

Strengthening and expanding integrated community case management of malaria

Introduction

In most countries with high malaria-associated mortality, facility-based services alone do not provide adequate access to malaria diagnosis and treatment, and most importantly not within the crucial window of 24 hours after the onset of symptoms. Integrated Community Case Management (iCCM) is a strategy that enables assessment, classification, treatment, and referral of certain health conditions in communities—close to the patient. This strategy is being adopted and scaled up in many countries, particularly in sub-Saharan Africa. Supporting countries to introduce, scale up and strengthen the quality of iCCM of malaria is a global priority for malaria control efforts.

This MalariaCare program brief provides an overview of how iCCM can be used to improve case management of malaria and other febrile illnesses at the community level. It is part of MalariaCare’s series of program briefs on strategies for achieving universal diagnosis and treatment of malaria.

Rationale

Correct treatment of pneumonia, diarrhea, and malaria is one of the most powerful interventions for reducing child mortality.¹ However, in most countries with high child mortality rates, facility-



Photo: PATH/Will Boase

based services alone do not provide adequate access to treatment.² Thus, the early use of effective diagnostics and antimalarial medicines close to the home can help reduce the burden of disease in sub-Saharan Africa³, and minimize the life-threatening consequences of treatment delays. The World Health Organization (WHO) and the United Nations Children’s Fund (UNICEF) recommend community

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case management of malaria as an important strategy for improving access to prompt and effective malaria diagnosis and treatment.⁴

Studies have shown that case management of malaria by community health workers (CHWs) using rapid diagnostic tests (RDTs) and Artemisinin-based Combination Therapy (ACT) is feasible⁵, acceptable to communities, and efficient in terms of reducing workload in health facilities by helping to test patients locally so that those who do not have malaria can receive appropriate treatment faster. CHWs are trained to prescribe anti-malarials only to positive cases. Studies show that when trained, CHWs are able to appropriately manage malaria related fever episodes, including referral of severe cases to health facilities when necessary.⁵ Researchers from Ethiopia and Burkina Faso demonstrated that community case management of malaria can reduce overall, and malaria-specific under-five mortality by 40 and 60 percent, respectively, and reduce severe malaria related illness by 53 percent.^{6,7} In addition, a 2014 review of 18 iCCM programs in 12 countries found that the average percentage of children under five with fever that received ACT increased from 24 percent to 45 percent as measured by pre- and post-program household surveys.⁸ In addition, a synthesis of several studies shows that CHWs correctly executed 90–100 percent of steps and correctly interpreted 96–100 percent of tests.⁹ Community acceptance of RDTs by CHWs is high, and an increasing proportion of iCCM programs now include RDTs, or are introducing RDTs.¹⁰

Challenges

Some of the more challenging aspects of case management of malaria include introducing the use of RDTs, and treating cases based on test results (changing long-standing habits of presumptive diagnosis and treatment), ensuring referral of severe malaria cases to appropriate health facilities, and providing supportive supervision to CHWs.

Introducing RDTs

In the past, fever was equated with malaria in many endemic countries, and any person presenting with fever was given anti-malarials. This is called presumptive treatment; and as the burden of malaria decreases due to scaled up implementation

of effective strategies, such as long-lasting bed nets (LLNs) and ACT, it has become clear that continued presumptive treatment would lead to both drug wastage and under-treatment of other febrile illnesses, such as pneumonia. In early 2010, WHO recommended prompt confirmatory diagnosis using microscopy, or RDTs before treatment, for anyone suspected of having malaria. Today, it is only when these diagnostic tools are not available that diagnosis may be made on the basis of symptoms and clinical observation alone.

When introducing RDTs into iCCM programs, it is important to plan for all the changes necessary, including revising case management algorithms, providing training to CHWs, adding RDTs as an additional commodity into supply chains, developing job aids, and ensuring ongoing supportive supervision.

Emergency treatment of severe malaria in the community

CHWs managing malaria cases are expected to refer cases of those thought to have severe malaria to the nearest health facility for treatment with quinine or injectable artesunate. Artesunate is effective, safe, cost-effective, and affordable. If given within the first 24 hours of treatment, a single rectal dose of artesunate is associated with rapid reduction in parasite density in adults and children with moderately severe malaria. However, in many remote and hard-to-reach areas, difficulties with transport delay the transfer of children to health facilities, resulting in unnecessary deaths.

If patients with severe malaria cannot be treated orally, and access to injections will take several hours, a single inexpensive artesunate suppository at the time of referral substantially reduces the risk of death or permanent disability.¹¹ Several countries implementing iCCM are training and equipping CHWs to provide a pre-referral artesunate suppository for severe malaria cases. Such programs need a consistent supply of artesunate suppositories for iCCM to be effective.

Supportive supervision of CHWs

It is important to ensure the quality of services in all health programs. This can be especially challenging for iCCM services because they occur outside of facilities. Supervision is an essential tool in maintaining skills and high performance of CHWs

because they often are trained only for short periods, tend to have fewer skills than other health personnel, and work on their own in rural areas. Identifying appropriate supervisors, ensuring transportation for supervisory visits, establishing appropriate frequency and duration of visits, and documenting visits remain critical.¹²

Successful strategies

The following are case studies of successful strategies used in Africa. National ownership of iCCM programs remains a key component of ensuring effectiveness.

Maintaining quality through program review and clinical mentoring in Ethiopia

Ethiopia has achieved national scale up of iCCM of pneumonia, malaria, diarrhea, and severe acute malnutrition (SAM). Ethiopia’s paid Health Extension Workers (HEWs) complete a six-day iCCM training and then receive follow up visits four to six weeks after initial training to reinforce skills building. Ongoing supervision, mentoring, and follow up support were found to be essential for ensuring quality case management.

The program review and clinical mentoring meeting (PRCMM) is a locally adapted, innovative approach that combines performance review and

clinical mentoring. It engages decision makers and supervisors in understanding the unique challenges and barriers each health post faces, and provides targeted mentoring support. Implementing partners with the primary health care unit (PHCU) conduct the review meeting five to six months after iCCM training and following a post training supervision visit.

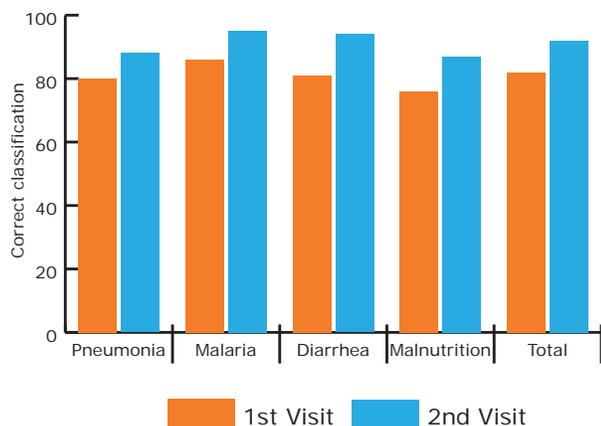
HEWs, the PHCU director, health extension supervisors, the district health manager, and NGO staff participate in the meetings. The main objective is to improve the availability and quality of care, create demand, and employ data for decision making. Meetings are facilitated by iCCM expert trainers and supervisors, with each facilitator supporting a team of four HEWS. This provides an opportunity for self-assessment and learning, as well as facilitator feedback. The key quality indicators are correct case management steps (e.g. classification, treatment, and follow-up).

The second day of the review meeting includes practice with case management, individual feedback, and mentoring at a health center. The meetings also provide an opportunity to review updates in treatment guidelines, and to provide training of supply chain management.

Administrative data has shown that there is an improvement in service uptake and case management quality (see bar charts below).

Quality improvement in correct classification skills following training follow-up and PRCMM

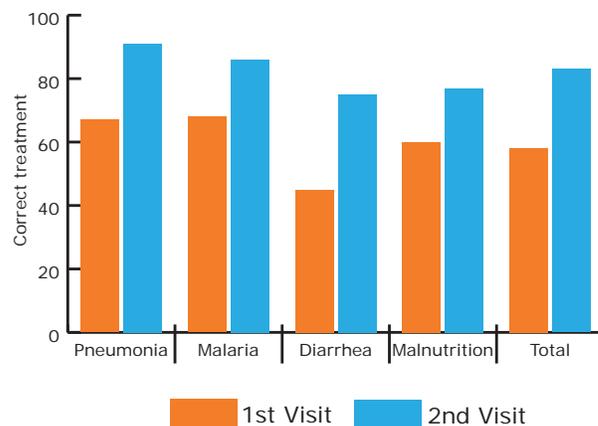
(Amhara, Tigray, Oromia, and SNNPR over 12 months)



Routine data: Correct classification rate for non-severe disease in HPs visited for post training follow-up (First visit, October–December 2011) with PRCMM and regular supportive supervision (Second visit, October–December 2012)–204 HPs.

Quality improvement in HEW case management skills following post training follow-up and PRCMM

(Amhara, Tigray, Oromia, and SNNPR over 12 months)



Correct treatment rate is 204 HPs visited for post training follow up visit, PRCMM in between and regular supportive supervision.

Malawi findings

In 2012, a desk review and baseline data quality assessment (DQA) of the current iCCM M&E system in Malawi revealed a well-defined structure for routine reporting, and high levels of reporting and completeness; however data use was low and often did not reach lower level health facilities.

The TRAction project led by Johns Hopkins University and Save the Children, worked with paid district health staff and partners to develop and pilot a program to improve data interpretation and use at the health worker level. The package included: (1) general training on data management, use and interpretation; (2) refresher training on the routine reporting forms; (3) simple templates for displaying the monthly CCM implementation strength data; (4) provision of calculators to assist with completing monitoring forms; and (5) working with district staff to identify reporting benchmarks and action thresholds.

The package was pilot-tested in two districts of Malawi (Dowa and Kasungu), and an end line evaluation showed improvements in data quality for malaria, with greater consistency between the data that Health Surveillance Assistants (HSAs) were recording in their registers, and what they submitted in their monthly reports. The evaluation also demonstrated that the package was feasible to implement and encouraged data use by HSAs, health facility, and district staff. The MOH has since scaled up the package to 23 of Malawi's 29 districts.

Improving data quality and use at the community level in Malawi

In Malawi, program managers and the Ministry of Health (MOH) rely on timely, reliable, and valid measures of iCCM implementation to identify bottlenecks. However, collecting data from dispersed and hard-to-reach CHWs on a routine basis is a major challenge. The “Implementation Research Embedded in Integrated Community Case Management Program: Improving Data to Improve Programs” Translating Research into Action (TRAction) project, led by John's Hopkins University, and supported by Save the Children, developed and tested an innovation to improve data quality and use for iCCM in Malawi. The main drawbacks of PRCMM are the need for skilled facilitators and labor intensive data collection and analysis. However, if PRCMM is conducted at the PHCU level, and key iCCM indicators are included in the HMIS, facilitators can spend more time providing clinical mentoring support.

Conclusion

In iCCM programs throughout Africa, CHWs who are appropriately trained, supervised, and supported with an uninterrupted supply of medicines and equipment, are identifying and correctly treating

the majority of children with common childhood illnesses, such as malaria. Supporting community level contributions to malaria control programs will lead to increased coverage of key interventions, better reach in remote areas, and increased options for families.

Key resources

For more information on ICCM, please visit CCM Central (www.ccmcentral.com), a website hosted by US Agency for International Development's (USAID) Maternal and Child Survival Project. It offers numerous iCCM resources including tools, reports, presentations, and news updates.

About MalariaCare

MalariaCare is a five-year partnership funded by USAID under the US President's Malaria Initiative (PMI), with the goal of scaling up high-quality diagnosis and case management services for malaria and other febrile (fever-causing) illnesses. MalariaCare is led by PATH and is supported by three other organizations: Medical Care Development International (MCDI), Population Services International (PSI), and Save the Children US (SC US).

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