shapes and sizes, so the way the net is hung should be customized to fit the room arrangement. Use the loops on the net to hang it from sticks attached to the corners of the bed or hung from walls or ceiling using nails and strings.
- Lower the LLIN to cover the users every night. **Tuck the edges under the mattress or sleeping mat** so no mosquitoes can sneak in.
- **Tie up the net in the daytime** to prevent it from being snagged and torn.
- **Sleep under the net every night of the year.**
LLIN Care and Repair
LLINs are most effective when they are well maintained. The net fabric can get dirty, tear, or burn just like clothes. Maintaining the net fabric is easy, just follow these steps:

1. **Wash your LLIN when it is dirty.** Only use soap and water to avoid washing out the insecticide.

2. After washing, lay your net flat in a shaded area to dry. **Do not place the net in direct sunlight** or hang it off a line.

3. If holes appear, you can sew the net as you would any other fabric. Make sure to sew small holes so they do not get larger and make the net unusable.

4. **Avoid closeness to open fires** such as candles. While the net will not burn quickly, it can still catch fire.

Quick Fact: **LLINs can last up to 4 years if you wash them 5 times per year.**

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**Sleep Under Your Net Every Night!**

- Hang the net over your sleeping place.
- Tuck in your net properly before you sleep.
- Tie up your net during the day to avoid damage.
- Care for your net. Sew up any holes.

“One for every two.” Stop malaria in your community and save lives!
Lesson 5: Diagnosis and Treatment

A person with symptoms of malaria should **seek testing and treatment from a health facility within 24 hours.** Early testing and treatment prevents severe malaria and death. It is important to be sure that you have malaria by getting tested for malaria before taking any treatment. By testing for malaria and making sure that you have it will ensure that you are treating the right illness. Then, getting treated from a health facility—not a local pharmacy or herbal remedy—is important for both diagnosis and proper treatment.

**Diagnosis**

Proof of the malaria parasites in a person’s body can *only* be established through a blood test. At a health facility, pharmacy or by a member of the Village Health Team (VHT) may be able to conduct a Rapid Diagnostic Test (RDT). At the health facility you could be tested with a **Rapid Diagnostic Test (RDT)** or with a **microscope.**
**Why is diagnosis of malaria important?**
The symptoms of malaria can be symptoms of other diseases too. Only laboratory tests can correctly diagnose symptoms as malaria. This ensures that a person with symptoms of malaria gets the correct treatment.

**Treatment**

The Ministry of Health approved treatment for uncomplicated malaria is ACTs (artemisinin combination therapy), such as Coartem. The directions for the medicine must be followed, including taking the right doses at the right times and completing the entire course.

**Why is correct treatment of malaria important?**

- **Rapid treatment of uncomplicated malaria prevents progression to severe malaria.** Sick individuals should **seek treatment within 24 hours of onset of symptoms.**

- **Malaria can be especially serious for pregnant women and their unborn baby. Malaria can cause abortion, death of the unborn child, premature delivery, and low birth weight.** Seeking treatment within 24 hours of onset of symptoms is extremely important for pregnant women so that they may be treated quickly to prevent malaria complications.

- **Chloroquine is no longer effective** against the malaria parasite. Other therapies such as herbal remedies will not cure malaria and use could lead to severe malaria. ACTs, such as Coartem, are the approved treatment of malaria in Uganda.

- **Adherence** to the treatment dosage and course is extremely important. If the dose is not completed, the medicine may stop working, the malaria can return, and the parasite may develop **resistance** to the medicine. **Even if you are feeling better before you have finished the course, still take all doses of the medication.**

- If a person has **severe malaria,** they must be treated at a health facility to prevent serious complications or death.
Lesson 6: Caring for a Fever at Home

What is a fever or hot body?
- A fever is when the body temperature goes up and the baby feels hot. This is the body’s response to an infection or other problem. Children age 5 and under must go to a health facility within 24 hours of the fever starting.

What are the causes of fever?
- A fever can be a sign of many different diseases that affect children such as pneumonia, malaria, measles, meningitis, flu, diarrhoea, ear infection, skin infection, HIV/AIDS or others
- Sometimes a fever is caused by a virus or illness that cannot be treated with medicine. Once a health worker has checked the child and decided that the fever is not malaria or other serious disease, you may be sent home and you can care for the baby or child with a fever at home.

How can someone with a fever at home once they have been sent home from a health facility? (refer to illustrations)
1. Remove excess clothing from the baby or child
2. Mop the child’s body with a slightly wet cloth or sponge (room temperature water)
3. Baby should be breastfed as often as the baby wants, or if the baby is older than 6 months or no longer breastfeeding, encourage the child to drink clean water from a clean cup as often as possible, or to drink fluids, such as water and juice.
4. If the baby or child gets worse or shows danger signs, go back to the health facility right away.
Lesson 7: Myths and Misconceptions
People hold a range of misconceptions about malaria. The following facts clarify the common misconceptions about malaria in Uganda.

<table>
<thead>
<tr>
<th>Myth</th>
<th>Fact</th>
</tr>
</thead>
<tbody>
<tr>
<td>I can get malaria by eating mangoes or walking in the rain.</td>
<td>Only the bite of an infected Anopheles mosquito can cause malaria.</td>
</tr>
<tr>
<td>I can cure malaria by using local herbal remedies or Chloroquine.</td>
<td>The only approved treatment for malaria in Uganda is ACTs such as Coartem. Chloroquine and herbal remedies will not cure malaria.</td>
</tr>
<tr>
<td>My baby can get sick from the insecticide in an LLIN.</td>
<td>Although the insecticide in an LLIN can kill mosquitoes, the amount used is so small that it is safe for pregnant women and children. Even if a baby puts the net in her mouth she will not get sick.</td>
</tr>
<tr>
<td>I hear that LLINs cause discomfort for my neighbors.</td>
<td>It has not been shown that LLINs cause side effects or increase the temperature inside the net. You can hang the net outside in the shade for a day prior to use to air out the extra insecticide.</td>
</tr>
<tr>
<td>The IPTp medicine, SP/Fansidar, makes you sick.</td>
<td>Taking medication on an empty stomach can make someone feel sick, but this is easily fixed by eating something before taking the medicine. When going for ANC visits, a pregnant woman should eat something or bring something to eat.</td>
</tr>
<tr>
<td>I only need to sleep under a net during the rainy season.</td>
<td>Malaria is transmitted all year long in Uganda. It is important to use the LLIN every night of the year to protect yourself from malaria.</td>
</tr>
<tr>
<td>Men should sleep under the LLIN because they are the head of the household.</td>
<td>Children under five and pregnant women are the most vulnerable to malaria. While they should be given the priority, everyone in the household should sleep under an LLIN.</td>
</tr>
<tr>
<td>I hear mosquitoes buzzing even when I use an LLIN. The net does not work.</td>
<td>The Anopheles mosquito that causes malaria does not make noise. The LLIN is designed to kill Anopheles mosquitoes but not others. Although other mosquitoes are a nuisance, they will not give you malaria. The LLIN will still keep other mosquitoes from reaching you when you sleep.</td>
</tr>
<tr>
<td>LLINs are too expensive and my family cannot afford them.</td>
<td>The cost of an LLIN is cheaper than the treatment for malaria. If you avoid even one bout of malaria, the net pays for itself. Save money every week or start a community savings group to help pay for nets for everyone in the family.</td>
</tr>
</tbody>
</table>
There is nothing I can do to prevent my family for myself from getting malaria.

All fevers are caused by malaria.

Everyone can do something to prevent malaria! Use an LLIN every night and take IPTp if you are a pregnant woman. These methods have been proven to prevent malaria in highly endemic countries like Uganda.

A fever can be a sign of many different diseases that affect children such as pneumonia, malaria, measles, meningitis, flu, diarrhoea, ear infection, skin infection, HIV/AIDS or others. Only a test can let you know for sure that the fever is caused by malaria.

Quick Facts

☑ Malaria is caused by a parasite that is spread by the female Anopheles mosquito

☑ Malaria treatment can be expensive. Prevention is cheaper!

☑ Know the symptoms of malaria to get treatment sooner

☑ Prevention efforts are simple and include using LLINs and care and repair of nets

☑ Pregnant women especially vulnerable to malaria infection. Prevention efforts should begin with pregnant women going for ANC and sleeping under a LLIN

☑ Children under 5 are especially vulnerable to malaria infection. Prevention efforts should begin with children under 5 sleeping under a LLIN and going to a health facility within 24 hours of a fever starting.

☑ Sick individuals should seek testing and treatment from a health facility within 24 hours of the onset of symptoms of malaria.

☑ Diagnosis of malaria is crucial for ensuring the patient receives the correct treatment

☑ Adherence to the drug treatment regimen is crucial for ensuring the patient is cured of malaria and drug resistance does not occur
V. SUGGESTED ACTIVITIES

Program implementers have suggested using these activities as age-appropriate methods for sharing the three key messages and supporting background information on malaria. The activities can be modified to accommodate any of the key messages or malaria topics provided in the “Malaria Background” section. It is important to use a variety of activities over the course of the program to ensure all messages and pertinent information is repeated and learned by the pupils. This list represents the activities that have worked well in existing malaria programs in schools.

The activities have been broken down into two types:

1. **Classroom activities.** The classroom activities section provides malaria activities that can be conducted in the classroom, malaria club, or other small group.

2. **School-wide activities.** The school-wide activities include the entire school to ensure that the malaria messages reach beyond the malaria club to all pupils.

3. **Community activities.** By working with the local council, schools may be able to find ways that they could take the malaria messages beyond the school into the community.
1. Classroom or Small Group Activities

- **Quizzes**
  Teachers or pupils could create short quizzes to test knowledge before or after the lesson.

- **Dramas**
  Pupils can be encouraged to create drama to represent certain concepts, these could even become a competition.

- **Poems/Songs**
  Pupils can be encouraged to create their own poems or songs on a particular topic.

- **Malaria classroom corners**
  Areas of the classroom where posters, messages, and drawings can be hung for viewing and discussion.

- **Drawings/written messages/Posters**
  Pupils can be encouraged to create their own drawings, messages or posters on a particular topic.

- **Debates**
  Teachers and pupils could organize debates where students have to choose one side of the debate and argue using correct information.

- **Demonstrations**
  Demonstrate correct use of LLINs or of how an RDT works.

- **Guest Speakers**
  There are many people in the community who could come as guest speakers to the class on a topic such as someone who sells nets, a pharmacist who does RDTs, a community health worker or even community member who can give a testimony about malaria.

- **Talking compounds**
  Short messages posted in the schoolyard to get discussions started.

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*Figure 2 Poem Posted in the Malaria Corner of a Classroom*
Case Studies
Short stories used to illustrate the consequences of malaria in the community and encourage discussion of malaria prevention and treatment. Example case studies are listed here:

**Case Study 1: Effects of Malaria on Pupils**

Mary is a primary seven pupil of ................. Primary school. She comes from ................. village. Last term Mary missed school for 2 weeks because she was suffering from malaria. While she was away, Ms. Kakembo taught about fractions in mathematics. Mary could not understand when she came back to school. During her mock exams, Mary could only answer 4 out of 100 questions in mathematics, so she failed the mock exams.

**Questions:**
1. What is the cause of malaria?
2. How could Mary have prevented getting malaria?
3. What effect did malaria have on Mary’s class work?

**Case Study 2: Early Treatment Seeking Behavior**

Paul felt ill and did not tell his mother. He went to school for two days and the illness grew worse. His mother took him to the dispensary and the nurse advised her to take him to the big hospital in town because he had got severe malaria. When they reached the big hospital the doctor admitted Paul for one week. When he returned home he was very weak and could not go to school for another one week. He was unable to do the tests well and so he did not get a good report.
Questions:
1. Why do you think Paul became very sick?
2. What should he have done to avoid the illness?
3. What should he have done when he felt weak?
4. What can prevent young boys and girls from getting severe malaria?

Case Study 3: Consistent use of LLINs

Jane is a bright student who performs well in class and never misses any lessons. Her teachers are very happy with her marks and have made her the head girl of the school. Jane sleeps under a mosquito net every night. The net was bought for her by her parents who heard of the importance of the mosquito net on a radio program. Jane and her parents use the mosquito net every night.

Questions:
1. What is the importance of using the LLIN every night?
2. How can we protect our nets from damage?
3. Which people are most affected by malaria?
2. School-wide Activities

- **Assemblies**
  Malaria activities can be incorporated into weekly assemblies. For example, malaria club can perform drama skits, songs, and poems for the student body.

- **Malaria day**
  The head teacher can declare periodic “Malaria Days” in which all teachers dedicate time to teaching malaria and the school holds assemblies about malaria. Teachers and pupils alike can wear reminders of malaria, such as malaria t-shirts or pins or even something readily available that could become a malaria symbol in your school.

- **Exchange visits with other schools**
  The head teacher and malaria club patron can collaborate with the local Health Assistant to schedule a visit with a nearby school. The visit can be spent sharing malaria messages and useful practices through assemblies and competitions. This activity can be done with the entire school community or simply the malaria club or head teacher depending on the resources available.

- **Community sensitization**
  Students can bring malaria messages to the community through variety of efforts, such as posting drawings in communal buildings (ex. churches) and leading discussions in crowded areas (ex. markets).

- **Painting the school exterior**
  Pupils can compose their own malaria messages and paint them on the exterior of the school.

- **Share messages with parents**
  The head teacher can use PTA meetings, AGM meetings, and end of year parties to reinforce the malaria messages with parents and update them on the progress of the program.

- **Competitions**
  Schools can organize competitions such as posters, drama, poems, written work or others to reward some of the best submissions.

- **Present to school management committee**
  Pupils can present their malaria drama skits, poems, songs and drawings during meetings of the school management committee to keep the committee aware of the program and its progress.
3. Community-wide activities

- **Community Sensitization**
  Students can bring malaria messages to the community through a variety of efforts, such as posting drawings in communal buildings (for example churches) and leading discussions in crowded areas (for example markets).

- **Competitions**
  Competitions for music, dance, drama, posters, and speeches could be organized between other nearby schools.

- **Public Debates**
  With the nearby health workers, pupils might be able to organize public debates on malaria topics.

- **Community activities**
  You may be able to organize activities about malaria during other previously organized community activities such as health talks, community dialogues or even community meetings.

- **Household visits**
  Pupils may wish to talk to community members by visiting their houses and doing LLIN net demonstrations or talking about specific topics.

- **Participate in national health activities**
  The recent national net distribution could give the students a chance to offer to help people hang nets properly.

- **Share messages with neighbors**
  Pupils can visit their neighbors to teach them about malaria through discussion, posters and other creative approaches.

- **Community Events**
  Schools and pupils could organize community events such as football matches, bicycle races, etc. and then when the people are gathered could use the opportunity to talk to people about malaria.
VI. MONITORING FOR SUSTAINABILITY

Consistent monitoring ensures that the program activities are implemented as planned and helps program planners uncover any problems in the implementation. Use of monitoring results can help pinpoint the cause of these problems, which can be resolved. Monitoring of the program is particularly important for program sustainability. The school management committee can use these results to demonstrate to the district and other donors that the program has taken place and that it has been successful in achieving its objectives, which can help you attain additional resources, funding, and facilitation needed to sustain the program over the long term. The monitoring plan for the malaria education program takes the form of three activities:

1. **Recordkeeping.** Good records of program activities are essential for monitoring the program and can also be used for advocacy purposes.

2. **Self-Evaluation.** Simple self-evaluation activities performed by the teachers can help them demonstrate what has been learned in the classroom and what malaria lessons need additional emphasis.

1. **Recordkeeping**

Keeping current and accurate records of the malaria activities conducted through the program is important for monitoring and advocacy purposes. Recordkeeping is useful to ensure that activities are implemented as planned, with respect to the timeline, activity type, malaria topic areas, and pupils reached. The head teacher should check the records periodically to ensure that activities are implemented as planned and records are kept according to the recommendations below. Any gaps should be addressed immediately. The head teacher should also share the records periodically with the school management committee for use in advocacy efforts. Records can be kept in a notebook according to the sample guidelines here:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Dates</th>
<th># Pupils Reached</th>
<th>Objectives</th>
<th>Comments</th>
<th>Signature of Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drama Skit</td>
<td>Monday, 29 Oct. 2012</td>
<td>200 female, 200 male</td>
<td>Create awareness of malaria prevention</td>
<td>Completed. Audience demonstrated comprehension of message</td>
<td>Malaria club patron</td>
</tr>
<tr>
<td>Poems</td>
<td>Wed., 7 Nov. 2012</td>
<td>100 female, 100 male</td>
<td>Learn key malaria messages</td>
<td>Completed. Reached all pupils.</td>
<td>Teachers</td>
</tr>
</tbody>
</table>
2. Self-Evaluation

Teachers and pupils will need to self-evaluate to ensure activities are implemented as planned. Evaluation of teachers is a way to follow up with the pupils about the malaria information they have learned. This is then compared with the malaria background information provided in the manual for gaps. If there are topic areas or key messages that were not taken up by the students, these should be emphasized more in the classroom in future activities.

a. **Know/Want/Learn Model**

The Know/Want/Learn model allows teachers and pupils to evaluate how well they learned the malaria messages and topics over the whole program. This activity centers around the chart shown below, which can be posted in the classroom. Before starting the program activities, the pupils should collectively brainstorm everything they already know about malaria and write the results in the “Know” column on the chart. Based on these results, the teacher should lead the class in brainstorming what they may want to learn from the program, and complete the “Want” column of the chart. The chart can then be put away.

At the end of the term/program, the chart can come back out and the pupils should brainstorm what they learned about malaria and write the results in the “Learn” column. Together the teacher and pupils can compare these results to the “Want” column and address any evident gaps during future activities. The teacher should also compare the results of the “Learn” column with the key messages and malaria topic areas found in the manual. If any messages are not found in the “Learn” column, they should be emphasized in future sessions to ensure the pupils retain the information.

<table>
<thead>
<tr>
<th>Know</th>
<th>Want</th>
<th>Learn</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malaria causes a lot of disease and death in Uganda.</td>
<td>How to reduce malaria.</td>
<td>Malaria can be prevented by using LLINs every night and taking two doses of IPTp during pregnancy.</td>
</tr>
</tbody>
</table>

b. **Quizzes**

Following program implementation, teachers can quiz the pupils periodically about the three key messages and topic areas found in the manuals. Any gaps in knowledge should be noted and those topic areas emphasized in future malaria activities.
VII. Evaluating through a Household Survey

1. Survey Purpose

The malaria program intends to spread messages taught in schools to the households by way of educating the pupils. In turn, the pupils act as agents of change, sharing the malaria messages with family members. Change is then seen at the household level: family members have increased knowledge of malaria and act on this knowledge by increasing LLIN use, early treatment seeking behavior, and IPTp uptake. As a result of community-wide changes in these behaviors, the malaria prevalence in the community should decrease.

In order to determine if the program is producing the intended changes, the family members of pupils participating in the program can be surveyed. The survey, found on the next page, measures the malaria knowledge the pupils share with their families, and the malaria behaviors that change with increased knowledge. The local Health Assistants (HAs) will help to implement this household survey. HAs already visit schools and households for various health campaigns, and this malaria program falls under their scope of work. The head teacher and malaria club patron should coordinate with the HAs to schedule times to visit households of school pupils on a regular basis to complete the survey tool. The HAs can help analyze the results, per the guidelines below.

If the surveys indicate that knowledge of the key messages and malaria prevention behaviors are high, this indicates success of the program. These results can be used by the school management committee to advocate for resources to sustain the program. If the surveys indicate gaps in knowledge or expected behavior, then the HA, head teacher, and malaria club patron can collaborate to determine and address any weaknesses in the program implementation, as described below. In this way, the household visits represent another method of monitoring the program activities to determine successes and areas of improvement.
2. Survey Tool for Households

**Knowledge Section**

**LLINS:**

1. Do you know what an LLIN (mosquito net) is?  
   Yes  No

2. Why are LLINs important? ________________________________

3. How do LLINs prevent malaria? ________________________________

4. How often should LLINs be used? ________________________________

5. Who should use LLINs? ________________________________

**Early treatment seeking behavior:**

6. What are the symptoms of malaria? ________________________________

7. What should you do if you or a family member shows symptoms of malaria?  
   ________________________________

8. Why is early treatment seeking behavior important?  
   ________________________________

9. Why is it important to go to a health facility for malaria testing and treatment?  
   ________________________________

**IPTp:**

10. Do you know what IPTp (or SP/Fansidar) is?  
   Yes  No

11. Why should pregnant women take SP/Fansidar? ________________________________

12. When should pregnant women take SP/Fansidar? ________________________________

13. How is SP/Fansidar given to pregnant women? ________________________________

14. Where did you get your information about malaria? (Check all that apply)
   - Radio programs
   - Child brought home messages from school
   - Health workers
   - Village health team (VHTs)
   - Community group
   - Other ________________________________
**Behavior Section**

**LLINs:**

*For questions 15-17, the Health Assistant should observe the net situation in the household:*

15. Are there any nets in the household?  
   - Yes  
   - No

16. Are the nets hung up properly?  
   - Yes  
   - No  
   - N/A (no nets)

17. Do the nets appear to be cared for properly? (ex. holes sewn closed, net tied up during day)  
   - Yes  
   - No  
   - N/A (no nets)

*The following questions should be answered by the interviewee:*

18. How many family members are in the house? ___________

19. How many LLINs are in the house? ________________

20. Are the LLINs used every night?  
   - Yes  
   - No

21. Are all pregnant women and children under five using an LLIN?  
   - Yes  
   - No  
   - N/A  
   (no pregnant women or children under five)

22. If LLINs are not being used, what are the reasons?  
   ____________________________________________________________

23. How can these reasons be addressed in the future?  
   ____________________________________________________________

**Early treatment seeking behavior:**

24. Think back to the last time a family member showed symptoms of malaria. Did that person seek treatment from a health facility within 24 hours of onset of symptoms?  
   - Yes  
   - No

25. If the family member did not seek treatment at a health facility, what were the reasons?  
   ____________________________________________________________

26. How can these reasons be addressed in the future?  
   ____________________________________________________________
**IPTp:**

*The following questions should address the most recent pregnancy in the family or any current pregnancies in the family:*

27. Did the woman who was most recently pregnant receive IPTp (SP/Fansidar)?
   - Yes
   - No

28. Did the woman receive both doses of the IPTp?
   - Yes
   - No

29. If the woman did not receive *both* doses of IPTp, what were the reasons?

________________________________________________________________________________________________________

30. How can these reasons be addressed in the future?

________________________________________________________________________________________________________
3. Guide for Analysis of Survey Tool

The purpose of this tool is to assess the extent to which the three key messages taught in the schools are reaching the pupils’ households and changing behavior. The **knowledge section** examines whether the background information on SMP’s three key messages are reaching the intended audience. The **behavior section** examines whether household members adopt the intended behaviors.

**Analysis of results of knowledge section:**
The interviewer should note whether the answers are similar to the information provided in the “Malaria Background” section of the manual. Any gaps in knowledge between the information provided in the manual and survey answers should be noted and addressed in a collaborative effort of the Health Assistant, head teacher, and staff. Gaps in knowledge can be emphasized as areas of improvement in future classroom malaria education activities.

**Analysis of results of behavior section:**
Any negative answers to the Yes/No questions suggest that the intended behaviors are not being adopted. The “No” answers indicate gaps in the program objectives and should be noted and addressed in a collaborative effort of the Health Assistant, head teacher, and staff. In future malaria education sessions, teachers should emphasize the importance of the prevention behaviors and that pupils should further encourage family members to adopt these behaviors.

Question 14 specifically examines whether the pupils are sharing the key messages learned in school with their households. If the interviewee does not indicate that they learned information about malaria from their child, then this indicates a major gap in the program objectives. In future sessions, teachers should emphasize the importance of pupils bringing messages home and sharing the malaria information with their family members.