

THE MANAGER

CASE STUDY FOR TRAINING AND GROUP DISCUSSION

A Malaria Task Force Works to Improve Supply and Demand for Appropriate Antimalarials

Scenario

THREE YEARS AGO, rising resistance to chloroquine and other monotherapy pharmaceuticals for managing malaria led the government of Nyasumu to change the national treatment policy from these therapies to a combination therapy for malaria. For initial treatment of uncomplicated *P. falciparum* malaria, the new treatment guidelines recommended artesunate and sulfadoxine-pyrimethamine. If that treatment failed, they recommended quinine. The government distributed the guidelines to public-sector health facilities throughout Nyasumu and provided training in applying them to half of all public-sector providers.

The Malaria Control Program (MCP) recently learned that malarial morbidity and mortality patterns in the country have changed very little in the past three years. A study revealed that 80% of malaria patients first seek care in the private sector, and 90% of them purchase their antimalarials from private pharmacies and drug shops. The study also found that 75% of providers in both the public and private sectors do not follow the national standard treatment guidelines, and only 10% of patients correctly complete the recommended combination therapy.

A Malaria Task Force met to discuss the study's findings and determine what to do to improve supply and demand for appropriate antimalarials. Task force members include MCP staff, the Director of Health

Services, the directors of the maternal and child health and malaria programs, research scientists, international development agencies, and representatives from the pharmacy board, the pharmaceutical manufacturers' association, and the medical association.

"Since clients are seeking treatment outside the public-sector, I found it disturbing that many private providers don't even know that new guidelines exist!" commented Dr. Muyaa, a scientist on the task force. "The MCP needs to disseminate them more widely and provide incentives to encourage providers to follow them. People will pay more attention if they are rewarded for following them."

"It isn't just providers who need to know about the guidelines," noted Mrs. Kamau, another scientist. "Pharmacies and private laboratories are involved in malaria control, also. The data show that most people buy antimalarials from private pharmacies and informal drug shops. The incidence of drug-resistant malaria will rise if the MCP doesn't take steps to inform the public about the need to go to a trained provider and adhere to the recommended treatment. These data on low adherence are alarming. I think we should ban the sale of antimalarials through private pharmacies and in particular the informal drug shops."

"We do not want to recommend such a drastic step," said Dr. Wambui, the task force leader, quickly cutting off protests from the pharmaceutical repre-

sentatives. “It may make sense to review the licensing requirements for prescribing or dispensing antimalarials, instead. Let’s encourage the MCP to involve the private sector in deliberations on this topic. A strong-arm approach could backfire, I believe. Besides, we need to be partners with the private sector, not adversaries.” Her pharmaceutical colleagues nodded in agreement and sat back again.

“The study showed that younger providers, right out of medical school, tended to be aware of the guidelines and follow them closely,” said Mr. Kiyonga, an MCP staff member. “This tells me that dissemination efforts in medical schools were successful. We should recommend that the MCP continue to provide printed copies of the guidelines for free to medical schools and other provider training programs.”

“It wasn’t just the training they received in class,” said Miss Ethuro, the communications member of the task force. “Younger providers also visited the MCP Web site to learn about upcoming events, keep up with news and data, and download reports. Let’s make sure we commend the MCP on their Web site and highlight its effectiveness in getting out the message.”

“Good point,” noted Dr. Wambui, “but I was disappointed that no outreach or training was done with traditional healers. They could be useful frontline collaborators in the fight against malaria—just as they are for some other health programs where they are part of the education and referral systems. Let’s recommend that the MCP research other health programs to find out what they have done to train and utilize traditional healers as well as informal drug shops.”

“The training curriculum needs to be evaluated,” suggested Dr. Kiplagat, the medical association representative. “If half of public-sector providers received training in the guidelines but only slightly more than 25% followed them, the training program may need to be revised.”

“Providers and patients can’t follow the guidelines if the recommended medicines are neither in stock

at the health center nor available through private pharmacies,” said the Director of Health Services. “Problems may exist with the pharmaceutical and commodity management system.”

“The MCP supervisory system may also be a contributing factor,” said Dr. Wambui. “Let’s recommend further study of the supply system, training program, and supervisory system.”

“It’s possible that the antimalarial packaging is problematic,” suggested a pharmaceutical representative. “Perhaps packaging the combination medicines together in blister packs would help patients to adhere to the recommended treatment.”

“Let’s also investigate those new rapid diagnostic tests,” said Mr. Kiyonga. “The private providers are already using them. If the public-sector providers start using them, they would no longer have to wait for results of laboratory tests.”

“That is worth exploring,” said Dr. Wambui. “You have raised some excellent ideas. Let’s stop the discussion here for today and decide on our next steps.”

Discussion Questions

1. Who are the stakeholders in the Nyasumu malaria control efforts, and what are their roles? What other stakeholders could the Malaria Control Program consider involving?
2. What barriers to malaria control are identified in the case? What do the Malaria Task Force members suggest as underlying causes of different problems? Based on the issue and experience, what other problems might exist?
3. What interventions have been implemented so far? What interventions have Task Force members suggested in the case? Based on the issue and experience, what other interventions would you recommend considering?

QUESTION 1 Who are the stakeholders in the Nyasumu malaria control efforts, and what are their roles? What other stakeholders could the Malaria Control Program consider involving?

The stakeholders in the Nyasumu malaria control efforts and their possible roles include:

- **Malaria Control Program**—coordinates public- and cross-sector efforts, encourages collaboration among sectors, trains providers, publishes and disseminates guidelines, provides information to the general public, and maintains a Web site with current information for providers and others
- **national government**—develops malaria control policy and treatment guidelines
- **Malaria Task Force**—plays an advisory role to the government’s Malaria Control Program and is comprised of MCP staff, the Director of Health Services, directors of the maternal and child health and malaria programs, research scientists, international development agencies, and representatives of the pharmacy board, the pharmaceutical manufacturers’ association, and the medical association
- **public health facilities**—quantify pharmaceutical needs and ensure a supply of necessary pharmaceuticals, ensure that providers follow treatment guidelines
- **medical schools**—train medical students in the new treatment guidelines
- **researchers**—carry out research and analysis to assist the government in developing policy and revising treatment guidelines
- **medical associations**—help disseminate new guidelines, encourage collaboration between the public and private sectors, provide or be a conduit for provider training
- **pharmacy board**—participate in licensing and other policy-level discussions
- **pharmaceutical manufacturers**—manufacture needed antimalarials, follow quality guidelines, bid on government contracts for antimalarials
- **informal drug shops**—sell antimalarials; if they know recommended guidelines, follow them; refer patients to public- or private-sector providers

- **laboratories**—analyze samples so providers can determine the type of parasite causing a patient’s malaria and prescribe appropriately
- **patients**—purchase antimalarials prescribed by their provider and complete recommended treatment
- **donors**—provide funding and/or technical assistance for research, policy development, infrastructure, pharmaceutical and commodity management systems, training, purchase of antimalarials, etc.

Additional stakeholders not mentioned in the case could include representatives from health insurance organizations, major employers, development programs with education and training components, schools of public health, traditional healers, and local nongovernmental organizations (NGOs).

QUESTION 2 What barriers to malaria control are identified in the case? What do the Malaria Task Force members suggest as underlying causes of different problems? Based on the issue and experience, what other problems might exist?

The basic problem in this case is that patterns in malaria morbidity and mortality have changed very little in the country, despite new standard treatment guidelines for malaria recommending an effective combination therapy. Identified barriers include the fact that most providers (in both the public and private sectors) do not follow the recommended treatment guidelines and providers in the private sector do not know about the guidelines. The majority of patients do not adhere to their recommended treatment. As a result, the incidence of drug-resistant malaria is likely to increase.

Possible causes underlying these barriers include:

- Providers in the private sector are unaware of the guidelines; no training or dissemination efforts have been carried out to reach them;
- No efforts have been initiated to involve pharmacies, private laboratories, traditional healers, or informal drug shops in malaria control efforts;
- There have been no efforts to educate the general public about the current treatment guidelines (for first-line treatment of uncomplicated *P. falciparum* malaria, use artesunate and sulfadoxine-pyrimethamine; for second-line treatment, use quinine) and adhering to the recommended treatment;

- The training carried out with public-sector providers does not seem to have had much of an impact on their treatment practices;
- Supplies of recommended first-line and second-line pharmaceuticals may be inadequate;
- A supervisory system does not exist that ensures providers' compliance with the guidelines;
- The antimalarial packaging may be problematic.

The task force may want to learn more by asking:

- How well are the guidelines being distributed? Are they easy for providers to access when needed? Are they written clearly and easy to refer to?
- Do private-sector providers have access to laboratory services? Are they making their diagnoses of malaria on the basis of clinical symptoms alone?
- Does the government provide any oversight of private-sector providers?
- Are the medicines too expensive for patients to purchase in the recommended quantities?
- Are dispensers in the drug shops licensed? If not, are they regulated? Are their activities monitored?
- Do public-sector providers have access to computers so they can visit the MCP Web site?

QUESTION 3 What interventions have been implemented so far? What interventions have Task Force members suggested in the case? Based on the issue and experience, what other interventions would you recommend considering?

Interventions they have implemented to date include:

- changing the national treatment policy to the use of combination therapy for malaria;
- distributing the new treatment guidelines to public-sector health facilities;
- conducting research in order to find out why malarial morbidity and mortality patterns have not improved despite the new policy and guidelines;
- using the new guidelines in medical school programs;
- creating a Malaria Control Program Web site containing the guidelines, information about upcoming events, news, data, and downloadable reports;

- training about 50% of all public-sector providers in the new guidelines (so far).

Task Force members suggest interventions such as disseminating the guidelines more widely and providing incentives to encourage providers to follow the guidelines. They also suggest reviewing licensing requirements for prescribing or dispensing antimalarials and involving the private sector in licensing or regulation deliberations. They want to see outreach to traditional healers and drug shops. They suggest investigating the use of rapid diagnostic tests; evaluating the training program; and studying the pharmaceutical and commodity management system, training program, supervisory system, and packaging of antimalarials. Other interventions could include:

- accrediting drug shops that have been trained in the guidelines;
- communicating the new guidelines to the general public, using radio, television, posters, etc.;
- improving the supervisory and monitoring system to ensure that providers follow the guidelines;
- reviewing and improving the pharmaceutical and commodity management system to ensure antimalarials are consistently available in public-sector facilities;
- providing vouchers or other incentives to help ensure that patients purchase the recommended medicines and adhere to treatment;
- distributing medicines at low cost to indigent caregivers through trained community health workers;
- complementing treatment with preventive measures: supporting insecticide-treated nets and providing intermittent preventive treatment in prenatal clinics.

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MSH Publications
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 165 Allandale Road
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Phone: 617.524.7799
 Fax: 617.524.2825
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