

MSH Final Results Review – Mozambique Malaria

Jennifer Braga-Leonardo

December 13, 2004

This report was made possible through support provided by the US Agency for International Development, Office of Population and Reproductive Health, under the terms of Cooperative Agreement Number HRN-A-00-00-00014-00. The opinions expressed herein are those of the author(s) and do not necessarily reflect the views of the US Agency for International Development.

Management and Leadership Program
Management Sciences for Health
Boston, MA 02130
Telephone: (617) 524 7766
www.msh.org/mandl

Preface

USAID/Mozambique Malaria project with the National Malaria Control Program (NMCP) of the Ministry of Health of Mozambique (MISAU) has an overall objective to increase sustainable and effective programs to reduce the morbidity and mortality due to severe and complicated malaria in vulnerable groups (women of child bearing age, children from 0-5 years old and the socially disadvantaged).

Under this objective, Management Sciences for Health (MSH) contributes to the following intermediate results:

- ✓ **Improved performance of management systems of organizations and programs**
- ✓ **Improved performance of managers**

USAID/Mozambique supports management strengthening of Malaria activities by providing field support funds to MSH's Management and Leadership (M&L) Cooperative Agreement.

This final report provides information for USAID/Mozambique regarding MSH's malaria management strengthening activities for purposes of its reporting requirements to closeout 2002-2004.

Table of Contents

Introduction	4
 Logistics Support Provided to the Ministry of Health Mozambique National Malaria Control Program	
1. Efficient Program Management, Supervision and Systems Development	6
2. Efficient Diagnosis and Case Management Program	7
3. Improved Surveillance, Information and Operational Research of Malaria.....	8
4. Increased Community Participation, Health Promotion and Advocacy.....	10
5. Strengthened Epidemics and Emergency Preparedness and Control	11
6. Improved Selected and Integrated Vector Control and Personal Protection against Malaria	12
 Technical Support Provided to the Ministry of Health Mozambique National Malaria Control Program	
7. Efficient and Effective Monitoring of the National Malaria Control Program	13
 Conclusion	 15
 Appendices	
Appendix I – Financial Pipeline and Expenditures through October 2004	16
Appendix II – Monitoring and Evaluation Plan.....	18

Introduction

Mozambique's Malaria Burden

From the 1980's until today, malaria continues to be the number one public health disease affecting about 17 million Mozambicans. It accounts for about 30% of the total childhood and maternal mortality in the country and occupies about 40-60% of the overall disease and treatment load of the public health centers, from health posts to provincial hospitals. According to figures reported by the Ministry of Health (MOH), there were about 3.5 million cases of malaria reported in 2003, with about 3,500 recorded deaths.

Resources in Mozambique are inadequate to meet the enormous problems that malaria poses throughout the country. Implementation of existing policies and strategies to fight malaria is hampered by lack of adequately trained human resources, particularly at the district level. Furthermore, there is a substantial gap in knowledge regarding the optimal policies and programs to address malaria transmission, prevention, and case management. Moreover, it is not clear which approaches to malaria prevention are most likely to be feasible in the context of Mozambique's resource-poor health sector and fragile economy.

The Mozambican Ministry of Health (MOH) has developed a new vision for its malaria control program, which is in alignment with the Africa Roll Back Malaria Initiative (RBM). The overall goal of the proposal is to reduce malaria morbidity and mortality by at least 25% in 10 selected districts by 2007. The new strategy focuses on development of a social movement for health, the capacity of the family to prevent, recognize, and when necessary, correctly treat malaria or refer to a health facility. The target groups of this strategy are children under five years of age and pregnant women.

MSH/M&L Support

The M&L Program (2000-2005) is a USAID cooperative agreement awarded to Management Sciences for Health (MSH), a private, nonprofit organization dedicated to closing the gap between what is known about public health problems and what is done to solve them. The Management & Leadership Program (M&L) works globally with public, private, and non-governmental organizations and programs at all levels of the health sector to address management and leadership challenges. M&L coordinated a joint effort between USAID/Mozambique and the MOH to finalize USAID/Mozambique support to the National Malaria Control Program (NMCP) for October 2002 through August 2004.

M&L has assisted the National Malaria Control Program in their goal to reduce the morbidity and mortality caused by malaria in vulnerable groups (women of child bearing age, children from 0-5 years old and the socially disadvantaged), within the context of the overall goal of the National Integrated Plan for communicable diseases (five-year plan). This was done over a two year period, October 2002 through August 2004, primarily through the provision of logistics support for improving the performance of management systems and managers.

M&L also assisted the NMCP by ensuring that USAID funds were managed in accordance with USAID rules and regulations. This logistic and administrative support was carried out with the

help of an M&L Management Unit in Mozambique, consisting of both technical advisors in administration and logistics and local support staff in office management. MSH/Boston based staff provided ongoing support to the M&L Management Unit in Mozambique in administrative, project management, coordination, contracting and procurement efforts.

The MOH was responsible for the technical design and implementation of the NMCP, reporting on the agreed upon activities with USAID/Mozambique and proposing adjustments to USAID/Mozambique when necessary. M&L was responsible for the provision of logistics support for the following components of the NMCP:

1. Efficient program management, supervision and systems development
2. Efficient diagnosis and case management program
3. Improved surveillance, information and operational research of malaria
4. Increased community participation, health promotion and advocacy
5. Strengthened epidemics and emergency preparedness and control
6. Improved selected and integrated vector control and personal protection against malaria

Logistics support includes procurement and payment to support travel related expenses and workshop and training expenses (i.e. car rental, fuel, airfare, per diem, conference room rental, meal expenses, course and training materials, conference room rentals, etc.).

M&L's technical role in the NMCP was to improve monitoring of NMCP activities through the development of an adequate data collection and information management system for the NMCP that will support accurate decision-making. M&L, in coordination with NMCP staff, developed a monitoring and evaluation system for the program. The monitoring and evaluation system was developed under the direction of the Monitoring & Evaluation Resident Technical Advisor, Dr. Chandana Mendis. Desired outcomes included establishment of a data collection and information management system for monitoring and evaluation and impact assessment in three provincial level sentinel sites, supervision of sentinel site activities, and final evaluations, assessment reports, and data analysis for the MOH.

1. Efficient Program Management, Supervision and Systems Development

The following planned outputs contributed to strengthening efficient program management, supervision and systems development of the National Malaria Control Program (NMCP): 1) logistics support for staffing the NMCP; 2) logistics support for NMCP staff development; and 3) logistics support for NMCP office materials and vehicle usage. Support was provided at the central and provincial levels for staffing needs and procurement and supply of materials from October 2002 through August 2004.

Overview of Activities

- Logistics support provided for staffing of NMCP
 - Logistics support provided for staff development for NMCP needs
 - Logistics support provided for NMCP office materials and vehicles financed by USAID
-

Results — Logistics support provided for National Malaria Control Program staffing, staff development, supply of office materials and vehicle maintenance

Staffing

- Two national field workers were contracted in July and August of 2003 by the MOH for entomology and epidemiology field surveys and lab work in Maputo. A local advisor was contracted in October 2003 to work in all the provinces in the MOH training program. M&L provided the logistic and administrative support for contracting these positions.

Staff development

- Logistics support was provided for a coordination meeting in May 2003 in Maputo with all malaria control partners, including: WHO, UNICEF, PSI, USAID, DFID, National Institute of Health, Centro de Investigação da Saúde em Manica, World Vision and Save the Children.
 - Logistics support was provided for three supervision and training visits for NMCP activities in Beira, Manica and Inhambane in May and June of 2003. Visits were conducted by Mr. Batista, the NMCP senior vector control technician and activities included training of spray men, maintenance of spray pumps and preparation of reports.
 - Logistics support was provided for the annual 5-day national meeting for provincial coordination, held in Inhambane in July 2003. Approximately thirty-five participants, including facilitators from Maputo, attended the meeting.
 - Logistics support was provided for two National Malaria Control Program (NMCP) staff to improve their English proficiency. The English course was provided in three month units (corresponding to competency levels) over a one year period. Both NMCP staff
-

completed their final units.

Supply of NMCP office materials and vehicle maintenance

- Logistics support was provided from October 2002 through August 2004 for the purchase of supplies and equipment for the NMCP.
 - Nine vehicles were financed by USAID/Mozambique for the NMCP. Logistics support was provided by M&L over a two year period to fully insure and maintain these nine vehicles for use in Maputo, Maputo City, Gaza, Niassa, Sofala, Nampula and Cabo Delgado.
-

Challenges

There were delays in purchasing of some of the NMCP materials due to required foreign orders and approvals from MSH/Boston and USAID/Washington. However these required items, such as chemicals for biological tests and motor bikes for sentinel sites, were provided in sufficient time for implementation of NMCP activities. Technical inputs were provided through the technical advisor or with outside service contracts as necessary.

2. Efficient Diagnosis and Case Management Program

M&L provision of logistics support to training and refresher courses to strengthen clinical and laboratory diagnosis of malaria contributed to the NMCP Efficient Diagnosis and Case Management Program. Training and refresher courses were held throughout the October 2002-August 2004 time period. Logistics support included procurement and funding for didactic materials, airline tickets, daily allowances and room rentals.

Overview of Activities

- Logistics support provided to strengthen clinical and laboratory diagnosis of malaria from October 2002 through August 2004.
-

Results – Logistics support provided to the National Malaria Control Program for strengthened clinical and laboratory diagnosis of malaria

- Logistics support was provided for two regional malaria training and refresher courses in the northern and central regions of Mozambique, involving approximately 180 participants from seven provinces during the October 2002 through August 2003 time period.
 - Logistics support was provided for MOH scheduled drug policy and clinical diagnosis
-

training in Manica, Sofala, Niassa, Cabo Delgado, Tete, Nampula and Zambezia. Two additional provinces, Inhambane and Gaza, also received logistics support for these trainings. Five hundred and forty-five participants attended the training on new drug policy. Approximately 75 microscopists were trained in Manica, Sofala, Nampula, Inhambane and Gaza. Trainings were held in the September 2003-August 2004 timeframe.

Challenges

Ministry of Health and participant time constraints led to the cancellation of some planned malaria training and refresher courses. Participant time constraints led to the third planned regional malaria training and refresher course for the October 2002-August 2003 period to be canceled. Scheduled participants attended the first two courses; but due to work and personal time constraints, the participants concluded that they could not attend the third offering. MOH time constraints led to delays in commencement of September 2003-August 2004 drug policy and clinical diagnosis trainings. This led to cancellation of trainings in Tete, Cabo Delgado, Zambezia and Niassa. Therefore, M&L did not provide the planned logistics support necessary to conduct these trainings.

3. Improved Surveillance, Information and Operational Research of Malaria

Logistic support was provided for training and supervision of thirty clinical and laboratory staff for monitoring of drug efficacy, for supervision visits to sentinel sites testing for insecticide resistance in vector mosquitoes, for monitoring and supervision visits for a case management surveillance system in eleven district sites and for supervision visits for mapping of vector distribution and bionomics from October 2002 through August 2004.

Overview of Activities

- Logistics support was provided to train clinical and laboratory staff in malaria diagnostic measuring and treatment efficacy.
 - Logistics support provided for supervision visits in six sentinel sites and conduction of bio assay tests for insecticide resistance in vector mosquitoes.
 - Logistics support provided to enhance a surveillance system for case management in eleven district level sites
 - Logistics support provided for supervision visits by MOH personnel for mapping of vector distribution and bionomics.
-

Results – Logistics support provided for clinical and laboratory Ministry of Health staff training in malaria diagnostic measurement and treatment efficacy

-
- Logistics support was provided for training and supervision of thirty clinical and laboratory staff from four selected sites between October 2002 and August 2003.
-

Results – Logistics support provided for supervision visits in six sentinel sites to ensure bioassays and susceptibility tests were conducted to assure quality of vector control

- Logistics support was provided for supervision visits in the sentinel sites of Chokwe, Gaza; Mafambisi, Sofala; Macuba, Zambezia; Belavista and Boane, Maputo; and several sites in Maputo City suburbs between October 2002 and August 2003. Resistance data was available for all six sentinel sites. Bio assay tests for insecticide resistance in vector mosquitoes were conducted at each site.
 - Logistics support was provided to purchase entomological equipment and laboratory supplies to support the supervision visits in sentinel sites.
-

Results – Logistics support provided for field visits to enhance surveillance systems for case management in eleven district sites

- Logistics support was provided for three MOH supervisors to monitor and supervise surveillance systems for case management in eleven district sites from September 2003 through August 2004. Logistics support was also provided for report editing and distribution on the surveillance system.
-

Results – Logistics support provided for supervision visits by MOH personnel for mapping of vector distribution and bionomics in selected sites

- Logistics support was provided for two central level MOH personnel to conduct supervision visits for mapping of vector distribution and bionomics from September 2003 through August 2004. Logistics support was also provided for the purchase of entomological equipment for National Malaria Control Program MOH staff.
-

Challenges

MOH human resource and time constraints resulted in cancellation of M&L logistics support for a survey on malaria during pregnancy, planned in the October 2002 through August 2003 time frame.

4. Increased Community Participation, Health Promotion and Advocacy

Logistic support was provided for the National Malaria Awareness Day in November 2003 and for a community based advocacy, communication and education program in three districts in the southern region of Mozambique involving a local NGO and youth from a dance and theatrical group. The aim of the community based program was to improve knowledge of malaria prevention, symptoms and treatment among school children in targeted districts.

Overview of Activities

- Logistics support provided for the National Malaria Awareness Day in 2003.
 - Logistics support provided for a community based advocacy, communication and education program on malaria targeting youth in the southern region of Mozambique
-

Results

- Logistics support was provided for the National Malaria Awareness Day in November 2003 in Ponta d'Ouro. The event included international and local participation in a day of cultural events. M&L provided logistics support to purchase posters, pamphlets and t-shirts for the event. There were approximately 1,500 attendees in the district city south of Maputo and the event was televised and transmitted via radio nation wide. M&L was also able to provide support to the Malaria Commemoration in 2004, although this was not a planned activity for 2004.
 - Logistics support was provided for a community based malaria education program in the districts of Manica in Maputo province, Chibuto in Gaza province and Homoine in Inhambane province. The logistics support enabled acquisition of clothing, instruments, decorations and training space for the local campaign. It also supported travel by the local dance and theatrical youth group involved in delivering the campaign with a local NGO. The program was delivered to approximately 6,000 children in the three districts.
-

5. Strengthened Epidemic and Emergency Preparedness and Control

The following M&L supported activities contributed to strengthening epidemic and emergency preparedness and control of the Epidemic and Endemic Disease Department of the MOH: 1) provision of logistics support to complete an assessment of health centers and rural hospitals in Manica province that led to designation of a health center for provision of epidemic data for national analysis; provision of logistics support to train MOH personnel in EpiInfo and use of the MOH epidemiological database; and provision of logistics support for acquisition of supplies and materials to develop a situational analysis room at the central level to monitor epidemic and emergency situations in the country. These activities were deemed essential by the MOH as there was a lack of emergency plans and preparedness at the central and provincial levels and limited personnel trained at the provincial level in information management for epidemiologic decision-making.

Overview of Activities

- Logistics support provided to identify and designate a health center in Manica province that can provide epidemic data for national analysis.
 - Logistics support provided to train MOH personnel in use of the epidemiological database.
 - Logistics support provided to equip a situational analysis room at the central level of the MOH to monitor epidemic and emergency situations in the country.
-

Results – Logistics support provided to identify and designate a health center in Manica province as a reference health center to provide epidemic data to the central level for national analysis

- Logistics support was provided to identify and designate a health center in Manica province that can provide epidemic data for national analysis. This involved providing logistics support to conduct an assessment of health centers in Manica province that looked at information from registration books over the 1993 through 2000 time period. A database that tracks the incidence of malaria and other communicable diseases in both inpatient and outpatient records was updated at the central level and provincial level databases capturing weekly epidemiology bulletin information in provinces. The Zambezia database was updated. Logistics support was also provided for site visits to the health centers by MOH personnel; a health center in Manica city and Manica province were selected to serve as reference hospitals for the province.
-

Results – Logistics support provided to train Ministry of Health central level personnel in epidemiological vigilance

-
-
- Logistics support was provided in April 2004 to train twelve central level Ministry of Health personnel in use of the epidemiological database. Training in EpiInfo was provided to all twelve MOH personnel. The training was originally planned to build capacity in Excel and Power Point, but the MOH deemed it more valuable to provide training in EpiInfo.
-

Results – Logistics support provided to purchase supplies and computer equipment for a situational analysis room at the MOH to monitor epidemic and emergency situations in the country

- Logistics support was provided in the September 2003 through August 2004 time period to purchase supplies and equipment necessary to develop a situational analysis room at the MOH. The room was developed at the central level with geographic, demographic, economic, environmental and health information that considers a range of variables pertinent to the health situation in the country.
-

Challenges

MOH human resource constraints and unavailability of key personnel led to cancellation of M&L provision of logistics support to improve capacity at the provincial level in data analysis and use of information for decision making and prediction of epidemiological events. The original workplan included provision of logistics support to train provincial level personnel in epidemiological vigilance concepts, routine investigation of epidemics and outbreaks and to calculate and diagnose the occurrence of epidemics. Provinces that were to receive this support were Nampula, Niassa, Manica, Sofala, Maputo and Gaza. A consultant had been contracted by the MOH to oversee these trainings, however, the consultant left the MOH shortly after the workplan was approved and a replacement was not located.

6. Improved Selected and Integrated Vector Control and Personal Protection Against Malaria

The MOH/M&L work plan for the October 2002 through August 2003 time period included logistics support for spraying operations in the southern provinces of Mozambique. Support included procurement of spraying equipment such as pumps, spare parts and protective material (overcoats, hats, gloves and eyeglasses). Funds were not used for the purchase of insecticides. Field operations were supervised by the technical personnel of the MOH National Malaria Control Program (NMCP), not the M&L program and the annual report of the NMCP includes monitoring and reporting of this activity for the 2002-2003 period.

Overview of Activities

- Logistics support provided to support spraying operations in the southern provinces of Mozambique.
-

Results – Logistics support provided to the Ministry of Health National Malaria Control Program for a spraying campaign in Maputo province

- Logistics support was provided for a spraying campaign in Maputo province involving 22,000 structures during a three month period, January through March 2003. M&L provided support to procure necessary protective material and spray pumps. This support was not continued in the following year of M&L support, 2003-2004.
-

7. Efficient and Effective Monitoring of the National Malaria Control Program

M&L's technical role in supporting the MOH National Malaria Control Program was through the establishment of a monitoring and evaluation system for the NMCP in three sentinel sites. This support included: a) establishment of an adequate data collection system, b) supervision, monitoring and assessment of intervention activities, c) evaluation and impact assessments, and d) data analysis and reporting. This support is expected to enhance overall program management capacity of the NMCP and to increase efficiencies in future planning and implementation efforts of the NMCP.

Overview of Activities

- Logistics and technical support provided to design a monitoring and evaluation system for the MOH National Malaria Control Program in June and July of 2003.
 - Logistics and technical support provided to establish an adequate data collection and management information system for monitoring and evaluation of NMCP activities in three sentinel sites: Beira-Niamatanda, Sofala province; Macia-Chokwe, Gaza province; and Nampila and Angoach in Nampula province.
-

Results – Planning and design of the MOH National Malaria Control Program monitoring and evaluation system

- Logistic and technical support was provided in June and July 2003 to design the monitoring and evaluation system for the NMCP. M&L contracted a Senior Technical Advisor in Monitoring and Evaluation and Malaria to oversee this effort, which began
-

with data collection, supervision visits and training of provincial entomology teams. A round of field visits to hospital sites in seven provinces in the north and central regions of Mozambique was conducted to begin planning the information management system and to collect data.

- Logistics support was provided for two five-day training courses in Gaza and Maputo provinces with vector control and spraying supervisors from ten provinces so that interventions for the monitoring and evaluation system could be designed by the Senior Technical Advisor. Twenty-five participants attended the trainings.

Results – Establishment of an adequate data collection and monitoring and evaluation system for the MOH National Malaria Control Program in three sentinel sites completed

- Sentinel site visits were conducted by the Senior Technical Advisor in Beira-Niamatanda, Sofala province; Macia-Chokwe, Gaza province; and Nampula and Angoach in Nampula province. Visits resulted in collection of base line data and action plans for monitoring and evaluation intervention activities.
- Logistics support provided to support the establishment of the monitoring and evaluation system in the three sites included contracting local data collectors and managers, procurement of three motor bikes for data collection efforts and purchase of computers. The motor bikes and equipment are in the possession of the MOH NMCP.
- Logistic and technical support was provided for a coordination meeting in August 2004 for all data collectors and managers involved in monitoring and evaluation activities.
- Sentinel site follow up visits were conducted 1-2 times per site for assessment and monitoring purposes.

Challenges

In the initial workplan there were activities to support short term consultancies that would contribute to assisting the Senior Technical Advisor with design of the monitoring and evaluation system. Due to competing professional obligations within the NMCP, these consultancies did not take place.

The process for establishing the database took longer than estimated due to internal MOH administrative factors related to designing data forms and forming provincial teams to support monitoring and evaluation efforts.

The final analysis and impact assessment report could not be carried out due to delays in the establishment of the system. This resulted in only 4 months of data being collected. It was agreed upon by M&L, the MOH and USAID/Mozambique that this task will be carried out in December 2004 with the help of a World Health Organization data manager.

Conclusion

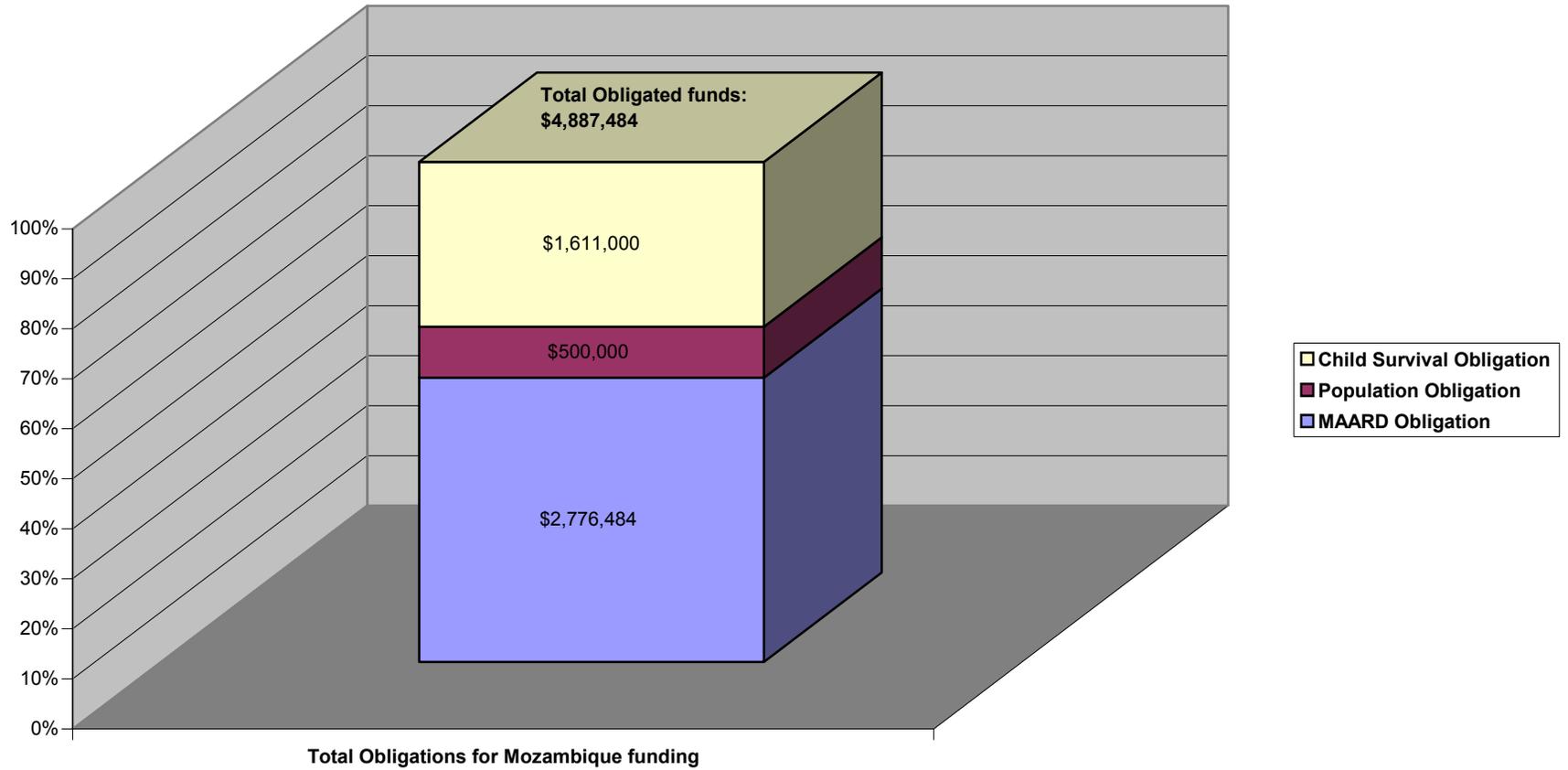
MSH/M&L provided logistics and technical support to the Ministry of Health National Malaria Control Program (NMCP) from October 2002 through August 2004 to 1) provide logistics support to the existing components of the NMCP country plan (see Introduction for the six components of the NMCP plan that were supported through M&L), and 2) establish an efficient and effective management information system for monitoring and evaluation of NMCP activities.

Challenges faced in providing support to the MOH included scarce human resource capacity of the National Malaria Control Program (only three full time scientists and two technicians were available) and delays in receiving both MOH approval for tasks such as monitoring and evaluation data collection forms and M&L/USAID approval for procurement of three motor bikes necessary for data collection in the three sentinel sites.

Recommendations for future direction are to increase human resources in the MOH NMCP so that funds can be absorbed more efficiently and activities carried out in a timelier manner and for the NMCP to undertake more regular mechanisms for evaluation of activities. Although outsourcing remains an option for addressing limited human resources, the ongoing assurance of quality from NMCP staff is necessary. Mechanisms for monitoring and evaluation of intervention impact on combating malaria are new and infrequent, in part due to short donor funding cycles.

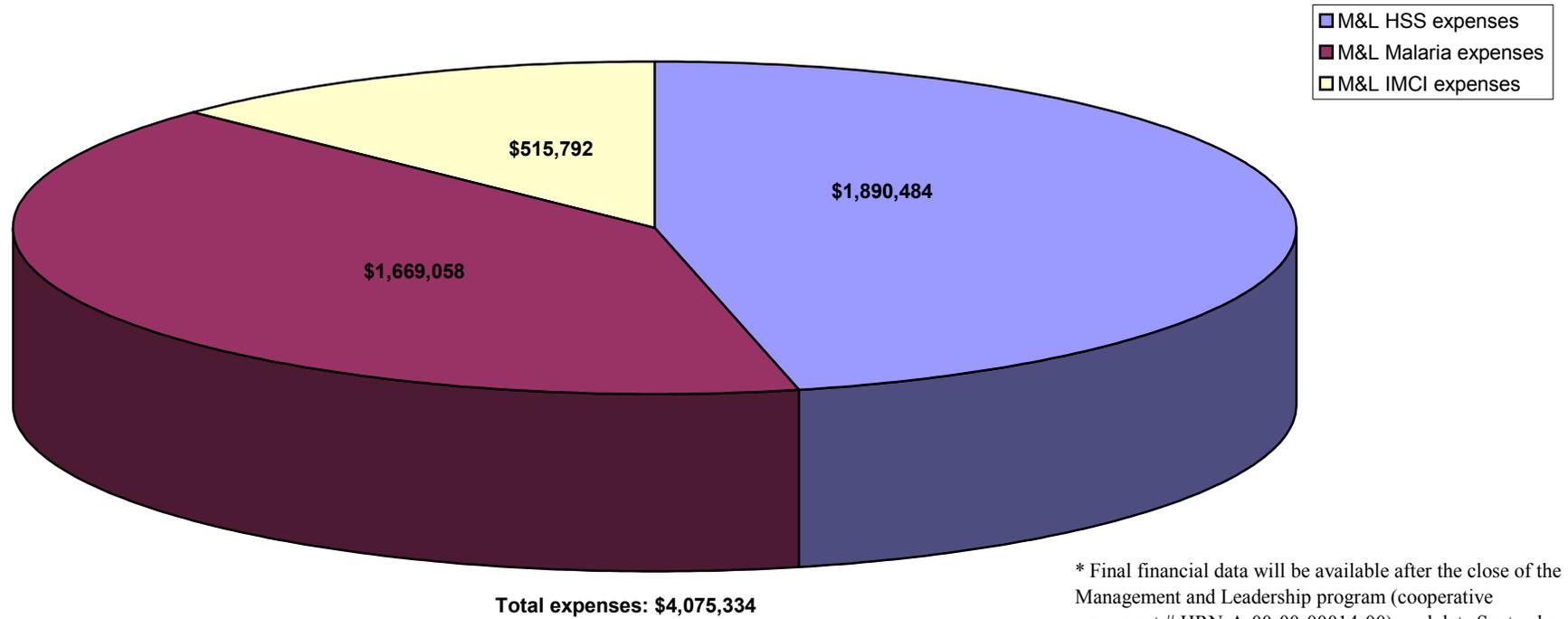
Appendix I - Financial Pipeline and Expenditures through October 2004 (page 1 of 2)

M&L Mozambique Funding



Appendix I - Financial Pipeline and Expenditures through October 2004 (page 2 of 2)

M&L Mozambique Financial Expenditures Through October 2004*



* Final financial data will be available after the close of the Management and Leadership program (cooperative agreement # HRN-A-00-00-00014-00), end date September 28, 2005.

Appendix II - Monitoring and Evaluation Plan

Monitoring and Evaluation Plan per Intervention			Intervention Name: Technical assistance to malaria control			
Outcomes and Outputs	Indicators	Required Data	Impact (results) indicators	<u>Results</u>	Source of Data	Method and Frequency of Data Collection
<u>Outcome 1</u> Efficient program management	Rate of implementation of activities: Number of activities executed / number of planned Number of activities executed in time / number of activities planned Number of activities executed within budget / number of activities planned	Number of activities completed / number of activities planned etc.. <i>Malaria case and death records and the attendance records at health centers</i>	<i>Morbidity and mortality rates due to malaria at health centers</i>	<i>90% implementation rate (5 activities out of 48 planned were not carried out)</i> <i>more than 60% of the tasks were completed at delayed dates.</i> <i>95% budget efficiency rate 2 activities exceeded the budget</i>	Activity reports and annual evaluation reports <i>Routine BES and sentinel sites reports</i>	Monitoring of activities implemented at desired intervals <i>Yearly and annual reporting of NMCP</i>
<u>Output 1.1:</u> Technical and Logistic support provided to the staffing of the NMCP	Rate of staffing: Number of staff recruited / number of staff indicated for recruitment	Terms of references and contract documents	<i>Rate of implementation of activities in the NMCP</i>	<i>100% as requested</i>	Management records of the M&L program	Semi annual reports
<u>Output 1.2:</u> Staff developed to correspond the needs of NMCP	Level of English training: Number of staff receiving English training / number of staff requiring English training	Training course certificates, personal evaluations	<i>English language proficiency level of the staff members</i>	<i>150% (3/2) 3 staff were given training classes they have passed two levels up in their standards</i>	Course material and final certificate from the institutions	Semi annual reports
<u>Output 1.3</u> Adequate logistic support provided to the NMCP program office and the activities and vehicle financed by USAID	Rate of fulfillment of requests: Number of requests attended / number of requests received for logistic support Vehicle efficiency rate: Number of vehicles serving the NMCP activities in the field / number of vehicles financed	Number of request fulfilled and number received for support Vehicles services reports and number of vehicles available at NMCP	<i>Rate of implementation of activities in the NMCP</i>	<i>More than 100% Several additional non planned requested were also fulfilled</i> <i>100% all vehicles in service 100% insured, maintained</i>	Administrative records Administrative records	Semi annual reports

Outcomes and Outputs	Indicators	Required Data	Impact (results) indicators	<u>Results</u>	Source of Data	Method and Frequency of Data Collection
<p><u>Outcome 2</u></p> <p>Efficient case management and successful implementation of drug policy</p>	<p><i>Correct case management rate:</i></p> <p><i>Number of patients managed correctly / number of patients admitted</i></p>	<p>Number of staff trained, number of centers with trained staff, total health staff and health centers in the selected provinces</p> <p><i>Number of patients attending health centers and # returning due to therapeutic failures</i></p>	<p><i>Treatment success rate at health centers:</i></p> <p><i>Number of patients returning due to therapeutic failure /number of patients treated</i></p>	<p><i>About 120 core trainers (10-11 from each province) were trained at TOTs. All 11 provinces received this TOT training.</i></p> <p><i>Second round of provincial training involving around 50 health workers from each involving peripheral levels done in 7 provinces.</i></p> <p><i>Monitoring and evaluation data has not be analyzed yet for calculation of the case management rate</i></p>	<p>NMCP reports and CIS records at MISAU</p> <p><i>Hospital admission and progress records</i></p> <p><i>Health center outpatient records</i></p>	<p><i>Six monthly interval monitoring</i></p>
<p><u>Output 2.1:</u></p> <p>Technical and Logistic support provided to the training and refresher courses for health personnel in selected provinces on case management, diagnosis and treatment</p>	<p>Rate of fulfillment of logistic support requests:</p> <p>Number of occasions providing logistic and technical support for training activities / number of logistic supports requests received for training</p>	<p>Records of requests received and training course reports</p>	<p><i>Ratio of trained staff in each category: Number of personnel trained in each staff category / total number of staff serving for case management</i></p> <p><i>Ratio of health centers with trained staff:</i></p> <p><i>Number of health centers with trained staff / total number of health centers</i></p>	<p><u>Case management training</u></p> <p><i>100% provision of logistic support</i></p> <p><i>Planned was 11 training sessions. Fulfilled 11 training sessions and additional 7 provincial training sessions also.</i></p> <p><u>Microscopy diagnosis training</u></p> <p><i>6 Planned microscopy diagnosis training, fulfilled 4 sessions amounting to 75% complete rate.</i></p>	<p>MSH management reports and NMCP activity reports</p>	<p>Six monthly reporting</p>

Monitoring and Evaluation Plan per Intervention				Intervention Name: Technical assistance to malaria control		
Outcomes and Outputs	Indicators	Required Data	Impact (results) indicators	<u>Results</u>	Source of Data	Method and Frequency of Data Collection
<u>Outcome 4</u> Improved surveillance capacity of NMCP	Surveillance rate: Number of Surveillance reports produced / number of surveillance planned or needed	Field visit records Data analysis reports <i>Number of cases reduced per unit cost</i> <i>Number of cases and deaths avoided per planned action related to the surveillance</i>	<i>Improved efficiency of the NMCP activity planning</i> <i>Improved efficiency of the intervention strategies</i>	90% - completed 8 supervision and surveillance visits were planned. 7 visits were carried out.	NMCP reports Next year plan and next year annual report	Semiannual reporting Annual reporting
<u>Output 4.1:</u> Technical and Logistic support provided to enhance the surveillance system for case management at 11 sites	Rate of fulfillment: Number of occasions providing logistic support / number of request received for logistic support	Number of requests received for logistic support Records of provision of logistic support for surveillance	<i>Improved efficiency of the case management program</i>	100% provision of support.	MSH Management and NMCP activity reports	Request for reports 6 month intervals
<u>Output 4.2:</u> Technical and Logistic support is provided for mapping of vector distribution and bionomics at 6 sites	Rate of fulfillment: Number of occasions providing logistic support / number of requests received for logistic support	Number of request received for logistic support Records of provision of logistic support for mapping activities	<i>Improved efficiency of vector control operations</i>	100% provision of support	MSH Management and NMCP activity reports	Request for reports 6 month intervals

Monitoring and Evaluation Plan per Intervention			Intervention Name: Technical assistance to malaria control			
Outcomes and Outputs	Indicators	Required Data	Impact (results) indicators	<i>Results</i>	Source of Data	Method and Frequency of Data Collection
<u>Outcome 6</u> Epidemic and emergency preparedness and control	Respond rate Number of epidemic and emergencies tackled successfully over number of similar events occurred					
<u>Out put 6.1</u> Logistic support provided to compile all existing information from BES and rural hospitals	Rate of fulfillment Number of request for compiling BES data over number of visits planned	Number of request received for logistic support Records of provision of logistic support for site visits	Occasions of epidemics and emergencies predicted and handled successfully	<i>100% completed of tasks</i>	Routine reports of epidemiology department And annual reports	Request for Monthly summaries and annual reports Monthly and annual
<u>Out put 6.2</u> Logistic support provided to train personnel in epidemiological vigilance and central and provincial level	Rate of fulfillment Number of training sessions and number of participants over number sessions planned and personnel counted	Number of request received for logistic support Records of provision of logistic support for training sessions	Timely prediction of epidemics and appropriate responses to emergencies	<i>100% provision of support</i> <i>50% completion of tasks ' (request for a training session on provincial level so far was not done by MOH)</i> Twelve participants from the central level were trained.	Routine reports of epidemiology department And annual reports	Requests for Monthly summaries and annual reports Monthly and annual
<u>Out put 6.3</u> Logistic support provided for establishment of situation analysis room	Functional situation analysis room	Requests for provision of support Records of supporting establishment of the situation analysis room	Timely and accurate predictions of epidemics and handling of emergencies	<i>100% provision of logistic support</i> <i>50% completed task</i> All equipment in place Personnel not trained yet	Routine reports of epidemiology department And annual reports	Request for anal activity reports d annual

Monitoring and Evaluation Plan per Intervention				Intervention Name: Technical assistance to malaria control		
Outcomes and Outputs	Indicators	Required Data	Impact (results) indicators	<i><u>Results</u></i>	Source of Data	Method and Frequency of Data Collection
<u>Outcome 7:</u> Increased community participation, health promotion and advocacy especially for school children	% of schools receiving IEC package:	Number of schools receiving IEC package and number of schools indicated in the 3 districts	<i>% of school children with accurate knowledge on cause, prevention and treatment seeking in the districts</i>	<i>100% - all 6 schools in three districts identified for activities received IEC training</i>	NMCP and district health office reports	
<u>Output 7.1:</u> Logistic and technical support provided for a community based advocacy, communication and education program for school children in 3 districts by using youth oriented theatrical and dance group	Activity report of the dance and theatrical group in schools from three districts	Physical evidence of the dance and theatrical piece (video tape) Video tape, photographs and activity report of the school events A count of the school children participating	% school children with accurate knowledge in 3 districts	<i>3 reports are available for 3 districts</i> <i>Video tape and cassette available.</i> <i>Estimated 6000 school children received the message through the theatrical and dance group.</i>	NMCP and MSH management reports	As per the event

Monitoring and Evaluation Plan per Intervention						
Outcomes and Outputs	Indicators	Required Data	Impact (results) indicators	<u>Results</u>	Source of Data	Method and Frequency of Data Collection
<u>Outcome 8</u> Efficient monitoring and evaluation program within NMCP	Evaluation and assessment report of NMCP	Information pertinent to planning and evaluation of performances	<i>Improved work plan and performance reports</i>		NMCP work plan and annual report	Annual analysis and reporting
<u>Output 8.1:</u> Technical assistance secured through a advisor	PP & R of the advisor	Task achievement by advisors Task identified for the advisor	<i>Appropriate M & E reports</i>	<i>100% and PP & R available.</i>	Activity reports of the advisor	Semi annual reports
<u>Output 8.2:</u> Adequate data collection and management system established in 3 regional sentinel sites	Complete and accurate data base and monitoring and evaluation system available from 3 sentinel sites.	Information secured on variables indicated in the data base data analysis reports obtained from these data base	<i>Improved work plan of NMCP</i>	<i>100% completed task all 3 regional sites with 2 each sentinel sites for data collection are functional and data base is available.</i>	Data reports of the 3 sentinel sites	Routine data collection annual analysis
<u>Output 8.3</u> Intervention activities supervised and monitored	Monitoring and evaluation reports of NMCP	Information on the specific variables indicated in the data base	<i>Monitoring and evaluation reports of NMCP</i>	<i>66% completed 2 out of 3 planned supervision visits were carried out.</i>	NMCP records	annual analysis
<u>Output 8.4</u> Data analysis, annual evaluation and impact assessment of the NMCP interventions	Annual comprehensive NMCP reports with appropriate evaluations	Information on the variables indicated	<i>Annual NMCP performance report</i>	<i>0 % completed Task not yet completed due to time constraints. Data collection is still at immature stages (4 months) for analysis.</i>	NMCP records	annual analysis

Monitoring and Evaluation Plan per Intervention			Intervention			
			Name: Technical assistance to malaria control			
Outcomes and Outputs	Indicators	Required Data	Impact (results) indicators	<i><u>Results</u></i>	Source of Data	Method and Frequency of Data Collection
<u>Outcome 9</u> Adequate administrative logistic and management support provided to entire M&L/Malaria project	Recommendation reports by clients NMCP and USAID	Appraisal report by NMCP and USIAD	Improved effectiveness (reduced malaria burden and improved cost benefit ratio) of NMCP performances	<i>100% completed</i>	Official reports	Annually Annual evaluation exercise
<u>Output 9.1:</u> Annual Work plan and budgets are developed and monitored for necessary revisions	Annual work plan Semi annual reports		Improved effectiveness (reduced malaria burden and improved cost benefit ratio) of NMCP performances	<i>100% completed</i>	Annual reports of NMCP	Annually Annual evaluation exercise
<u>Output 9.2</u> On going administrative management and logistic support provided to the implementation of the all M&L/Malaria activities by the MSH management unit in Mozambique and by M&L staff in Boston	Project report on success rate (completeness, timeliness, quality and cost) of the project implementation	Individual task monitoring and evaluation data Task planning as per WP	Improved effectiveness (reduced malaria burden and improved cost benefit ratio) of NMCP performances	<i>100% completed</i>	Work plan and activity reports M & E reports	Annually Annual evaluation exercise