

GHANA MALARIA

CASE MANAGEMENT Newsletter



December, 2016 Edition

Message from the Programme Manager, NMCP

Improving Malaria Case Management in Ghana

Ghana has made significant strides in ensuring effective management of malaria.

These achievements have been made possible with efforts from all our malaria implementing partners like the U.S. President's Malaria Initiative (PMI), the Global Fund, DFID, WHO and UNICEF.

MalariaCare, a PMI-funded project through USAID, has contributed to the provision of quality malaria diagnosis in all ten regions as well as treatment in five regions. We all know malaria is a preventable and treatable disease. The primary objective of treatment is to ensure a rapid and complete elimination of the Plasmodium parasite from the patient's blood in order to prevent progression of uncomplicated malaria to severe disease or death and to chronic infection that leads to malaria related anaemia. From a public health perspective, diagnosis and treatment are meant to reduce transmission of the infection to others by reducing the infectious reservoir and by preventing the emergence and spread of resistance to antimalarial medicines. We at NMCP are therefore very pleased to be



*Dr. Constance Bart-Plange,
Programme Manager, NMCP, Ghana*

working hand in hand with MalariaCare since 2012 as one of the partners to improve on malaria case management. We have observed the improvement of health care workers' knowledge on the importance of diagnostic testing in all our facilities. There has been substantial increase in all patients suspected malaria being confirmed with either microscopy or rapid diagnostic test (RDT) before antimalarial treatment is started. Nationally, Ghana recorded increased testing rate of 73.6 percent in 2015 compared to 38.9 percent in 2012. Proportion of OPD malaria cases treated with artemisinin-based combination therapy (ACT) reduced from 86.3 percent in

Cont. on pg. 2

Maintaining Healthcare Workers' Skills and Knowledge through Quality Assurance Processes



A picture showing a training session for regional and district OTSS supervisors in Kumasi.

MalariaCare's quality assurance (QA) approach is built upon the mechanism of outreach training and supportive supervision (OTSS) which is a reconceptualization of the traditional way of conducting supervision. OTSS is aimed at establishing a model for high-quality care, which is characterized by a comprehensive continuity of care, a focus on attention to providing high-quality patient engagement, and coordination of services either within the same facility or between different facilities.

OTSS aims to strengthen the individual health care worker, the District Health Management Team (DHMT), district supervisory bodies and healthcare systems. Grounded in continuous, data-driven assessment to ensure the effectiveness of support activities, the approach explicitly targets health service delivery challenges. The OTSS process involves the use of standardized checklists, job aids and on-site observation of processes and procedures performed by providers during visits to the facilities.



*Published by MalariaCare in collaboration with
National Malaria Control Programme*

Message from the Programme Manager, ...*Cont. from pg. 1*

2013, to 57.4 percent in 2015. This reduction in the use of ACTs is due to increase in the parasitological diagnosis of suspected malaria cases, therefore reducing irrational use of ACTs. Malaria deaths in health facilities have reduced from 2,799 in all ages in 2012 to 2,133 in 2015. A similar reduction of malaria deaths was recorded in children under five years from 1,129 in 2012 to 1,033 in 2015. The progress has been made possible through the hard work of all implementing partners.

However, our work is far from over. Some regions are still behind in providing the optimum quality of care, with a sizeable percentage of health care providers still requiring training in case management, especially in the prompt and effective management of complications due to severe malaria to reduce malaria deaths, which are still high in some districts. To address these and other challenges, we look forward to continued collaboration with all stakeholders towards achieving our set goal of reducing malaria morbidity and mortality by 75 percent by the year 2020.

Improving Malaria Case Management Using Mobile Technology for OTSS



A clinical OTSS supervisor using an electronic device to administer OTSS checklist and capture data at Sunyani Polyclinic Clinic laboratory

MalariaCare supported the NMCP to conduct OTSS in about 1,600 health facilities in the Ashanti, Brong Ahafo, Eastern, Upper East and Upper West regions. The visits covered 107 districts using GPS-enabled tablets with customized electronic data system (EDS) program to monitor and assess malaria case management capacity. All health workers from the district teams were trained at the regional level to effectively build their capacity on the tablet-based EDS.

District teams visited facilities, provided mentorship and assessed provider performance in malaria

diagnosis and treatment.

Data was entered into the tablet and submitted to the website specifically developed for the EDS. This intervention has significantly improved the accuracy, timeliness, and geographic pinpointing of managing confirmed malaria cases.

Onsite training of healthcare workers in case management during the visits greatly improved diagnostic practices and response to treatment of positive cases. All these activities combined together are to substantially increase the ability of healthcare workers to treat malaria effectively.

Community Health Officers (CHO) Internships - a Program for Improving Management of Febrile Illnesses at the Lower Level of Care

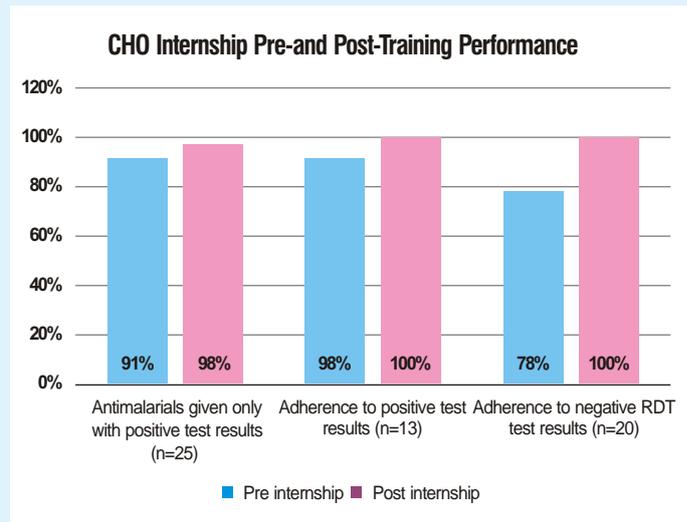
MalariaCare has worked to strengthen healthcare workers' ability to properly identify and treat cases of fever through training, supportive supervision, and other quality assurance mechanisms. The QA internship program is a quality improvement approach, developed to target the cadre of health care workers specifically in low-performing facilities known as Community Health Planning Systems (CHPS) compounds. In managing other causes of febrile illnesses, health care workers at

the lower level of care are faced with challenges in identifying and managing non malaria febrile illnesses due to limited skills and knowledge per their training. In 2015, Ghana's National Malaria Control Program (NMCP) reported a 33 percent test positivity rate for all suspected malaria cases using rapid diagnostic tests (RDT Annual Bulletin 2015). Most often, the CHOs are faced with the challenge on how to manage patients who present with fever but test negative to RDTs. To

ensure rational use of antimalarials in adherence to national protocol, additional skills are required. The CHO internship programme was implemented in selected districts and the outcome was assessed about a year after implementation. The objectives of the CHO internship program is to progressively improve the quality of clinical care and build the capacity of lower level providers to appropriately manage malaria and other febrile illnesses. A total of 56 CHOs/clinical nurses

participated in the five-day residential training programme. The participants were trained on causes of febrile illnesses, diagnosis and treatment, data capture, referral and stock level management. They were also taken through practical sessions, presentations and demonstrations. A total of 27 mentors from district hospitals supported this program. The pre-and post-internship assessment results for the pilot indicate that skills increased from average of 35.5 percent (pre-internship assessment) to an average of 77 percent (post-internship assessment).

A follow-up assessment was conducted for 27 randomly selected CHOs using an assessment guide. Findings showed that 100 percent of CHOs indicated the programme had improved their capacity to diagnose and treat clients with febrile illness. Following the review of 40 client records in the 27 facilities visited, adherence to negative test results increased from 78 percent prior to CHO internship to 100 percent after implementation.



The internship programme was generally seen as beneficial to the staff trained, their colleagues, and their clients through a self-reported assessment.

Proficiency Testing Scheme Pilot in Ashanti Region - an External Quality Assessment (EQA) to Improve Malaria Microscopy in Health Facilities

Proficiency testing (PT) is an external quality assurance (EQA) system in which validated blood films are sent to a laboratory for examination, and feedback is given by supervisors following assessment. PT schemes are a vital component of QA systems medical laboratories, providing an external and objective evaluation of a laboratory's performance over time, identifying problems for improvement, in and providing direct training and educational opportunities to laboratory staff. Consistently good PT performance

provides assurance to clients (patients, doctors, and funders) that routine test results are accurate, reliable, and of high quality.

MalariaCare collaborated with the Clinical Laboratory Unit (CLU) and NMCP to conduct a one-day training session on the PT scheme prior to its pilot in Ashanti region. The participants trained then rolled out the lessons learned from the pilot will be used to guide nationwide implementation of the PT scheme by the CLU. Prior to the lab OTSS visits, PT panels consisting of 10 slides from the

national archive of malaria slides were shipped to each of the 28 selected health facilities. Instructions were provided to the laboratory heads to have laboratory staff read the slides and document findings on the electronically generated answer forms before the arrival of the supervisors. During the OTSS visits, supervisors read the slides by themselves and provided feedback and mentoring to laboratory staff based on the answers they reported. This helped build skills in identifying various species including *Plasmodium malariae*, *P. ovale*, low level parasitaemia and parasite quantification. PT results indicated that 11 out of 27 (41 percent) facilities reached the target of ≥ 80 percent for parasite detection, 4 out of 27 (15 percent) reached the target of ≥ 80 percent for species identification, and 11 out of 27 (40.7 percent) met the target of ≥ 40 percent for parasite quantification.

The PT scheme is the way forward to maintain skills set for larger numbers of microscopists in Ghana.



Supervisors at the PTS pilot training in Kumasi



Effective Implementation of OTSS Visits Depends on Committed and Skilled Supervisors: OTSS Refresher Training in Upper West Region



Group picture: Upper West Region OTSS Supervisors, MalariaCare Staff and USAID/PMI Team.

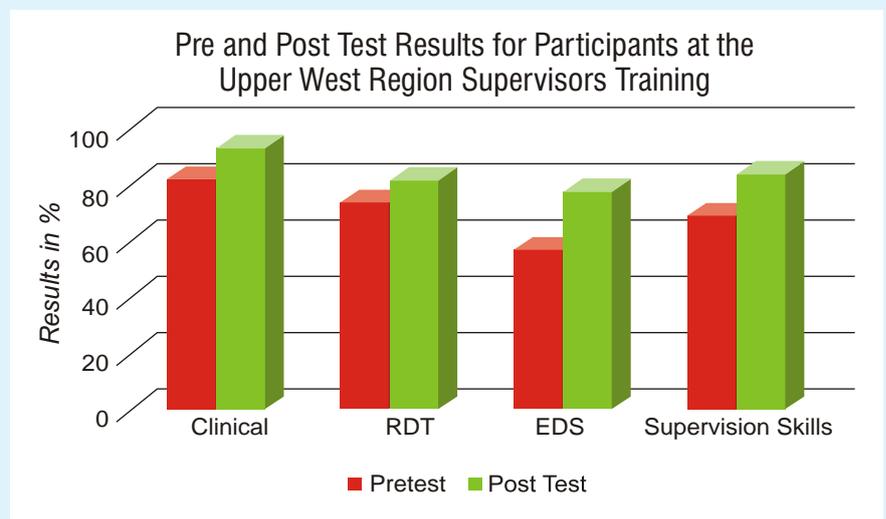
Since 2009 the NMCP has promoted a policy of universal access to malaria diagnostics for all age groups, progressively moving away from clinical diagnosis. In response to this policy shift, the Ghana Health Service (GHS) has focused efforts on improving malaria case management. MalariaCare has collaborated with the NMCP since 2012 to implement OTSS, a decentralised method of supportive supervision that relies on a qualified team of supervisors at the national, regional and district levels. OTSS visits are designed to provide regular support to laboratory and clinical health workers at the point of care. OTSS quality and effectiveness rely on the commitment of skilled supervisors with known competency levels.

Routine training, assessment and monitoring of supervisors' mentoring skills and technical competence are required for effective implementation of OTSS visits. Therefore regular support should be provided to update the

knowledge and skills of these supervisors. A total of 685 supervisors participated in refresher training in malaria case management and supportive supervision in MalariaCare's project year four (PY4).

At the training in Upper West region, representatives from the USAID Ghana mission, led by the Malaria Program Specialist, Mr. Kwame Ankobea, joined the session on the first day and emphasised in his opening remarks that OTSS supervisors training and

visits to health facilities were to help strengthen the health system so that the GHS could sustain the activities. He expressed his satisfaction with the excellent conduct and content of delivery of the training especially, the supportive supervision overview module. He further emphasised the importance of OTSS follow-up reports being made available at the district health administration for monitoring and evaluation purposes.



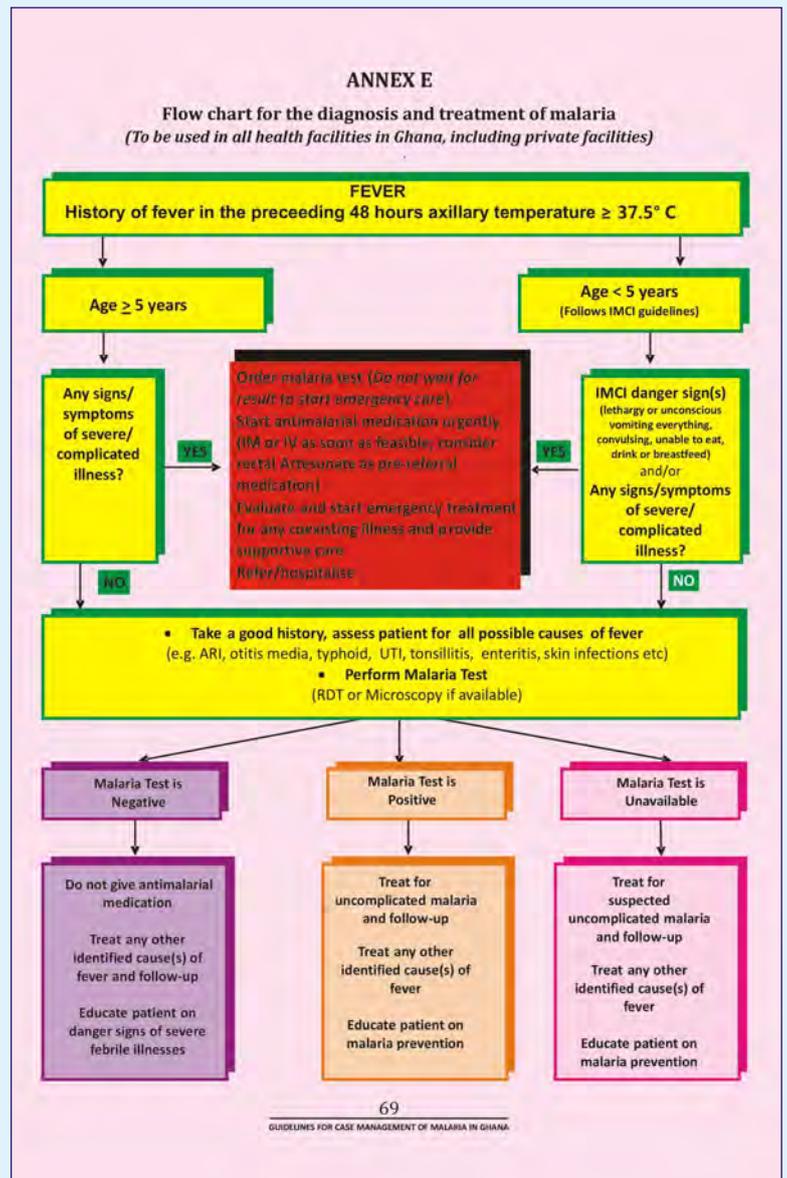
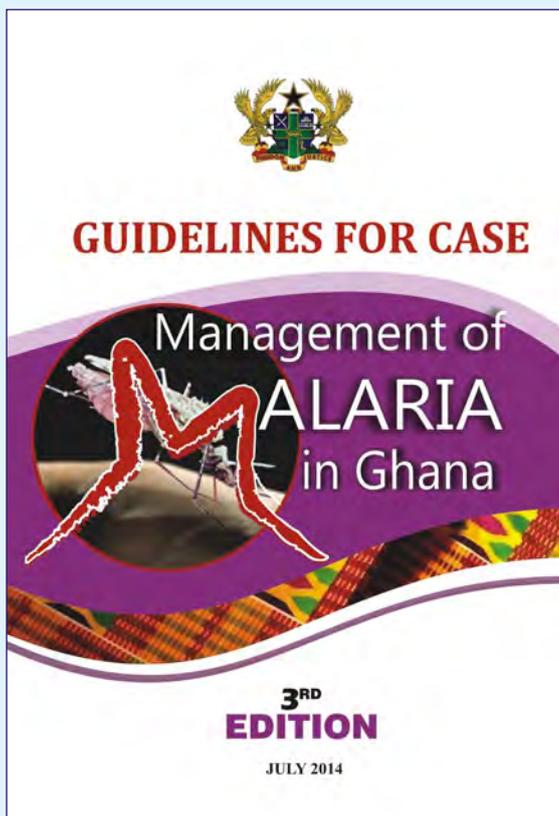


Malaria Case Management App

MalariaCare has published a free malaria case management application. The malaria case management app provides easy, mobile access to malaria case management guidelines, treatment algorithms, and important job aids for healthcare workers in Ghana. The app gives access to a reference library full of important resources to aid in providing the highest quality of care for effective management of malaria cases. The contents can be accessed off line. MalariaCare's new mobile app puts up-to-date malaria case management guideline and protocols right at your fingertips. One can search by topic, bookmark, highlight, annotate, and share with colleagues right from mobile phones and tablets. The app is accessible and can be found in the Google Play Store:

<https://play.google.com/store/apps/details?id=org.path.ghanamcm>

Search for Ghana Malaria Case Management app





Updates on Malaria Case Management in Medical Schools in Ghana

Information on malaria is dynamic and each year graduating medical students are posted into health facilities as practitioners who will manage malaria cases which account for more than 38 percent of the total outpatient department patients seen (Annual report 2015, NMCP). MalariaCare assembled a team of malaria experts to provide two-day training sessions to 256 Lecturers and preceptors from the country's four medical schools in University of Cape Coast, University of Development Studies, University of Science and Technology, and University of Ghana. Participants were taken through scientific evidence that led to the national policy updates in malaria, modules on uncomplicated and complicated malaria, malaria in pregnancy and the use of RDTs. Lecturers shared their appreciation of the current recommendations on confirming all cases through parasitological diagnosis before treatment of malaria. Participants from Komfo Anokye teaching hospital indicated that the training met their expectation and 77 percent indicated that training was applicable to their work. Copies of the presentations were made available to the participants to serve as training materials.

It is expected that medical student graduates will enter practice well equipped with malaria treatment policy updates.



Participants in training session for Lecturers at UCC/Teaching Hospital



Training update session in UCC showing the Dean of Medical School, Prof. Francis Ofei

Frequently Asked Questions About Malaria Rapid Diagnostic Test



1. Q. Why use RDTs?

A. RDT is an alternate way of establishing the diagnosis of malaria infection by detecting specific malaria antigen in the person's blood. Malaria RDTs are the quickest and easiest way to test for malaria and can be used even in remote areas with no microscopy infrastructure.

2. Q. Can I use one RDT cassette on more than one person?

A. No. Each cassette must be used only once. You need a new unopened cassette for each patient.

3. Q. Can I puncture any part of the finger as long as I choose the 4th finger on the less dominant hand?

A. The best place to puncture is on the side of the fingertip, but not close to the nail bed. If there is a reason the 4th finger cannot be used, other fingers may be used, but avoid the thumb.

4. Q. Why do I have to write down the time after adding the last drop of buffer and not after adding the blood?

A. The test only begins to work after recommended drops of buffer is placed in appropriate well after the blood is placed in the sample well. You need to write the time when the last drop of buffer was added and wait for the amount of time recommended by the manufacturer before reading. Reading before the correct amount of time has elapsed may result in an incomplete antigen-antibody reaction, which could provide a false negative test result.

5. Q. How long will results remain visible?

A. Results remain visible for at least an hour, but the RDT results must be read according to the time stated in the manufacturer's instructions leaflet. After several hours, a negative RDT may read as positive and this is a false positive.

6. Q. What if the RDT result is negative but the patient still requests anti-malarial medication?

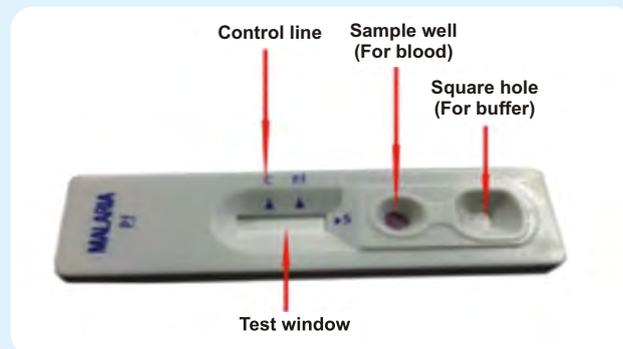
A. A negative result for correctly performed RDT requires investigation for other causes for fever. Antimalarial must be withheld until test results are confirmed positive.

7. Q. What are the limitations of RDT use?

A. RDT cannot be used for patient follow-up or used to determine malaria parasite density.

8. Q. When are RDT results considered invalid?

RDT results are considered invalid when no control band shows up. The test must be repeated and results reported



How To Do The Rapid Test For Malaria



- Collect:
- NEW unopened test packet
 - NEW unopened spirit swab
 - NEW unopened lancet
 - NEW pair of disposable gloves
 - Buffer
 - Timer



disposable gloves



spirit swab



lancet



Timer



Buffer



test packe

READ THESE INSTRUCTIONS CAREFULLY BEFORE YOU BEGIN.

- 1** Check the expiry date on the test packet.

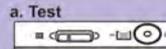


Expiry date

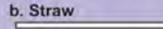
- 2** Put on the gloves. Use new gloves for each patient.



- 3** Open the packet and remove:



a. Test



b. Straw

c. Desiccant sachet



- 4** Write the patient's name on the test.



- 5** Open the alcohol swab, Grasp the 4th finger on the patient's left hand. Clean the finger with the spirit swab. Allow the finger to dry before pricking.



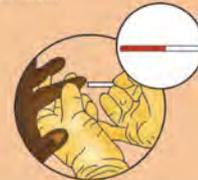
- 6** Open the lancet, Prick patient's finger to get a drop of blood.



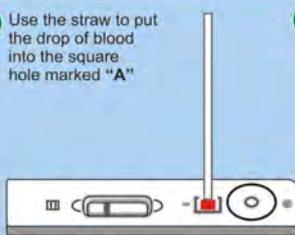
- 7** Discard the lancet in the Sharps Box immediately after pricking finger. Do not set the lancet down before discarding it.



- 8** Use the straw to collect the drop of blood



- 9** Use the straw to put the drop of blood into the square hole marked "A"



- 10** Discard the straw in the Sharps Box



- 11** Put six (6) drops of buffer into the round hole marked "B".



- 12** wait 15 minutes after adding buffer.



POSITIVE

One red line in window "C" AND one red line in window "T" means the patient DOES have falciparum malaria.



The test is POSITIVE even if the red line in window "T" is faint



NEGATIVE

One red line in window "C" and NO LINE in window "T" means the patient DOES NOT have falciparum malaria.



INVALID RESULT

NO LINE in window "C" means the test is damaged.



A line in window "T" and NO LINE in window "C" also means the test is damaged results are INVALID.



if no line appears in the window "C", repeat the test using a NEW unopened test packet and a NEW unopened lancet.

- 15** Dispose of the gloves, spirit swab, desiccants sachet and packaging in a non-sharps waste container



- 16** Record the test results in your CHW register. Dispose of cassette in non-sharps waste container.



NOTE: Each test can be used ONLY ONE TIME. DO not try to use the test more than once.



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The US Agency for International Development (USAID) funded MalariaCare under the terms of Cooperative Agreement No. AID-OAA-A-12-00057. The information provided in this document does not necessarily reflect the views or positions of USAID or the US Government.