



**Eighth Meeting of the RBM Partnership  
Monitoring and Evaluation Reference Group (MERG)**

**12-14 December 2006  
Livingstone, Zambia**

**Discussion Summary  
Table of Contents**

1	List of Acronyms.....	1
2	Objectives/Outcomes of Meeting.....	3
3	Summary of Presentations and Discussions	
	Day One – Tuesday 12 <sup>th</sup> December 2006.....	5
	Day Two – Wednesday 13 <sup>th</sup> December 2006.....	13
	Day Three – Thursday 14 <sup>th</sup> December 2006.....	21
	Appendix A – Draft of RBM MERG Terms of Reference.....	24
	Appendix B – Draft of RBM MERG Workplan.....	28
	Appendix C – MERG Guidance Note on Mortality Impact .....	37

## 1) List of Acronyms

AIS	AIDS Indicator Survey
AED	Academy for Educational Development
AFRO	Africa Regional Office (WHO)
CDC	Centers for Disease Control
DHS	Demographic and Health Survey
GF	Global Fund (GFATM)
GFATM	Global Fund against HIV/AIDS, TB and Malaria
GIS	Geographic Information System
GMP	Global Malaria Programme (WHO)
GPS	Global Positioning System
HFS	Health Facility Survey
HH	Household
HIMS	Health Information Management System
HIS	Health Information System
HMN	Health Metrics Network
HWG	Harmonization Working Group
IDSR	Integrated Disease Surveillance Response
IMCI	Integrated Management of Childhood Illness
IPT	Intermittent Preventive Treatment
IRS	Indoor Residual Spraying
ITN	Insecticide Treated Net
JHU	Johns Hopkins University
LLIN	Long-Lasting Insecticidal Net
LQAS	Lot Quality Assurance Sampling
M&E	Monitoring and Evaluation
MACEPA	Malaria Control and Evaluation Partnership in Africa
MARA	Mapping Malaria Risk in Africa
MAWG	Malaria Advocacy Working Group
MCH	Maternal and Child Health
MDG	Millennium Development Goal
MERG	Monitoring and Evaluation Reference Group
MIAM	Malaria Institute at Macha
MICS	Multiple Indicator Cluster Survey
MIP	Malaria in Pregnancy
MIS	Malaria Indicator Survey
MIT	Malaria Indicator Template
MOH	Ministry of Health
NMCP	National Malaria Control Programme
OPD	Outpatient Department
PMI	US President's Malaria Initiative
RBM	Roll Back Malaria
RDT	Rapid Diagnostic Test
SEARO	Regional Office for South-East Asia (WHO)
TOR	Terms of reference

UNICEF  
WG  
WHO  
WIN  
WPRO

United Nations Children's Fund  
Working Group (RBM)  
World Health Organization  
Working Group for Scalable Vector Control  
Regional Office for the Western Pacific (WHO)

## 2) Summary of Objectives and Outcomes of the Meeting

### *Objectives*

- To provide an update on global malaria coordination efforts
- To discuss ongoing progress in capacity building for malaria M&E
- To update the TOR and workplan for 2007
- To review current work and proposed initiatives in data collection, data analysis and burden of disease estimation
- To discuss how best to strengthen communications and dissemination activities

### *Outcomes/Action Points*

The RBM MERG meeting summary and action points are as follows:

#### 1. Household Survey Task Force (January/February)

- Develop consensus on IRS indicators (coordinating with WIN), and with representation from countries (e.g. Swaziland); consider other needs for entomological reporting
- Follow up on further analysis of MICS and DHS data
- Standardize reporting of parasitemia testing results; review use of RDTs and other methods for monitoring case burden
- Coordinate HH survey activities
- Discuss follow up action on harmonization of targets
- Standardization of VA methods (link up with WHO and HMN), and with input from PMI

#### 2. Working group on databases and mapping (January/February)

##### Databases

- Review availability of data for different indicators maintained by partners
- Agree on mechanism for linking different malaria databases under one umbrella
- Agree on respective responsibilities for database maintenance and design

##### Mapping

- Define MERG's role in harmonization of endemicity mapping efforts

#### 3. Ad hoc group on dissemination

- Develop a workplan related to dissemination of products for the MERG
- Develop a proposal for funding these activities
- Participants should include JHU (Lead), MACEPA, UNICEF, CDC/PMI, MEASURE, GF, RBM Secretariat and AED

#### 4 Capacity Building Task Force (January/February)

- Develop template for the costed M&E plan for use in 6-10 countries, in collaboration with HMN, GF and HWG
- Follow up on development of M&E training modules (coordinate with WHO/AFRO, MEASURE, Malaria Consortium)
- Follow up on training and support needs discussed by Zambian MOH (training in M&E; site visit to best practice site in M&E; support to implementation in 3 districts)
- Re-circulate draft M&E guidelines by end-Jan 2007

#### 5. Mortality Task Force (report on status at next MERG)

- Finalize “Lancet” model
- Discuss dissemination plans
- Provide guidance on how to implement and use at country level
- Validation of impact model

#### 6. Morbidity Task Force

- Reach consensus among MERG members on follow up to earlier work on model-based estimation of disease burden
- Possible joint meeting with mortality task force

#### Other issues:

- Finalize TOR and submit to RBM Executive Board (Co-Chairs)
- Finalize workplan and submit to RBM Executive Board (MEASURE Evaluation and Co-Chairs)
- Date and location of next MERG (June 2007-after Global Health Council, Washington DC)

### **3) Summary of Presentations and Discussions**

#### **Introduction**

The 8<sup>th</sup> meeting of the Roll Back Malaria Partnership's Monitoring and Evaluation Reference Group was held from December 12<sup>th</sup> to December 14<sup>th</sup> 2006 in Livingstone, Zambia.

#### ***Day One – Tuesday, December 12<sup>th</sup> 2006***

##### ***Opening Remarks***

After participants briefly introduced themselves, the Chair Bernard Nahlen opened the meeting by reviewing the overall meeting goals and agenda (see objectives listed above), and by reviewing the previous meeting minutes.

##### ***Task Force Updates***

*Mortality Task Force* – There is an urgent need to provide guidance on the best approach for assessing changes in malaria-related mortality in the context of monitoring international goals and commitments. The mortality task force will report on their recommendations, which are presented in a summary guidance note as well as a longer technical background paper, which has been submitted for publication in a peer-reviewed journal. These recommendations focus on the mortality impact assessment for African children under five years of age. Therefore, there is a need to extend their discussions to older age groups and to other geographic regions in the future.

*Morbidity Task Force* – This task force will update the MERG on progress in developing country-level incidence estimates based on the estimation procedure previously developed by the morbidity task force which led to global and regional incidence estimates that were published in the World Malaria Report 2005. There is also an urgent need for updating the global endemicity map, and WHO/WPRO has taken a lead on providing guidance on this work. A meeting was held by WHO/WPRO and SEARO in Bangkok in September 2006 to initiate these discussions.

*Capacity Building Task Force* – This task force has developed a draft template for M&E activities to be used as part of overall national malaria control program planning work. This template includes a logical framework for each malaria intervention, guidance on a set of core indicators for monitoring program implementation, as well as costing component for this M&E work.

*Household Survey Task Force* – The Malaria Indicator Survey (MIS) which was developed by this task force has been launched, and the MIS was first conducted in Zambia in Q2 2006. MIS surveys have since been conducted in Angola and Senegal and are being planned for other African countries. The guidelines for parasite testing in the context of the MIS will be finalized, including the use of rapid diagnostic tests (RDTs)

where relevant. There is a need for the Task Force to update guidelines for core population coverage indicators and to include IRS indicators, as well as to disseminate lessons learned from the Zambia experience with MIS implementation.

*Anemia Task Force* – There is a need for this task force to review anemia data collected in recent DHS and MIS surveys, and to identify a person to conduct this analysis.

*Economic Impact Task Force* – The World Bank is in the process of launching this task force, and will report to the MERG on progress in this initiative.

### ***Update on global malaria coordination efforts***

#### ***a) RBM Change Initiative (James Banda)***

- The RBM Change Initiative will impact the work of the MERG in the following ways: the MERG needs to consider expanding its role to support implementation of its recommendations.
- The Partnership will also provide some funding for meeting participation as well as for those activities that support implementation and product development.
- The MERG will have to further discuss how its work, especially in terms of implementation support, relates to the new Harmonization Working Group.

#### ***b) World Bank Malaria Booster Program and the Dakar Meeting (John Paul Clark)***

The World Bank organized a meeting in Dakar (“Striking Back at Malaria”) in September 2006, which took stock of the status of various activities and focused on sharing experiences and developing consensus on a set of concrete actions for future activities.

In terms of M&E, the discussion focused on how to build capacity at country level and the development of M&E systems and joint reporting mechanisms. It was recognized that there needs to be integration of HMIS across HIV, TB, and malaria. The World Bank would like to work with the MERG capacity building task force to develop a training approach for M&E activities for use at the country level. They would also like to support technical assistance and competency training activities through standardized training materials. There was discussion around whether such capacity building of local M&E systems should include the development of costed M&E plans.

Finally, the World Bank has developed a database (Malaria Indicator Template) that will track commitments and disbursements for malaria control activities, as well as other country level data on the coverage of key malaria control information. Further discussion is needed on this database to determine how best to work with partners on its updating and maintenance.

#### ***c) WHO Global Malaria Programme M&E activities (Richard Cibulskis)***

The major focuses of WHO M&E activities will be on developing M&E guidelines, updating databases, monitoring disease trends, rapid assessment tools and producing global and regional malaria reports. Specifically, the WHO/GMP is currently updating

the global malaria database, which will include information on policies, finances, human resources, implementation, etc. There will also be a focus on defining and estimating populations at risk of malaria. However, these efforts will use locally collected information on transmission, and will rely less on climate models. Other specific work activities will include strengthening routine systems for case reporting; setting up sentinel surveillance sites; developing methods for measuring coverage at the district level, such as through EPI contact or LQAS methods; harmonizing with other WHO initiatives for health facility and household survey work, including service availability mapping, IMCI/MCH survey initiatives and developing verbal autopsy methods; and producing global and regional malaria reports.

*d) WHO/AFRO M&E Guidelines, Meeting in Harare (N. Bakyaita)*

The guidelines adopted the RBM core output and impact indicators, as well as the proposed core list of input, process and output indicators for monitoring program implementation. There is, however, a need for providing more detailed guidance on program performance monitoring. The guidelines also include examples of best practices and provide clear guidance on how to use this data as feedback on program performance. In terms of timeline, it is intended to complete the guidelines (at least the first volume) by end-January and to subsequently test the guidelines in select countries.

*Action points: There is a need for partners to come together to discuss these different databases and to possibly bring them together into some sort of one-stop shopping for malaria data. There should be an ad hoc group put together to discuss these database issues.*

*e) President's Malaria Initiative (Amy Ratcliffe) ([www.fightingmalaria.gov/](http://www.fightingmalaria.gov/))*

The countries that are part of the PMI initiative include Angola, Tanzania, Uganda (2006); Malawi, Mozambique, Rwanda and Senegal (2007); and Benin, Ethiopia, Ghana, Kenya, Liberia Madagascar, Mali and Zambia (2008).

PMI will initially evaluate trends in malaria-specific mortality by using a plausibility argument that if intervention coverage increases and anemia decreases then malaria-specific mortality will likely have decreased as well. This will be interpreted in conjunction with other factors such as rainfall and other health indicators. In addition, PMI will work with the Health Metrics Network partners to standardize the approach for using verbal autopsy methods for assessing malaria-specific mortality, and to further develop plans for this evaluation. PMI will also support the implementation of MIS surveys in PMI countries, and will work to harmonize this schedule with other household surveys taking place in these countries. Finally, PMI will also provide a set of core indicators for monitoring program implementation in their program countries, which will be harmonized with the work of other MERG partners.

*Action Points: There was a discussion regarding the rationale for PMI to have chosen 85% coverage targets rather than the 80% coverage targets to which all partners in RBM had previously agreed. This creates confusion at the country level and is in contradiction to the spirit of the "Three-Ones", which encourages all partners to harmonize around*

*targets and a single M&E plan.. There was also a call for both anemia and parasite prevalence to be included as intermediate impact indicators. There was also a discussion of the need for further work on diagnostics, and the use of rapid diagnostic tests to diagnose malaria cases in the context of household survey activity. The household survey task force should take up these issues at their next meeting. In addition, standardized IRS indicators for household surveys and for monitoring program implementation need to be urgently developed and finalized*

*f) World Bank Malaria Booster Programme (John Paul Clark  
([www.worldbank.org/afr/malaria](http://www.worldbank.org/afr/malaria))*

In 2005, the World Bank recommitted itself to combating malaria through the Booster Program. To date, 11 projects have been approved for World Bank funding including 10 country projects and 1 multi-country project (Senegal River Basin). \$US 357 million has been committed to these 11 projects, and another 4 countries will likely be supported – which will bring the financial commitment to over \$400 million, and closer to the World Bank target of committing \$US 500 within the first year of the program.

In addition to focusing on malaria-specific interventions, these programs will also focus on overall health system strengthening in support of country-led multi-year strategic plans. The World Bank intends to work closely with partners to achieve overall goals for reducing the malaria burden in program countries and to ensure overall project success. They also want to work with partners to help develop the Malaria Indicator Template, which will help track progress in intervention coverage in countries, as well as financial commitments and disbursements for malaria control.

*g) Malaria Consortium (Albert Killian)([\\_www.malariaconsortium.org/](http://www.malariaconsortium.org/))*

The Malaria Consortium is developing monitoring systems for the mass distribution campaigns of LLINs, in addition to monitoring routine distribution channels, in select countries (e.g. Uganda and Mozambique). They are also looking at ITN availability and ITN use in various countries, such as Ethiopia and Northern Sudan.

The Malaria Consortium has developed a model to translate the number of nets distributed with predicted ITN coverage (e.g. household availability of ITNs). This will allow program managers to better understand the potential impact of various distribution channels on ITN availability. This model has been applied in Uganda, Sudan (South) and Mozambique.

*g) MACEPA activities (Rick Stekete)*

*([www.path.org/projects/malaria\\_control\\_partnership.php](http://www.path.org/projects/malaria_control_partnership.php))*

MACEPA began working with the Zambia NMCP in 2005 and has focused on providing technical support to their activities, including the development of a national malaria M&E plan. In terms of future work, MACEPA will focus on developing a “regional learning community” that will work with multiple countries in the Southern Africa region to help implement scale up of malaria control activities. MACEPA has also been a key member of the MERG Capacity Building Task Force.

*h) Malaria Advocacy Initiative (Matt Lynch)*

<http://www.malariafreefuture.org/about.php>

The first meeting of Malaria Advocacy Working Group (MAWG) will take place in January in London, and the Secretariat of this working group will be Johns Hopkins University. The focus of this working group will be to publicize best practices, innovative approaches and tools, and to disseminate products developed by the MERG and other working groups. The MAWG also offered to host the website that could potentially contain the central malaria database.

*i) Health Metrics Network (Don De Savigny)([www.who.int/healthmetrics/en/](http://www.who.int/healthmetrics/en/) )*

The Health Metrics Network is housed at WHO and is a partnership of stakeholders that are interested in supporting the improvement of overall health information systems. In addition, HMN promotes a more integrated approach to data at the country level that includes census, vital registration, population-based surveys, health administrative records, service records, as well as health and disease records. The goals are to increase the availability, access, quality and use of health information that is critical for decision making at the global and national levels, and this work is carried out in four phases. Phase 1 focuses on leadership, coordination and assessment by engaging stakeholders in reviewing the current status of HIS systems and to assess gaps. Phase 2 focuses on strategic planning to develop plans to build a functional health information system, including a costing of this work. Phase 3 focuses on implementation and will start addressing how information can be packaged in an easy-to-use manner.

There is a need to come up with a consolidated tool to analyze the quality of data systems that can be adapted to different country settings. There is also an urgent need to assess cause-specific mortality and there will be a special edition of vital registration issues in *The Lancet* in 2007.

*Action points: There was a discussion of the tension between providing disease-specific technical assistance and guidance and the need to strengthen the overall monitoring and evaluation systems. There is, and always will be, a tension between these activities. However, in the short term there is a need to generate data for disease-specific programs in the context of increased funding to malaria control programs and to report on progress. At the same time, most countries lack a costed M&E plan for developing longer term systems. Beginning with Round 6, the Global Fund will be requiring that this be developed as part of a national stakeholders' workshop. . It was proposed that the Capacity Building Task Force work with the Health Metrics Network and others to develop a template for a costed M&E plan for 6 – 10 countries.*

*j) Scalable Malaria Vector Control –WIN Working Group (Don De Savigny)*

The purpose of the WIN working group is to provide the Partnership with strategic advice on best practices for scalable vector control interventions. The working group focuses on both ITN scale-up as well as IRS activities.

A workplan was developed for this working group but has been on hold since March 2006 until plans for the WHO/GMP ITN and IRS groups have been finalized. If the WIN working group continues it will focus on documenting best practices, strategies for

scaling up ITNs and IRS and supporting the Harmonization Working Group to assist countries with ITN and IRS scale up strategies and plans.

In terms of the WIN working group and its monitoring needs, it was mentioned that better information is needed on logistical capacity for scaling up, improved demand forecasting and tracking equity issues in intervention coverage in real time.

### ***Experiences of Zambia NMCP on Scaling-Up for Impact***

#### *Malaria M&E Activities in Zambia (Mercy Mwanza and Pascalina Chanda)*

The national strategic plan of Zambia (for 2006-2010) calls for the reduction of malaria incidence by 75%, a significant reduction of malaria mortality by 2011, as well as the reduction in all-cause mortality in children under 5 by 20%. In addition, Zambia plans to exceed the 60% Abuja targets of key malaria control interventions.

Information is currently being obtained from more than one source. These sources include the Health Information Management System (HIMS), the Integrated Disease Surveillance and Response (IDSR) system; and the Malaria Information System (MIS). The IDSR will be scaled up in 2006-07. The MIS will be collecting additional indicators on IPT in pregnancy and ITNs in 10 districts. Other sources of information include: MICS; RBM baseline surveys; Family Health Survey (FHS); Malaria Indicator Survey (MIS); and DHS among others.

#### *District Performance Monitoring/M&E Needs-Lusaka Province (Chongwe—C.Y M'siska, Kafue—M.K. Lembalemba, and Southern Province, Livingstone—J. Chinyonga)*

Malaria interventions in the 3 districts of Chongwe, Kafue, and Livingstone are: ITNs; IRS; IPT; and case management. Some of the tools used in district-level M&E were look district monthly surveillance reports; MIS reports; Malaria in Pregnancy (MIP) reports; and data from DHS and performance assessments which are conducted every quarter.

Collecting malaria M&E information at a district level has had numerous challenges. Zambia is facing a human resource crisis, resulting in a loss of qualified personnel to obtain this information. Not only is there a lack of personnel, there is a lack of capacity in M&E. In addition, the funds for collecting M&E indicators are limited. Many districts are not equipped with adequate laboratory testing for case management, and are lacking in blood bank services. Coartem, the first line drug used in case management, is sometimes not available in the district. The supply of ITNs can also be erratic. It is also difficult to receive quality data and feedback from the districts in a timely fashion, especially from the private sector.

#### *Malaria Institute at Macha: Toward a Sub-National M&E (Sungano Mharakurwa)*

The goals of MIAM are to conduct malaria-related research, to become a regional centre of excellence status for malaria research and training, and to provide technical support for

malaria control. The research center is equipped with numerous facilities with which to reach its goals (e.g. laboratories, GIS/GPS equipment, an in-built insectary, etc...).

#### *Priorities of Zambian Ministry of Health to Strengthen Malaria M&E*

A question was raised to the officials from the Zambian Ministry of Health on 2 to 3 priorities for the next year that they feel would help them strengthen their information systems at a district level. The following are their priorities:

- Further training in M&E—training should also be carried out at the district and community levels
- Support to implement M&E in districts—this may include a site visit to an M&E best practice site
- Training in HMIS at both the facility and community levels

#### *Update of the TOR and Work Plan for 2007*

The purpose of this discussion is to discuss proposed changes to the terms of reference and to discuss the proposed workplan for the MERG for 2007. Please see Appendix A for a draft of the updated TOR to be submitted to the RBM Board for approval.

#### Terms of Reference

1. Under functions of the MERG, language was proposed that stated that MERG is an advisory body and “does not have authority to implement on behalf of RBM...” (Item 3). Item 3 bullet point 5 was added and states that the MERG can “identify and prioritize critical action steps” for countries.

It was noted that such language allows the MERG to make recommendations, prioritize critical action steps and advocate for partner organizations to implement these recommendations. It was agreed to maintain these points in the terms of reference. However, the wording of bullet point 5 should be slightly changed as it is not clear in the current wording if action by partners can be taken prior to the MERG recommendation.

1. Selection of core members – how does the MERG formally define membership?

Members are to be defined by those who consistently participate in MERG meetings and help to move forward the work of the MERG. However, this does not exclude people from participating in the MERG as needed. MERG has had difficulty having consistent representation from malaria-endemic countries due to lack of funding from the RBM Partnership Secretariat to support their travel. However, the MERG believes it is important to have consistent representation from at least 3-4 M&E experts from malaria – endemic countries so will discuss with the RBM Partnership Secretariat again and include in the 2007 work plans

1. Electing the chair and co-chair of the MERG

It was agreed that the chair and co-chair of the MERG would be elected by the core RBM MERG members for a 2-year term, and this is the recommendation that was put forth at the last MERG meeting in Switzerland. The next election of Chairs will be in June 2007.

| 1. Implementation arm of MERG

An explanatory footnote was included in the terms of reference that explains the implementation arm of the MERG. This text will not be formally included in the terms of reference, but was included in this version as an explanation of the issue and the implications of the implementation arm.

| 1. Other issues

It was noted that the focus of the MERG is global, regional and national. However, in the terms of reference there is wording about a focus on Africa, which isn't global. It was agreed that these sentences should be deleted since the focus of the MERG is global, although at the start of the MERG there was a recognition of the need to focus on Africa. However, this is no longer correct and the MERG does actively work on issues related to other regions.

Work Plan

Bernard noted that the RBM Executive Board has asked the MERG to provide them with an updated work plan. Please see Appendix B for the entire draft of the work plan.

*Day Two – Wednesday, December 13<sup>th</sup> 2006*

**Review of current work and proposed initiatives in data collection, data analysis and burden of disease estimation**

***Malaria Risk Mapping:***

*MARA: Updating maps to include control efforts (Immo Kleinschmidt)*

The aim of MARA is to retrospectively collect data on the prevalence of infections with malaria parasites across Africa.<sup>1</sup> This data is then used to create spatial models of malaria distribution, map predicted malaria prevalence, and to develop an atlas of malaria. MARA uses a number of different data sources to map indicators, including Ministry of Health reports, published articles, surveys, and other reports. There are currently 10,000 points for which a prevalence value is available. And in most cases, age-specific grouping is available, allowing the calculation of age-specific prevalence rates.

Of note, it was learned that MARA is currently not funded. It is difficult to get funding for mapping activities by themselves. There needs to be convergence of different groups on mapping, and a strategy needs to be developed that will look at both the supply side of information and how to feed it into a dynamic set of maps. A malaria atlas is being created by Bob Snow, but a collaborative effort is needed to put everything together.

*WHO WPRO/SEARO Plans for Malaria Risk Mapping and Burden Estimations (David Bell)*

There are a number of mapping issues that are specific to the Asia/Pacific regions that include:

- Vast differences in malaria epidemiology, entomology/vectors and transmission
- Difficulties in obtaining consensus on standardized definition of population at risk
- Many malaria-endemic areas have very limited or poor-quality data.

Some of the possible criteria that can be used to define those who are “at risk” are as follows: areas with active transmission; occupational exposure (e.g. forest workers in Cambodia); people who live in a country with indigenous transmission, but live and work in an area without transmission; and people who live in an area with the disease vector but with no transmission because of good disease surveillance and access to effective treatment. A consistent definition of “at risk” needs to be agreed upon. In terms of defining “burden” of disease, there are several problems with health information data completeness. There is incomplete reporting in many areas, the coverage of formal health services is weak in remote rural areas, and there is often no reporting from private providers. Burden data is then adjusted differently in different areas.

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<sup>1</sup> <http://www.mara.org.za/>

The Asia-Pacific project aims to develop a risk map, burden estimates, and to strengthen health information systems reporting. The risk map will use routinely-collected data down to the lowest level possible, modified by entomological and other data and expert opinion. Risks maps will include vector maps, malaria reported cases, additional areas (“masks”) where no malaria occurs. The burden estimates will be based on evidence and will be updatable from readily accessible data.

*Action point: A meeting of a task force including UN partners should be convened on database harmonization and initiatives. This could be a 3-4 day meeting, and funding partners should also be invited.*

#### *WHO Morbidity Task Force Update (Richard Cibulskis)*

The WHO Morbidity Task Force produced updated model incidence estimates. However, some concerns have been raised about the validity of estimates that have been produced at a country level. WHO will continue to emphasize bringing together locally available data. Headquarters is working with WPR/SEARO, PAHO, and EMRO. WHO/GMP is now moving toward creating a global endemicity map. The availability of the data that GMP is working on is dependent on funding. However, there is a need to produce these estimates in time for the next World Malaria Report. It is intended that the WHO will work with interested partners on this issue.

#### *Changes to MDG Indicators (Tessa Wardlaw)*

There was an opportunity during a meeting in Geneva in November 2006 to make changes to the official list of Millennium Development Goal (MDG) indicators.<sup>2</sup> Although most discussions took place around changing reproductive health indicators, the RBM MERG recommended changing indicator #21 from “Prevalence and death rates associated with malaria” to “Incidence and death rates associated with malaria” since parasite prevalence is not a good measure of burden and is not useful by itself for assessing program impact in most endemic areas. The recommendation was accepted, so the next step is for the recommendation to be approved by the general assembly. The UN Statistics Division requested having a note for their record on the MDG malaria indicator change. The note covers the definition of the indicator and data sources. It is assumed that global level estimates would be modeled estimates based on Morbidity Task Force recommendations, while initially national level data source would be what is available through the health information system reports (until model-based estimates are available at a country level).

#### *Task Force Updates*

##### *Economics Task Force Update (John Paul Clark)*

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<sup>2</sup> <http://mdgs.un.org/unsd/mdg/Host.aspx?Content=Indicators/OfficialList.htm>

There have been internal meetings at the World Bank on the development of the Economics Task Force. The task force will be in a position to report on outcomes at the next RBM MERG meeting.

*Mortality Task Force Update (Tessa Wardlaw)*

The Mortality Task Force met in October 2006 in New York. The objectives of that meeting were to develop a consensus on MERG recommendations regarding appropriate methods for estimating the mortality impact of malaria interventions; to review the progress on the development of a child survival impact model (based on the Lancet model published in 2003); to discuss the MERG guidance note on mortality impact assessment; and to finalize the technical background paper on methods for evaluating the mortality impact of malaria control efforts.

The Mortality Task Force came to a consensus on three basic principles: MERG does not *generally* recommend directly monitoring trends in malaria-specific mortality; at minimum, a country-level assessment of impact should be done in all countries; and there should be a focus on assessing the mortality impact on African children. The task force also recommended that in all high-burden African countries, key malaria control interventions should be regularly monitored through household surveys; all-cause under-five mortality should be regularly monitored through household surveys; and coverage estimates should be used as inputs to the child survival impact model. Additional recommendations were made by the task force to undertake additional analyses, including a review of health information systems data to analyze the burden of malaria on health systems themselves.

The Mortality Task Force's next steps are to review and test the first version of the model and developed detailed plans for the roll out of the model and training on its use. The guidance note will also be finalized. In the future, the task force will also develop an approach for mortality impact assessment among older children and adults, across other geographic regions, which will include further guidance on monitoring trends in malaria-specific mortality.

*MERG Guidance Note on MERG Mortality Impact Paper (Emily Johansson)*

A short 2-3 page note was drafted to help non-technical audiences of the MERG mortality impact paper better understand its contents. The note includes a brief background of the RBM MERG, as well as a summary of the challenges involved in assessing mortality impact. The second section of the paper lays out the intention of the guidance note. The final page of the note gives an overview of this model-based approach. The last table in the note is adapted from the technical paper and lays out in summary form the issues with each data source that could potentially be used for this assessment, as well as that data source's benefits and drawbacks.

*Methods for Evaluating the Impact of Malaria Control Efforts on Mortality in Africa*  
(Alex Rowe)

This technical paper was developed because in Africa, there is no reliable way to directly measure malaria mortality. The objective of the technical paper is to serve as a consensus statement and to describe the methods and MERG recommendations for mortality impact, focusing on the evaluation of mortality. This paper was co-authored by representatives of key partner organizations and was explicitly written for the MERG.

Discussion around the paper included the following:

- Coverage or use being measured and on the timing of surveys. The focus is on use. Coverage surveys should be done at the end or within 4-6 weeks of the end of the rainy season. One exception is where the transmission season is short because there you would want to finish the survey closer to the end of the rains to hit the peak transmission season. Since multiple measurements are needed over time, measurements should be done at the same time every year.
- The correlation of asking about net usage last night to the use of nets last year. This issue just exemplifies the limitations of surveys.

*Overview of “Lancet Model” for Tracking Changes in Child Mortality—An Update on Modeling the Impact of Interventions on Malaria* (Tessa Wardlaw)

The impact model or “Lancet model” was developed by UNICEF to estimate the number of child deaths that could be prevented from a series of proven child survival interventions, if those interventions were delivered to all children. In order to improve the model for estimating the impact of interventions, several steps must be taken: a) the impact model must be moved into a user-friendly system that correctly captures demographic dynamics (SPECTRUM); b) assumptions of the model should be reviewed and updated as necessary; c) validation analyses comparing predicted and measured impact of increasing coverage of interventions should also be undertaken.

The SPECTRUM Interface allows you to look at links between demographic information and cause of death profiles. The alpha version of the software is being sent out for review. The initial testing of the beta version is planned for February 2007. Validation analyses are set to begin in the winter of 2007, using pre-existing datasets. The first real release version of the software with full documentation and multiple languages should be ready by summer 2007. There was discussion on IRS data in the model. During the initial development of this model, there was little data on IRS, so this particular intervention was not included in the model. One issue going forward with this model is to include more information on IRS and to account for the likely impact of combining interventions.

*Discussion of Malaria Score Card and LQAS* (John Paul Clark)

An appeal for more donor accountability and transparency was made during the Dakar meeting. The Malaria Score Card (previously known as the World Bank Malaria

Indicator Template), helps program managers and donors track commitments, disbursements, and outcomes. This score card will be available to the public. An alpha model of the software is already in place.

Input from the RBM MERG was sought on who will contribute to the matrix, at what frequency, and other expectations. Issues raised during the discussion included:

- Major donors and bilaterals have different fiscal years and project cycles
- Scaling-up: a standardized approach to assessing funding gaps has to be created.
- There is currently work being done now by RBM on standardizing the calculation of funding gaps across countries.
- How population at risk is defined, especially since it is changing all the time.
- Which data sources should be used in the score card? The World Bank uses World Development Indicators, but other data sources are used by other contributors to the score card.
- There has to be consistency in source of information for the score card
- It must be determined how often data needs to be updated, who updates it, who checks and validates the quality of the data, and the best way to pull together country level data (i.e. whether WHO should do it or each country should upload their own information).
- The World Bank is anxious to remove the World Bank's logo from the matrix. This product should be owned by partners in country.
- The World Bank would be willing to house the matrix and support the development and management of the matrix. Johns Hopkins University has offered to manage the "going-live" process, with limited access for beta tests.

### ***Update on UNICEF Global Database (Tessa Wardlaw)***

UNICEF maintains a global database for key indicators, including key malaria control coverage indicators, from nationally representative surveys, including the DHS, MICS, and MIS.<sup>3</sup> These indicators are published every year in the *State of the World's Children*. This data is also used to report progress towards the MDGs, for reports to the UN Statistics Division, and for *A World Fit for Children*.

A comment was made on the need to coordinate data from different sources into one data warehouse. One major complication in doing this is that different organizations want their data to be presented in a different way. Another issue is how to filter this data.

### ***Survey Task Force Update:***

#### ***Report on Zambia Malaria Indicator Survey (MIS) (John Miller)***

The objectives of the MIS were to: 1) collect data on core indicators, and parasite and anemia prevalence; 2) to collect information on anemia prevalence; and 3) to strengthen the country's capacity to implement surveys. Details of the methods and results of the

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<sup>3</sup> [://www.childinfo.org/](http://www.childinfo.org/)

Zambia MIS can be found at <http://www.nmcc.org.zm> and [http://www.path.org/projects/malaria\\_control\\_partnership\\_Zambia\\_survey.php](http://www.path.org/projects/malaria_control_partnership_Zambia_survey.php)

The first application of the RBM MERG's "full package" stand-alone MIS was in Zambia, and was timed to coincide with the end of the malaria transmission season. It was PDA-based and included anemia testing with the Hemocue system and parasite determination with Paracheck and thick and thin blood smears.

Lessons learned include:

- there should be a person dedicated to handling the budget and planning throughout the survey;
- adequate time should be given to the planning;
- there can be some confusion with the types of software used with PDAs; and
- there should be an expansion of standard tables used to report results.

*Report on plans for Angola and Senegal MIS surveys and overview of Service Provision Assessment (SPA) (Alfredo Fort)*

The Angola MIS is currently being conducted. The sample size is 3,200 households from 4 different domains, which means that since the sampling size is small, disaggregated information will be difficult to obtain. The usual RBM indicators were collected. Anemia testing was done in children and malaria prevalence was also tested using RDT (Paracheck) and microscopy in a sub-sample. Verbal autopsy was also included in this survey. Training for the Senegal MIS was conducted in 10 days. Fieldwork started on November 25<sup>th</sup> and will end in January 2007. No biomarkers will be collected for the Senegal MIS. The sample size is 3,200 households from 15 clusters.

The SPA (Service Provision Assessment) is a nationally representative sample survey of 400-600 health facilities to ascertain information about different services and the availability of equipment from both public and private facilities at a regional level. Malaria specific questions are included in the SPA, including guidelines for treatment, types of testing, whether there is IPT for ANC (observed), and sick children observation (if there is diagnosis and care).

A recommendation was made for an update to be given on planned surveys and surveys currently in the field. This update should be given at MERG meetings and can also be made on the RBM MERG website.

*PMI Update on Needs and Plans for Survey Work (Amy Ratcliffe)*

The majority of information used in the planning of the PMI's work comes from DHS and MICS. PMI only promotes MIS surveys in places where DHS or MICS has not been done recently. Ideally, and MIS would fit between 2 DHS or MICS surveys. The PMI itself is not implementing any surveys but is working with other agencies to implement the surveys.

The biggest impact of PMI on survey work is with the additional funding the program provides for surveys. For 7 PMI countries, 3 surveys will be undertaken soon. And in the 8 additional countries, there will be additional surveys in countries that do not have a recent DHS. Anemia and parasitemia information will be collected when possible. This was not possible for the Senegal survey, as this particular survey had to be undertaken very quickly.

There is great interest in getting malaria specific mortality from as many samples as possible. Where possible, the PMI supports the use of verbal autopsy.

#### *Comparison of Coverage Estimates Derived from Health Facility Surveys with Household Survey Coverage (Alex Rowe)*

M&E data on intervention coverage are collected to assist with program management, inform governments and donors on progress, and assist with advocacy. One method of data collection is through the use of survey data. However, survey data has limitations, including the fact that surveys do not provide continuous data or localized data. Other possible choices for monitoring coverage data include routine data on proxy indicators, other survey methods (e.g. LQAS, continuous surveys with small area analyses); health facility-based data via HMIS (e.g. EPI contact method, sick contact method, and hospital line-listing method). All of these various methods also have their own issues as well.

The objective of research monitoring ITN use in the Lindi Region and Rufiji District, Tanzania in November 2005 and from August-November 2005, respectively, was to assess the validity of health facility data on ITN use compared to the “gold standard” of population-based surveys. The health facility surveys were of a representative sample of 15 health facilities in Lindi and 4 facilities in Rufiji, and included standard questions on ITN use. The health facility surveys were found to consistently overestimate community-level use of ITNs in both districts. Potential explanatory factors for this difference include the socioeconomic status of people visiting health facilities, their health-seeking behavior, and a social desirability bias.

A need was expressed for the local monitoring of ITN use. Health facility data might be used for monitoring, but it overestimated the use of ITNs in these two sub-national settings. Additional studies of validity, cost, and utility need to be done before recommending this type of monitoring strategy for widespread use. The exploration of other methods (e.g. continuous surveys with a small area analysis) is also recommended.

#### *IRS Indicators and Methods (Thom Eisele)*

Two sets of indicators for IRS coverage were presented (5 total): 1.) household level indicators as collected from household surveys; and 2.) program-level indicators as collected from program data. Please see the Power Point presentation for the complete listing and description of the five indicators. A request was made for the RBM MERG to give recommendations on and to approve the suggested indicators as soon as possible.

Issues from the discussion included:

- Use the wording “through the entire transmission season” in the indicators rather than using a number of months. The indicators should get at the fact that spraying had to be done in a timely manner.
- Look at the proportion of households sprayed before transmission began
- The range of insecticide use per sprayer
- Was the insecticide sprayed properly at the proper rate of speed with the right nozzle?
- Effectiveness of the spray was also raised. It was suggested that a device could be created to test whether anything useful was sprayed on the walls.
- In Bioko, Equatorial Guinea, a question was asked about whether the house was sprayed in the last 12 months and how many times it was sprayed. From the program side, something like this question has to be used in addition to survey data.
- It is also useful to have questions on why a house was not sprayed (i.e. whether the household refused, the spraying was not offered, there was a newborn in the house, etc). This will allow for a better understanding of access to spraying.

It was concluded that finalization of the indicators be deferred until they are discussed further at the Household Survey Task Force meeting. It was recommended that representatives from countries with successful IRS programs could be present at the meeting to give their recommendations on what is important from a program perspective.

*Day Three – Wednesday, December 14<sup>th</sup> 2006*

## **How best to strengthen communications and dissemination activities**

### **Review and Discussion of the Needs for an Improved Communications and Dissemination Strategy:**

#### **Update on Reporting**

*a.) WHO Regional Reports (Nathan Bakyaita)*

A meeting was held last week to finalize the M&E guidelines for the AFRO region. The guidelines are aimed at national malaria programs in how to do programmatic M&E around inputs, processes, and outputs. Within the guidelines, guidance is given on how to develop M&E plans in a program itself. There is also guidance on doing the “Three ones”. By the end of January, a draft should be ready for review. Some of the next steps are to identify some countries to go over issues in the guidelines and to field test the guidelines. Also, a draft of the Africa Malaria Report has been prepared. The report should hopefully be ready in time for Africa Malaria Day.

*b.) World Malaria Report 2007 (David Bell)*

The World Malaria Report 2007 will be ready by March or April. Two more countries have recently been added to the report. Two outlines of the report are being discussed in Cairo right now. UNICEF has been contacted about collaborating on this report as well. Also, PAHO will be producing something for Africa Malaria Day which means that other regional reports will also be coming out soon.

*c.) UNICEF Coverage Report (Tessa Wardlaw)*

There is a wealth of new malaria data that will be available soon, so there is a need to analyze this data and publish it quickly. The third round of MICS involved 50+ countries in 2005-06, and there have been DHS surveys in 25 malarious countries between 04 and 06. MIS surveys have also been conducted in Zambia, Angola, and will be conducted in Senegal. Other data sources are also available (e.g. AIS, CDC/PMI-supported surveys, etc.).

The coverage report will include coverage of ITNs, bednets, IPT, prompt effective antimalarial treatment. The final product will be a glossy report that will be approximately 30 pages and will provide up-to-date information on the coverage of key interventions. Data analysis for the report will occur in the first and second quarters of 2007 and the report will be published by the middle of 2007.

#### *Overview of Issues for Improving Dissemination Activities (Daniel Vadnais)*

There are three key steps in putting together a communications and dissemination plan: 1) identify the goals of the plan; 2) identify individuals and institutions that need to be reached or sensitized; and 3) identify expected actions or changes that should occur. There should also be follow-up afterwards to make sure that recipients of the information

have used it. Details and additional activities are also outlined in the presentation. Of note, additional activities include the training of journalists, targeting a few key media outlets (e.g. BBC, Radio France, etc.), shooting some footage during the MIS fieldwork for the website, and identifying upcoming events where presentations can be made. It was recommended that the Malaria Advocacy Working Group assist with such activities as it fits within their mandate.

It was expressed that there needs to be a more proactive approach in disseminating the work of the MERG. It would be a good idea to have a group of people working together to develop a set of concrete products and ideas of dissemination materials, and to then to put together a proposal for funding to support this work.

Matt Lynch offered to take the lead in assisting in the preparation of a communications/dissemination strategy. UNICEF, PMI, MEASURE Evaluation, the Global Fund, RBM Secretariat, MACEPA, and USAID/AFRO are also willing partners.

*Action Item: Matt Lynch will take the lead on calling together a meeting of the Communication Working Group.*

*Update on Malaria M&E Listserv and RBM MERG Website (Reena Sethi)*

The Malaria M&E listserv has been up and running since May 2006. Messages are sent out on a weekly basis. There are currently approximately 120 members. Messages typically include malaria in the news, job announcements, and conference announcements. Input is being sought from members for information to be posted to the listserv, as the listserv offers a way to reach a large number of people in a quick and inexpensive manner.

A suggestion was made to put one-pagers together on RBM MERG activities that can be distributed through the M&E listserv. The listserv can also be advertised through various conferences and meetings.

The RBM MERG website has been updated. Currently, publications are listed on the right-hand side of the page under various headings. There are new M&E specific publications available on the website.

*Continuation of discussion on on-going progress in Capacity Building Initiatives*

An M&E framework was agreed upon at a meeting in Harare last week. For IRS, inputs do not necessarily have to change, but outputs may change once an agreement is reached on IRS coverage. The HMIS in Zambia is currently being revised and a section is being added on additional national level malaria indicators.

A question was raised on the compatibility of different systems. One data information system in Zambia is based on EpiInfo while the HMIS is based on MS Access. Antenatal services in Zambia are beginning to use smart cards for individual tracking of data.

Smart cards are currently being used for OPD clinics as well and will be expanded to other health facilities. There is also a new program that will be using cell phones and SMS as part of the information transfer.

A note was made of Global Fund Application A: malaria attachment A is different from the HIV attachment of the application. There is an opportunity for the RBM Secretariat to provide more assistance to countries in filling out these applications.

At the AFRO meeting last week, it was decided that the 5 core outcome indicators are the same as before. They also looked at output and some process and input indicators that would be core indicators for all programs. That list is currently being finalized. All countries should then report on those indicators, using the clear guidance that will be provided to them. Since Round 7 is coming up, now is a good time to create that guidance and for the group to annotate attachment A. If this does not happen soon, it will be more difficult to follow-up on attachment A with every country.

There was discussion on the management of process level indicators and the identification of bottlenecks. These issues seem to be what is causing donors to hold back their funding. The idea of having management indicators was brought up to give donors an idea of the capacity of a program to absorb funds. There should also be a tool to review bottlenecks, though that tool was not identified. Nathan Bakayita mentioned that one of the indicators discussed at the meeting in Harare last week was funds budgeted and disbursed. He suggested that the Global Fund could help in revising the list of management indicators. This issue could be taken up by the Capacity Building Task Force.

**RBM Secretariat  
Monitoring and Evaluation Reference Group (MERG)**

**Updated Terms of Reference  
10 May, 2007**

**I. Background**

In accordance with the Operating Framework of the RBM Partnership, the Monitoring and Evaluation Reference Group has been established by the Board in May 2003 to advance the work programmes of the partners. The MERG is supported by the Secretariat to fulfill its terms of reference as noted below. The MERG will continue to focus on issues of monitoring and evaluation of progress towards the RBM Partnerships goals and objectives. It will not duplicate the responsibilities of WHO Expert Committees. Recommendations to the board arising from the MERG should be useful and adaptable to local situations (bearing in mind inter-country and within country differences in needs and context, and existing local mechanisms for securing such advice). The MERG is further guided by the overall commitment of the RBM partners to: (i) partnership and capacity building, (ii) harmonization, accountability and transparency in scaling-up actions; and (iii) bridging the gaps between technical and programmatic support needs at country level.

**II. Purpose/Rationale**

Over the past five years, the RBM partners with support from the Secretariat have worked towards developing a comprehensive monitoring and evaluation system to track progress towards the RBM stated goals. In the course of constructing this system, the Secretariat identified a need for an advisory body that could inform RBM on technical questions related to monitoring and evaluation (M&E). This body brings together a group of individuals who are well versed in the science of M&E as well as the programmatic needs and implications to advise on, and advocate for, improved M&E of the RBM Initiative. In July 2002, representatives of the various RBM Partner organizations met in Washington DC, to discuss M&E issues. This group endorsed the formation of a Monitoring and Evaluation Reference group and laid out the proposed terms of reference below.

The Monitoring and Evaluation Reference Group (MERG) of the RBM Secretariat will continue to act as an advisory body for the RBM Partnership Board on all matters pertaining to M&E of the Secretariat's initiatives on the international, regional, and national levels. The MERG will provide technical advice on state-of-the-art approaches to M&E of malaria programs.

The technical focus of the MERG is on the global indicators to assure consistency and accuracy in national and regional reporting. The MERG will maintain communications with inter-country teams and WHO and UNICEF regional offices working on process

monitoring and country-specific M&E issues but will not address these issues as part of its primary mandate.

### **III. Functions of the MERG**

The MERG is an advisory body for the RBM Partnership Board. It does not have authority to implement M&E activities on behalf of RBM, nor is it accountable for reporting to the Secretariat on national or regional progress in malaria control. Instead, the M&E work will be implemented by National Malaria Control Programmes with support from the RBM inter-country teams and RBM partners.

The activities of the MERG will include, but not be limited to, advising WHO on the following functions:

- Developing and providing technical guidance on selection and definition of indicators for national, inter-country and global reporting
- Advising on prioritization of tasks and recommendations for outputs or products from working groups
- Providing technical guidance on appropriate data collection methods, analytic strategies, and dissemination of recommendations
- Identifying critical technical questions arising from M&E activities and organizing smaller working groups to address the questions and provide technical feedback on issues
- Identifying and prioritizing critical action steps for country, regional and global M&E work to assure that action is taken by the relevant group(s) to achieve quality M&E in a timely fashion
- Identifying and recommending strategies for addressing the needs for capacity building in M&E at all levels
- Developing and maintaining consensus around M&E strategies across partners and institutions
- Keeping RBM informed of developments within other institutions and initiatives, such as the Health Metrics Network, the Global Fund to Fight AIDS, TB and Malaria, the US President's Malaria Initiative, the World Bank Malaria Booster Programme, and similar initiatives that have relevance for RBM
- Monitoring changing needs for M&E as country programs, and the RBM Initiative itself, develop further
- Supporting coordination/harmonization of M&E activities (data collection, analysis, dissemination) among the RBM working groups and partners
- Informally advocating for increased attention to and resources for monitoring and evaluation activities within the RBM Secretariat and the members' home institutions
- Other activities pertinent to M&E as requested by the RBM Secretariat

### **IV. Membership**

The membership of the MERG will be drawn from a variety of institutions and will represent a broad range of disciplines necessary for informing the M&E process. Depending on the objectives of a particular meeting or subject matter to be discussed, an

outside consultant or expert may be invited. The RBM Secretariat will invite the members. The following are suggested criteria as guidance for the selection of individuals:

- expertise and experience in M&E
- knowledge of malaria and malaria-related issues
- balance of scientific and programmatic knowledge and experience
- geographic representation (especially Africa)
- commitment to participate actively in the MERG
- balance of relevant disciplines (e.g. evaluation, public health, medicine, epidemiology/biostatistics, social sciences, economics, programme management, etc.)

All members should have a familiarity with M&E frameworks and issues and should be responsible for M&E activities within their organizations. MERG members will include a variety of partner organizations and individuals including but not limited to the following:

- WHO (WHO, AFRO, EIP)
- UNICEF (headquarters and regional offices)
- World Bank
- Global Fund
- National Malaria Control Programs/Ministries of Health/National Statistical Offices (or similar statistical or analytical divisions within national governments)
- Key bilateral donors for M&E (e.g., USAID, DFID)
- RBM inter-country, inter-agency teams
- Research organizations, academic institutions and programme support or implementation organizations with expertise in the area of malaria M&E (e.g., CDC, Measure-DHS, INDEPTH Network of demographic surveillance sites, Universities or Schools of Public Health, Non-Governmental Organizations, etc.)

## **V. Structure/Working Procedures**

The MERG will be comprised of 15-20 members. Other experts in specific fields will be invited to participate in general MERG meetings and task forces, depending on the agenda and the focus of activities being conducted on behalf of RBM partners. The Chair and Co-chair will be elected by RBM-MERG members for a two-year renewable period. The MERG will meet approximately 2-3 times per year as organized by RBM. Dates and locations will be determined by the Chair in coordination with members. Occasionally, smaller task forces of the MERG may meet on an ad-hoc basis to address specific issues as assigned by the larger body. RBM partner(s) will fund one of the implementing agencies to serve as Secretariat for the MERG under the guidance of the RBM Secretariat (currently USAID provides this support to ORC-MACRO Measure Evaluation to serve in this role. The MERG Secretariat will take responsibility for keeping minutes of the meetings and preparing a report for distribution to the membership. It will also work with the RBM Secretariat to serve as the coordinators of the MERG, in particular with regards to the arrangements for meetings, invitations, and logistical support. It may also

undertake other support functions as necessary, such as coordinating online information or discussions.

**RBM MERG Work Plan January 2007-December 2007 DRAFT**

Function	Products/Services	Partnership (and community) objective	Targets for 2007	Operationalized Indicators (2007 specific)	
Please see attached Terms of Reference for the RBM Monitoring and Evaluation Reference Group (MERG) which addresses these categories in detail				<i>How achieving of the goals is measured, i.e. actual metrics used</i>	
<p><i>Synopsis:</i> The MERG will act as an advisory body for the RBM Partnership Board on all matters pertaining to monitoring and evaluation (M&amp;E) of the Secretariat's initiatives on the international, regional, and national levels. The MERG will provide technical advice on state-of-the-art approaches to M&amp;E of malaria programs. The technical focus of the MERG will be on the global indicators to assure consistency and accuracy in national and regional reporting.</p>	<p><i>Synopsis:</i> Actual M&amp;E work will be implemented by National Malaria Control Programmes with support from the RBM inter-country teams and RBM partners. The MERG is purely an advisory body for the RBM Partnership Board. It does not have authority to implement M&amp;E activities on behalf of RBM nor is it accountable for reporting to the Secretariat on national or regional progress in malaria control.</p>	<p><i>Synopsis:</i> The primary objectives of the MERG are to provide the RBM Partnership Board with the following:</p> <p>7. Recommendations and guidance on the best practices of M&amp;E methods and reporting vis-à-vis international targets and goals for measuring the success of malaria control efforts.</p>	<p>Guidance and coordination of best-practices of M&amp;E methods to measure progress of malaria control efforts against international standards</p>	<ul style="list-style-type: none"> <li>• Holding of 2 MERG meetings with resultant written recommendations and guidance in best-practices of M&amp;E (meeting minutes)</li> <li>• Joint database meeting held</li> </ul>	
	<p>The MERG operates primarily through task forces designed to address specific M&amp;E issues. Such task forces regularly meet and seek external expertise from multilateral, bilateral, and academic partners within their mandated area, reporting back to the MERG for consensus and harmonization.</p>	<p>7. Harmonization of RBM (and other organizations) M&amp;E activities and methods to ensure results are valid, accurate and comparable over time and across countries.</p>	<p>Tools to improve country-level capacity of the NMCP to perform high quality M&amp;E available</p>	<ul style="list-style-type: none"> <li>• M&amp;E Toolkit completed and adopted by MERG partners</li> <li>• Recommendations for M&amp;E Toolkit implementation presented to the MERG</li> <li>• M&amp;E Toolkit dissemination workshop held with representation from 10 countries</li> </ul>	
			<p>Standardized procedures for creating country-level endemicity maps and estimating country-level disease burden and risk populations available.</p>	<p>Standardized procedures for creating country-level endemicity maps and estimating country-level disease burden and risk populations available.</p>	<ul style="list-style-type: none"> <li>• Procedures for creating county –level endemicity maps and country-level estimates of disease burden and risk populations adopted by MERG partners</li> </ul>
				<p>Standardized procedures and tools for                      0) indoor residual spraying (IRS) coverage indicators                      0) laboratory testing of parasitemia and field testing of anemia                      0) the use of methods other than traditional probability household surveys to generate service coverage estimates                      are available.</p>	<p>Standardized procedures and tools adopted by MERG partners:</p> <ul style="list-style-type: none"> <li>• IRS coverage indicators</li> <li>• Field testing of anemia and laboratory testing of parasitemia</li> <li>• the use of methods other than traditional probability household surveys to generate service coverage estimates</li> </ul>

Function	Products/Services	Partnership (and community) objective	Targets for 2007	Operationalized Indicators (2007 specific)
			Use of malaria information from various information sources for national-level program planning and management improved.	<ul style="list-style-type: none"> <li>• 2-3 “white papers” on further analysis of household survey data with recommendations for national-level program planning and management 1) written and 2) published in journals</li> <li>• Regional workshop on malaria information use for national-level program planning and management held</li> </ul>
			Provide guidance and coordination of best-practices of measuring malaria specific and all-cause mortality	<ul style="list-style-type: none"> <li>• Paper on options for evaluating the impact of malaria control efforts on mortality in Africa published</li> <li>• Guidance note on assessing the mortality impact of malaria control program on African children under five years of age issued</li> <li>• Recommendations on what data are needed for feeding the Spectrum malaria mortality modeling software written</li> </ul>
			Areas for assessing economic outcomes vis-à-vis malaria prioritized	<ul style="list-style-type: none"> <li>• Prioritized list of areas for assessing economic outcomes vis-à-vis malaria</li> </ul>
			Malaria monitoring and evaluation information readily available.	<ul style="list-style-type: none"> <li>• Malaria monitoring and evaluation available on RBM MERG website</li> <li>• Malaria M&amp;E listserv operational</li> </ul>

Activity	Description	Timing/Quantity				Non personnel costs (kUSD)			
		Q1	Q2	Q3	Q4	Travel	Events	Other	Total
<b>Capacity Building Task Force</b>									
Hold Capacity Building Task Force Meetings	<ul style="list-style-type: none"> <li>2 Capacity Building Task Force meeting to be held in 2007</li> </ul> <p><u>Activity lead:</u> Malaria Consortium and MEASURE Evaluation <u>Activity partners:</u> WHO (HQ and Regional), UNICEF, World Bank, PMI-CDC, MACEPA</p>		X		X	\$80	\$35	\$40	\$155
Coordinate the finalization of a malaria M&E toolkit	<ul style="list-style-type: none"> <li>Provide guidance and coordination for the finalization of an M&amp;E toolkit, to include: <ul style="list-style-type: none"> <li>M&amp;E system strengthening tool (exists on Global Fund website)</li> <li>M&amp;E plan template</li> <li>Costed M&amp;E plan template</li> <li>Malaria M&amp;E training module</li> </ul> </li> </ul> <p><u>Activity lead:</u> MACEPA and Malaria Consortium <u>Activity partners:</u> WHO (HQ and Regional), UNICEF, World Bank, PMI-CDC, Global Fund, MEASURE Evaluation</p>		X		X				
Develop recommendations for implementation of the M&E toolkit in 10 countries	<ul style="list-style-type: none"> <li>Identify 10 countries where the M&amp;E toolkit can be effectively disseminated through a short workshop</li> </ul> <p><u>Activity lead:</u> MACEPA and Malaria Consortium <u>Activity partners:</u> WHO (HQ and Regional), UNICEF, World Bank, PMI-CDC, Global Fund, MEASURE Evaluation</p>		X	X					
Conduct regional workshop to train consultants who will provide assistance for strengthening M&E capacity	<ul style="list-style-type: none"> <li>Conduct 5 day workshop for 10 consultants who will be used to provide technical assistance for strengthening M&amp;E capacity.</li> </ul> <p><u>Activity lead:</u> MEASURE Evaluation and Malaria Consortium <u>Activity partners:</u> WHO (HQ and Regional), UNICEF, World Bank, PMI-CDC, Global Fund, MACEPA</p>				X	\$95	\$45	\$45	\$180
<b>Morbidity Task Force</b>									

Activity	Description	Timing/Quantity				Non personnel costs (kUSD)			
		Q1	Q2	Q3	Q4	Travel	Events	Other	Total
Hold Morbidity Task Force meetings	<ul style="list-style-type: none"> <li>2 Morbidity Task Force meeting to be held in 2007</li> </ul> <u>Activity lead:</u> WHO (HQ and Regional) <u>Activity partners:</u> PMI-CDC, UNICEF, World Bank, MACEPA		X		X				
Coordinate endemicity maps generated across countries	<ul style="list-style-type: none"> <li>Review and provide recommendations for standardization of country-level endemicity maps</li> <li>Provide guidance and coordination of their availability and use</li> </ul> <u>Activity lead:</u> WHO (HQ and Regional) <u>Activity partners:</u> PMI-CDC, TBD, Global Fund, MEASURE DHS		X	X	X				
Coordinate estimates of disease burden and risk populations across countries	<ul style="list-style-type: none"> <li>Review and provide standardization of country-level estimates of disease burden and risk populations</li> <li>Provide guidance and coordination of their availability and use</li> </ul> <u>Activity lead:</u> WHO (HQ and Regional) <u>Activity partners:</u> PMI-CDC, TBD		X	X	X				
<b>Household Survey Task Force</b>									
Hold Household Survey Task Force meeting	<ul style="list-style-type: none"> <li>Household Survey Task Force meetings to be held in 2007</li> </ul> <u>Activity lead:</u> UNICEF and MEASURE DHS	X							

Activity	Description	Timing/Quantity				Non personnel costs (kUSD)			
		Q1	Q2	Q3	Q4	Travel	Events	Other	Total
Finalize IRS indicator guidelines	<ul style="list-style-type: none"> <li>Develop consensus and finalize guidelines for IRS indicators</li> </ul> <p><u>Activity lead:</u> Tulane University, MEASURE Evaluation and RTI  <u>Activity partners:</u> WHO (HQ and Regional), World Bank, PMI-CDC, Swiss Tropical Institute, London School TMH</p>	X	X						
Coordinate the development of guidelines and protocols for field testing of anemia and laboratory testing of parasitemia	<ul style="list-style-type: none"> <li>Provide recommendation for the standardization of guidelines and protocols for field testing of anemia and laboratory testing of parasitemia</li> <li>Review and provide recommendations on the use of RDTs and other methods for monitoring case burden within household surveys, to be considered in conjunction with microscopy</li> </ul> <p><u>Activity lead:</u> MACEPA  <u>Activity partners:</u> WHO, PMI-CDC, MEASURE Evaluation, MEASURE DHS</p>	X	X	X					
Hold a meeting on assessing and providing recommendations for the use of methods other than traditional probability household surveys to generate service coverage estimates	<ul style="list-style-type: none"> <li>Provide guidance and recommendations on the use of sampling methods other than traditional probability household surveys (i.e. LQAS, EPI contact method, etc..)</li> </ul> <p><u>Activity lead:</u> PMI-CDC  <u>Activity partners:</u> World Bank, UNICEF, WHO, MEASURE Evaluation, MEASURE DHS</p>		X						
Coordinate secondary analysis of MICS, DHS and MIS malaria data	<ul style="list-style-type: none"> <li>Coordinate the development of a series of “white papers” for publication in peer-reviewed journals on issues critical to RBM, PMI, WB Booster program, etc.</li> <li>Key findings summary and white papers loaded to RBM website</li> <li>Creation of a forum for presentation of final papers and discussion of program and policy implications</li> </ul> <p><u>Activity lead:</u> MACEPA</p>		X	X	X				

Activity	Description	Timing/Quantity				Non personnel costs (kUSD)			
		Q1	Q2	Q3	Q4	Travel	Events	Other	Total
	<u>Activity partners:</u> WHO, UNICEF, PMI-CDC, World Bank, MEASURE Evaluation, Tulane, Global Fund, MEASURE DHS								
Hold a regional workshop on further analysis of household survey malaria data (DHS, MICS, MIS) for the purpose of informing program management and planning	<ul style="list-style-type: none"> <li>Development of consensus on the types of further analysis to be promoted in a workshop</li> <li>Holding a 1-2 day regional workshop on further analysis to be targeted towards country NMCP representatives (location TBD)</li> </ul> <u>Activity lead:</u> UNICEF <u>Activity partners:</u> WHO, World Bank, PMI-CDC, MACEPA, MEASURE Evaluation, Tulane University, MEASURE DHS		X	X		\$40	\$10		\$50
<b>Mortality Task Force</b>									
Hold Mortality Task Force meeting	<ul style="list-style-type: none"> <li>Mortality Task Force meetings to be held in 2007</li> </ul> <u>Activity lead:</u> UNICEF		X						
Publish MERG documents on malaria mortality monitoring	<ul style="list-style-type: none"> <li>MERG paper 'Options for Evaluating the Impact of Malaria Control Efforts on Mortality in Africa' finalized and published in a peer-reviewed journal</li> <li>MERG guidance note on assessing the mortality impact of malaria control program on African children under five years of age issued</li> <li>Dissemination plans discussed</li> </ul> <u>Activity lead:</u> CDC <u>Activity partners:</u> WHO (HQ and Regional), UNICEF, Global Fund, PMI-CDC, USAID, MACEPA, MEASURE DHS				X				
Coordinate with Global Fund, PMI-CDC/USAID, WHO and MACEPA on key inputs needed for the Spectrum mortality modeling software (Lancet model)	<ul style="list-style-type: none"> <li>Provide advocacy, coordination and guidance on obtaining important input estimates for the Spectrum-based mortality modeling software (Lancet model) to address: a) better estimates of malaria specific mortality; b) comortality and c) data to address/test linearity assumption of relationship between malaria mortality and determinants thereof (e.g. intervention coverage)</li> </ul>			X	X				

Activity	Description	Timing/Quantity				Non personnel costs (kUSD)			
		Q1	Q2	Q3	Q4	Travel	Events	Other	Total
	<u>Activity lead:</u> UNICEF <u>Activity partner:</u> WHO, Global Fund, PMI-CDC, MACEPA, JHU, TBN								
<b>Economic Task Force</b>									
Hold Economic Task Force meetings	<ul style="list-style-type: none"> <li>2 Economic Task Force meetings to be held in 2007 to garner consensus on best practices and establishing priority areas for assessing economic outcomes vis-à-vis malaria</li> </ul> <u>Activity lead:</u> World Bank <u>Activity partners:</u> WHO (HQ and Regional), UNICEF, Global Fund, PMI-CDC, USAID, MACEPA		X		X	\$80			\$80
<b>Dissemination Task Force</b>									
Manage Malaria Listserv/ Website updates	<ul style="list-style-type: none"> <li>Manage the malaria M&amp;E Listserv and to regularly update the RBM MERG website</li> </ul> <u>Activity lead:</u> MEASURE Evaluation	X	X	X	X				
<b>Other activities not falling under a specific Task Force</b>									
Hold joint partner database sharing group meeting	<ul style="list-style-type: none"> <li>Meeting of joint database sharing group to establish consensus on principals of sharing databases on malaria M&amp;E across partners.</li> </ul> <u>Activity leads:</u> UNICEF <u>Activity partners:</u> WHO, World Bank, Global Fund, PMI-CDC USAID, JHU, MEASURE Evaluation	X							

Activity	Description	Timing/Quantity				Non personnel costs (kUSD)			
		Q1	Q2	Q3	Q4	Travel	Events	Other	Total
Conduct activities of MERG Secretariat	<ul style="list-style-type: none"> <li>Hold 2 MERG meetings with the objective of coordinating MERG workplan activities, assessing progress in achieving operationalized indicators, administrative issues and harmonization of MERG activities between MERG task forces and RBM working groups</li> <li>Support the MERG in its activities</li> </ul> <p><u>Activity lead</u>: MEASURE Evaluation (Secretariat)</p>		X		X	\$80	\$20	\$20	\$120

## RBM MERG Budget January 2007-December 2007 DRAFT

<b>Item</b>	<b>Cost</b>
MERG Capacity Building Task Force Meetings	\$75,000
Travel expenses for 4 representatives from countries in Africa to attend 2 MERG Capacity Building Task Force Meetings	\$80,000
Regional workshop to train consultants who will provide assistance for strengthening M&E capacity	\$180,000
Regional workshop on further analysis of household survey malaria data	\$50,000
Travel expenses for 4 representatives from countries in Africa to attend 2 MERG Economic Task Force Meetings	\$80,000
Costs of Secretariat for July – December 2007*	\$40,000
Travel expenses for 4 representatives from countries in Africa to attend 2 MERG Meeting	\$80,000
<b>Total</b>	<b>\$585,000</b>

\*USAID has already provided financial support for the secretariat for the first half of 2007 through MEASURE Evaluation which will cover the first MERG meeting. In order to conduct 2 Capacity Building Task Force Meetings (\$75k), a regional workshop for consultants (\$180k) and 1 MERG meeting and to provide secretariat support for the remainder of 2007 (\$40k), MEASURE Evaluation will need \$195,000.



## **Monitoring and Evaluation Reference Group (MERG) GUIDANCE NOTE**

### **Assessing the Impact of Malaria Control Activities on Mortality among African Children Under 5 Years of Age**

#### **BACKGROUND**

The Roll Back Malaria Monitoring and Evaluation Reference Group (MERG) was established in 2003 to advise the Partnership on key monitoring and evaluation issues, including guidance on monitoring progress toward malaria-specific international goals and commitments. A stated goal of the RBM Partnership is to halve the burden of malaria by 2010. Other major international goals, such as the Millennium Development Goals, also call for reducing the malaria burden.

It was previously proposed that malaria-specific mortality be the principal indicator for assessing malaria's burden, as it is the most important contributing factor to this burden, as measured in DALYs.<sup>i</sup> However, there are significant challenges to monitoring changes in malaria-specific mortality, especially in the areas of high-intensity malaria transmission in Africa south of the Sahara, where the greatest burden of malaria-specific mortality occurs, mainly among young children, and where vital registration and health information systems are weakest. In these countries no one source of information is available that provides robust and timely information for this mortality impact assessment. Table 1 provides an overview of the benefits/drawbacks of the various potential information sources for this assessment. A more detailed discussion is also available in Rowe et al (forthcoming).<sup>ii</sup>

#### **PURPOSE**

The purpose of this technical note is to provide guidance on how best to assess the impact of malaria control activities on mortality among African children. This guidance note focuses on the mortality impact assessment for African children under five years of age, as this population bears the greatest burden of malaria-related mortality. A detailed discussion of the technical considerations for this recommendation is provided in Rowe et al (forthcoming).<sup>2</sup> Further work is still needed to determine the best approach for such an assessment among older children and adults in Africa and as well as in other geographic regions.

The RBM MERG recognizes that there are a number of limitations with each of the potential measurements of malaria's burden and changes in that burden. Thus, there is

no perfect single or set of measurements to track burden and burden reduction. For example, the measurement of malaria-specific deaths is problematic. In most malarious areas, most deaths occur outside of any system of death registration linked with health facility and laboratory confirmation. Verbal autopsy methods can be used to categorize a death as caused by malaria, yet with imperfect specificity and sensitivity. And, it is widely recognized that malaria contributes to many deaths even though the ultimate cause may be categorized as due to another condition. Thus, we offer recommendations and guidance in this context of imperfect sensitivity and specificity of malaria-specific and malaria-associated mortality.

## **RECOMMENDATION**

The RBM MERG recommendation first sets out the minimum needed by all countries to implement the malaria impact assessment, and then provides options for additional analyses, if needed. This 'minimum standard' approach intends to help ensure consistency across countries in the method used for this assessment. It is also based on the recognition that monitoring efforts in resource-poor settings should focus on collecting only those indicators that will be reliable and useful for decision-making purposes.

Therefore, at a minimum, the RBM MERG recommends that all countries south of the Sahara with high-intensity malaria transmission should:

- First, regularly monitor coverage of key malaria control interventions based on data derived from high quality and statistically-sound household surveys, such as the Multiple Indicator Cluster Surveys (MICS), the Demographic and Health Surveys (DHS) and the Malaria Indicator Surveys (MIS).
- Second, regularly monitor all-cause under-five mortality based on data from statistically-sound national-level household surveys, such as MICS and DHS. In addition, annual estimates of under-five mortality for all countries are produced by the Interagency Group for Mortality Estimation (UNICEF, WHO, World Bank and UN Population Division) which are available at [www.childinfo.org](http://www.childinfo.org).
- Third, use coverage estimates of key malaria control interventions as inputs to the child survival impact model, which has been developed by the Child Health Epidemiology Reference Group (CHERG). Based on these inputs, the model can predict the impact of malaria control programs on mortality among African children. (See 'model-based approach' section)

Additional data collection and analyses where there is better country capacity to conduct special studies:

- If complementary and robust data are available, such as from local research projects or sentinel surveillance sites, countries may decide to use this information for a more in-depth assessment of trends in malaria-specific mortality. In addition, if malaria morbidity data are available (e.g. anemia and

parasite prevalence) this information may also be used by countries to further substantiate the predictions of the model. For example, if increases in malaria intervention coverage are accompanied by reductions in anemia and parasite prevalence, then it is likely that malaria-specific mortality has been reduced. Finally, verbal autopsies attached to household surveys may be able to provide information on malaria-specific mortality. However, operational research is needed to determine the validity of data collected using this tool before it can be recommended. A full discussion of these potential analyses is available in Rowe et al (forthcoming).<sup>2</sup>

- Review malaria data from health information and vital registration systems to better understand the gaps in these data sources, and to analyze the burden of malaria on the health system itself.

## **MODEL-BASED APPROACH**

Given the significant challenges to directly measuring changes in malaria-specific mortality, an innovative and useful model has been developed by the Child Health Epidemiology Reference Group (CHERG) that allows users to predict the impact of a range of child survival interventions (including those for malaria) on under-five mortality. The child survival impact model links coverage of key child survival interventions (including those for malaria) with an estimate of each intervention's efficacy. Based on these inputs, the model is able to predict the proportionate reduction in under-five mortality due to increasing coverage of key child survival interventions (including those for malaria) from a baseline value to a current level.

This model-based approach has been used by UNICEF to evaluate the impact of its Accelerated Child Survival and Development (ACSD) program.<sup>iii</sup> This approach is practical, cost-effective and provides immediate outputs. In addition, the model-based approach may be systematically and immediately implemented in all countries south of the Sahara with high-intensity malaria transmission that have conducted good quality household surveys.

In the coming months, the model will be developed into a user-friendly software package for use at the country level. The first version of this software package will become available in 2007. In addition, validation of the model will be carried out in 2007 to substantiate the accuracy of the model's predictions. Based on this assessment, the model's assumptions may then be adjusted to improve comparability between the model's predictions and observed mortality trends.

**Table 1: Summary of the attributes of information sources for malaria-associated mortality**

Attribute	Source of mortality information				
	National-level household surveys (e.g. DHS, MICS)	Sentinel surveillance sites (e.g. DSS)	Verbal autopsies attached to household surveys	Vital registration and health information systems	Model-based approach
Representativeness	Excellent	Not nationally representative	Excellent	Not nationally representative	Excellent
Validity of deaths attributed to malaria	Not applicable	Validity of verbal autopsies from DSSs is good at population level; individual deaths often misclassified	Operational research needed to determine validity of data collected	Fair (if no lab confirmation) to Excellent (if lab confirmed)	Uses intervention coverage estimates as inputs to derive estimate of mortality impact; validation of model to begin shortly
Relative costs	Expensive (but costs may be shared)	DSSs are expensive (but costs may be shared)	Expensive (but costs may be shared)	Inexpensive (but improving data collected through systems will be expensive)	Inexpensive
Timing	All cause under-five mortality estimates typically refer to 5-year period prior to data collection	Provides timely mortality data	Estimates typically refer to 5-year period prior to data collection	Provides timely mortality data	Provides timely mortality estimates
Overall Comment	<b>MERG Recommendation</b> Does not provide malaria-specific mortality; use for regular monitoring of malaria intervention coverage and under-five mortality (key inputs to model-based approach)	Not available in most countries; long time period required to set up new DSSs and for new sites to then collect and report relevant data; provide sub-national data where available; high cost and long time period needed to set up new DSSs	More operational research needed to determine robustness of this data source; long time period needed for operational research to be conducted	Currently available; data reporting from district to national level often slow and incomplete; need to provide an estimate of completeness of reporting which can be used for estimating cases	<b>MERG Recommendation</b> Use for malaria impact assessment; low cost; immediate outputs; validation to begin shortly

Source: Rowe et al, *Methods for evaluating the impact of malaria control efforts on mortality in Sub-Saharan Africa* (submitted for publication).

## References

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<sup>i</sup> Roll Back Malaria. Framework for Monitoring Progress and Evaluation Outcomes and Impact, 2000, Geneva: World Health Organization. Available at: [http://rollbackmalaria.org/cmcc\\_upload/0/000/012/168/m\\_e\\_en.pdf](http://rollbackmalaria.org/cmcc_upload/0/000/012/168/m_e_en.pdf).

<sup>ii</sup> Rowe, AK, RW Steketee, F Arnold, T Wardlaw, S Basu, N Bakyaite, M Lama, CA Winston, M Lynch, B Nahlen for the Roll Back Malaria Monitoring and Evaluation Reference Group (MERG), Methods for evaluating the impact of malaria control efforts on mortality in sub-Saharan Africa (submitted for publication).

<sup>iii</sup> United Nations, "Report of the Executive Director: Results Achieved for Children in 2004 in Support of the Medium-Term Strategic Plan", 2005, Economic and Social Council, E/ICEF/2005/7. Available at: [http://www.unicef.org/about/execboard/files/05-6\\_ExecDirs\\_report2\(1\).pdf](http://www.unicef.org/about/execboard/files/05-6_ExecDirs_report2(1).pdf); and UNICEF, "Child Survival", 2006, Available at: [http://www.unicef.org/health/index\\_childsurvival.html](http://www.unicef.org/health/index_childsurvival.html)