



Mekong Malaria Program Core Partners' Meeting

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ABBREVIATIONS

ACT	Artemisinin-based Combination Therapy
ACTMalaria	Asian Collaborative Training Network for Malaria
ANEQAM	Asian Network of Excellence in Quality Assurance of Medicines
ART	Artemisinin
CAM	Cambodia
CNM	Cambodia National Centre for Parasitology, Entomology and Malaria Control
DRA	Drug Regulatory Authority
FY	Fiscal Year
GFATM	Global Fund to fight AIDS, Tuberculosis and Malaria
GMP	WHO Global Malaria Programme
GMS	Greater Mekong Sub-region
IR	Intermediate Results
ITN	Insecticide-Treated Net
Lao PDR	Lao People's Democratic Republic
LLIN	Long-Lasting Insecticide Net
M&E	Monitoring and Evaluation
MMFO	Management of Malaria Field Operations
MMP	Mekong Malaria Programme
MSH	Management Sciences for Health
OD	Operational district
PMI	President's Malaria Initiative
PSI	Population Services International
RBM	Roll Back Malaria
RDT	Rapid Diagnostic Test
RPM Plus	Rational Pharmaceutical Management Plus
TA	Technical Assistance
TES	Treatment Efficacy Studies
THL	Thailand
SEARO	WHO South-East Asia Regional Office
USAID RDM-A	United States Agency for International Development Regional Development Mission - Asia
USP	United States Pharmacopeia
URC	University Research Co., LLC
VHW	Village Health Worker
WHO	World Health Organization
WPRO	WHO Western Pacific Regional Office

BACKGROUND

It is one year since the Mekong Malaria Partners last met from 5-6 October 2009 in Bangkok, Thailand to finalize the five year Strategic plan for malaria control in the GMS region: *Towards the Implementation of a Strategic Plan for Malaria Control and Elimination in the Greater Mekong Subregion: 2010-2015*¹. During that period, USAID Regional Development Mission in Asia (RDM-A) has continued to play a leading role in malaria control in the GMS, particularly through its support of the Mekong Malaria Program. This partnership initiative involves national malaria programmes from six countries in the GMS – Cambodia, China (Yunnan province), Lao PDR, Myanmar, Thailand and Viet Nam –, core technical agencies directly funded by USAID/RDM A and other partners playing a role in malaria control including research in the GMS. MMP contributes to address remaining challenges malaria control programmes are facing to and focused on initiating strategic projects and programs for malaria control towards elimination in the Mekong region. The WHO Mekong Malaria Programme (WHO-MMP) office, based in Bangkok, has the role of coordinating the activities of the MMP network, linking with all MMP partners including non-USAID funded agencies.

Following the 2009 meeting, MMP Partners met again from the 21-22 September, 2010 in Phuket, Thailand. The purpose of this meeting was to review the progress made in the previous year and discuss work plans for the coming fiscal year with inputs from programme managers from the 6 countries. The key objectives of the meeting were to review the achievements and challenges of partners' activities for the FY09 fiscal year, to share planned areas of focus and activities for 2010-2011, and to identify key technical assistance and resource gaps. Partners then took the opportunity provided at the forum to share ideas and approaches for addressing these gaps in order to intensify and scale-up efforts for malaria control and elimination in the region.

The Agenda and List of Participants for this meeting are attached as Annexes 1 and 2.

¹ [HTTP://WWW.WHOTHAILAND.ORG/EN/SECTION3/SECTION113_269](http://www.whothailand.org/en/section3/section113_269)

Executive Summary

Following the finalization of the strategic plan during the 5-6 October 2009 (*Towards The Implementation Of A Strategic Plan For Malaria Control And Elimination In The Greater Mekong Subregion: 2010-2015*), the MMP partners met again from 21-22 September in Phuket, Thailand. The purpose of this meeting was to review the progress made in the previous year and discuss work plans for the coming fiscal year. A key focus of the workshop was working together to assess the key capacity building needs of NMCPs and partners for M&E Surveillance and elimination. Participants worked together to provide inputs, identify strengths and weaknesses and the next steps forward with focus on M&E and Surveillance.

As in previous years, partners also worked together to identify core areas for strengthening programs across the region. A number of areas were recognized as requiring a greater focus of efforts and/or resources. These included: Migrant and mobile populations; Engaging the Private Sector; Pharmacovigilance; Laboratory systems strengthening; BCC/IEC; Cross-border initiatives; Slide Bank Management; Drug Quality; Regional communication and information sharing, as well as improved information sharing between partners at country level, and capacity building, particularly as countries moved towards pre-elimination and elimination of malaria. In addition, there was much discussion about the need to consider a greater focus on Entomology and vector control especially when related to personal protection targeting migrants and mobile population.

The issue of resources was a subject of much discussion over the course of the 2-day meeting. Dr. John MacArthur, Chief, Program Implementation Unit, Malaria Branch, CDC, informed participants that from FY2011, the MMP Programme would no longer be administrated under USAID RDM/A but would come under the Presidents Malaria Initiative (PMI). As a result, there would be increased resources, technical assistance and planning for the region. GMS Malaria Operational Plans (MOPS) would be developed with an initial focus on drug resistance, quality medicines and malaria elimination. The transition from USAID to PMI would occur during FY2010 and from 2011 onward, MMP would operate under the PMI.

Valuable inputs were given by programme managers to partners at day2 and strategic technical domains were highlighted to be strengthened in 2011 as well as inputs given through plenary discussion to Representatives from USAID/.PMI in order to feed the next 5-year USAID PMI plan in the GMS to be implemented from 2012 onwards.

The date for the next MMP partners meeting was confirmed as 26-27 April, 2011 probably in Bangkok.

Day 1: Tuesday 22 September, 2010

Overview of Day One

Following the opening remarks by Dr. Charles Delacollette and Dr. Chansuda Wongsrichanalai, all partners were invited to give a brief presentation and overview of their FY09 activities supported by USAID RDM/A in the GMS. Following these presentations, there was an opportunity for discussions and clarifications. In the afternoon session, Dr. Ravi Goud provided an update on RDM/A's M&E Data Reporting System and Dr. Bjorge presented the *Containment of Artemisinin-resistant parasites on the Cambodia-Thailand border* project and progress made to date. Following further discussion, Dr. Souly Phanouvong gave an overview of *Drug quality monitoring and control of substandard and counterfeit drugs in the GMS* over the past 5 years. Finally, Dr. John MacArthur updated participants on the *PMI and its new role regarding the MMP program and RDM/A*.

Opening Remarks: Dr. Charles Delacollette, Coordinator, WHO-Mekong Malaria Partners Program

Dr. Charles welcomed all participants and noted that it had been one year since partners had met due to the cancellation of the April meeting as a result of political unrest in Thailand. Dr. Charles noted that the increase in global funding (PMI's budget has seen a 30% increase, for example) for Malaria and the positive ramifications for the GMS region. However, he reminded all partners that with increased funding came increased responsibility, and scrutiny of all programs. The Mekong region remained a positive model because of strong facilitation, communication and collaboration amongst all partners, and remarked that all partners should be proud of the successes that had been achieved to date. Dr. Charles reported that he had recently met with the Gates Foundation in Bangkok and was pleased to see that Donors were also improving their coordination and operating better together to make more funds available for the region.

Dr. Chansuda Wongsrichanalai, Infectious Diseases Strategic Information, USAID RDM/A

Dr. Chansuda welcomed partners to the meeting and recalled the successes of the previous year. She commended the leadership and coordination of WHO in helping to facilitate a robust MMP program. Dr. Chansuda reviewed the RDM/A activities in western Cambodia and the coordination efforts with other donors on the containment of artemisinin resistance on the Cambodian-Thai border. These efforts were going well and artemisinin resistance was now being looked at in a wider area of the GMS including the Thai-Burmese border. Excellent progress had been made with existing activities on anti-malarial drug efficacy monitoring, drug quality, pharmaceutical management, M&E, development of surveillance tools, regional training, as well as other areas.

Dr. Chansuda reminded participants that through new projects beginning in 2009, RDM-A has continued to support the Phuket malaria elimination efforts, paying more attention to cross-border co-ordination, as well as to migrants communities. More emphasis has also been placed on Behavioral Change Communication and in strengthening drug resistance surveillance with the addition of the molecular component.

USAID RDMA was very proud of the MMP model with each partner possessing specific expertise but working together to contribute to fulfilling the 3 main objectives of the U.S. Government Malaria Strategy, 2009-2014, for Southeast Asia:

1. Supporting well-functioning anti-malarial drug resistance surveillance networks,
2. Establishing national systems to monitor the quality of anti-malarial drugs as a means of preventing the introduction and dissemination of sub-standard or counterfeit drugs; and
3. Contributing to a further reduction in the level of transmission of *P. falciparum* malaria and the number of reported cases in the GMS, with a goal of elimination by 2020.

Finally, Dr. Chansuda reminded partners that the US Government recognized the significance of artemisinin resistance in this sub-region and that in the next Fiscal Year there was likely to be a sizable increase in the funds. Further, the RDMA malaria program would be moving more and more to be under the umbrella of the PMI and Dr. John MacArthur would elaborate further on this.

Review of FY09 partners activities supported by USAID RDM/A in the GMS

ACTMalaria, Ms. Cecilia T. Hugo, Executive Coordinator: Ms. Hugo reviewed ACTMalaria's key successes and challenges of the previous year. A number of trainings had taken place including *Broadening Involvement Team training workshop*, *Transfer of Technology training while the preparation for the Management of Field Operations*, and a *TOT on Integrated Vector Management* has been initiated. The Executive Board meeting was held in March 2010 with all of the 11 member countries represented. Operation of the Secretariat and AIRC continued, however AIRC activities were contracted out due to staff and funding shortages. Coordination activities and technical assistance to partners continued. Key challenges included meeting the increased needs of countries for trainings and technical support as they moved towards elimination. Many countries were facing staffing shortages and were often unable to find appropriate candidates to attend trainings. Coping with other vector-borne diseases, in addition to malaria, provided a further challenge.

AED/C- Change Communication, Dr. Robert Kelly, Regional Representative and Research Advisor: Over the past year, AED had taken an integrated approach across API, Malaria and Dengue, with formative research employed to gain a better understanding of why existing communication materials were not working. The project had a cross-border focus, which involved also looking at other economic and transportation corridors. AED has been developing a Communication Conceptual Framework to refine the areas for action and better understand the triggers and behavioral motivations of target communities. The work on H5N1 helped a lot in informing the Malaria work particularly in visualizing what the malaria project should look like. With the completion of the communications gap analysis, the focus has shifted to streamlining targeted communications materials and testing new technologies such as GIS to better target outbreak areas and to conduct spatial analysis to determine what impact the communications are having. Key challenges were: low literacy levels and diverse ethnicities of target audiences; high mobility of traders and migrants, and too much information. The challenge was to develop a more coordinated, synchronized approach across partners and countries.

Questions, Comments and Discussion:

Collaboration with the corporate sector: A question was raised about the level of collaboration occurring between ACTMalaria and the corporate sector in the region, such as work place programs. In *response*, ACTMalaria confirmed that in Indonesia there had been some progress in establishing partnerships with the business sector, local government and community networks. In addition, the Philippine Malaria Network was a collaborative partnership between local groups and the corporate sector. In other countries, progress was slower.

Coordination and streamlining of BCC messages: there was some discussion around the need for a coordinated approach at both country and regional levels in order to simplify and streamline BCC messages. AED explained that on-going coordination was occurring, and that the level of coordination varied across countries. For example, in Laos there have been collaborative efforts for BCC messages regarding Avian Pandemic Influenza initiatives. There were BBC working groups in other countries and AED was planning to work more closely with them. Regarding Malaria, to date, there was some coordination of BCC messages and interventions in Thailand, Laos and Cambodia.

CDC Atlanta-Malaria Consortium: Dr. David Sinsatath, Regional Technical Director, Malaria Consortium Asia: During FY09, CDC/MC had continued to provide TA on finalizing the Mekong Regional M&E Framework and Guides and contributed to the first country implementation M&E meeting in Cambodia in May 2010. In addition, assistance had been provided to partners in surveillance activities and a number of M&E tools had been developed. Progress towards a regional operation research agenda had occurred with a Regional Operational Research Symposium planned for October 2010 in Siam Reap. The aim was to develop a regional operations research framework as a key output of this workshop. CDC/MC also assisted in revising and updating the MMFO modules, and completed the first draft of the M&E curriculum. Participation in partner and donor meetings had continued and assistance to WHO-MMP was provided for development of a 5-year Strategic plan. A Bibliography on efficacy of mosquito nets in SE Asia had been developed, a literature review for MDA was being conducted, and a number of proposals were in progress for studies, including a systematic review of MDA. Collaboration with APMEN and Jiangsu Institute of Parasitic Disease to document China's experience with mass primaquine administration was occurring.

Kenan/GMS –Response to Infectious Diseases (RID), Mr. James Hopkins, Senior Program Manager, Public Health: Key activities for RID during FY09 included co-organization of a Thailand-Burma border-wide stakeholders forum and training on malaria and infectious diseases (case management, diagnostics, treatment regimens) and preparation for the malaria component of the PMP using RDMA indicators. The Phuket Malaria pre-Elimination Pilot project continued with a number of workshops being held, an M&E plan developed, and key meetings were conducted with the private sector to mobilize public-private-partnerships for healthy tourism and the elimination of malaria. In addition, support was provided to the Royal Thai Government to hold a workshop that resulted in the formulation of the first draft revision of the National Strategic Plan for Malaria Control and Elimination. Support was also provided for the Chief of the Thailand MOPH Malaria Cluster to participate in the 2ND APMEN Annual Meeting in Sri Lanka. A mini-workshop conducted on elimination of malaria in the GMS at the MMP Core Partner's Meeting (a separate report is available). A key challenge for the Phuket Pilot program was designing and implementing a provincial pilot project prior to formulation of national

strategic plan and guidelines. For the Trat pilot project the key challenge was delays due to unavailability of NMCP staff due to heavy workload.

Questions, Comments and Discussion

Field-testing of M&E Tools: Partners were interested in whether there would be opportunities to be involved in the testing of tools and subsequent related trainings. CDC/MC explained that there would be an opportunity to review the needs of the different countries regarding M&E Tools and how the partnership could work to field test and utilize the M&E tools. This would be done during the M&E Workshop on 23 September 2010.

Literature Review on MBA: a comment indicated strong approval of this initiative. A suggestion was made to seek out some of the older examples of how drugs were used in older interventions and situations, such as in the former Soviet Union, for example.

Sub-group on migrants and malaria: given the large amount of work being done on migrants by CDC/MC, AED and Kenan/RDS, it was proposed that consideration should be given to developing a sub group on Migrants and Malaria. Further to this, URC also reported that they were working with migrant populations along the Cambodia/Thai border and sharing information would be useful on how to reach and monitor migrant populations, as the situations might help to inform each other. For example, in Cambodia migration was seasonal and limited to internal movement. In Thailand, migrants had employers and lived in camps so the employers and camp foremen could be targeted. Therefore providing nets to the owners of the housing was a good solution as the net stayed with the house/room. For the rubber tappers, it was also possible to work through the owners and likewise, for the fisher people, to work through the owners and captains of the boats. It was not difficult to reach these populations. However, as all the target groups were unregistered migrants working illegally, this presented significant challenges, particularly in trying to involve the private sector. Kenan was working with Rotary, various hotels and the Rubber tappers association.

MEASURE Evaluation, Dr. Ravi Goud, Infectious Disease M&E Specialist: Dr. Goud reviewed the program's key focus, which was assisting with the development of the RDM/A ID Performance Management Plan (PMP), finalizing the Mekong Malaria M&E Framework and updating country malaria M&E plans. IN FY09 key activities were: completion of the PMP Database and datasheet revision, as well as completion of a preliminary round of data collection. Regarding the Bi-Regional Malaria Framework, indicators were selected, reference sheets created and finalized (incorporating partner feedback), and the draft document outlining framework and indicators was created. Assistance to NMCPs in updating their M&E plans was provided and the first national M&E TA meeting was held in Cambodia to assist the NMCP with development of their M&E plan. Key challenges included defining more clearly the different roles and responsibilities for the provision of TA and other support for MMP partners and NMCPs. In addition, some indicators required further refinement such as IEC/BCC, vulnerable populations and GMP elimination.

Questions, Comments and Discussion

Ensuring National Malaria Strategies were in place: USAID noted that, as many countries in the region did not yet have a national malaria strategy, it was possible that the M&E framework would end up driving the national strategies and that this should be avoided. Measure Evaluation's response was that they were working closely with countries to help create the

national strategies so that the strategies would drive the M&E rather than the other way around. MEASURE Evaluation also reflected that the strategies were also frequently driven by donor requests and were therefore often oriented towards the specific needs of donors and therefore were not always reflective of the needs of the entire country.

Further to this, USAID asked what level of interest countries were showing in having the Bi-Regional Framework as a guide, or whether they really just perceived it as a donor-driven initiative. Measure Evaluation's response was that the situation varied across countries. MEASURE had endeavoured to make the process very NMCP-driven and ensure that their concerns were addressed. MEASURE believed the process had been largely NMCP-driven and there was generally a lot of enthusiasm. However, the reality of the detail of the indicators also caused concern for NMCPs so the situation oscillated.

MSH/SPS, Melissa Thum, Senior Program Associate: Ms. Thumm informed participants that MSH/SPS' focus for the fiscal year 2009 had been IR's 4 and 5, with key achievements reflecting this focus. Activities included participation in the evaluation of the pilot of the public-private mix strategy in Laos, and presentation of findings at a stakeholder meeting; development of training materials for the Procurement and Supply Management session at the MMFO course (October 7, 2010). In addition, a presentation on "Key Capacities in Pharmaceutical Management for Malaria Programs" for the International Malaria Colloquium in Bangkok was prepared and submitted for presentation in December 2010. Finally, MSH/SPS collaborated with the Amazon Malaria Initiative team at MSH/SPS to share lessons learned on pharmaceutical management in low-transmission areas. Key challenges included scheduling issues, staff transitions, lack of full-time staff in the region, and competing priorities within MSH/SPS. In addition, cancellation of the MMP meeting in May 2010 had a significant impact as MSH/SPS relied heavily on regional meetings to communicate with partners.

University of Maryland School of Medicine Molecular Surveillance Network, Dr. Christopher Plowe, Investigator, Chief, Malaria Section, Centre for Vaccine Development: Dr. Plowe provided participants with a brief overview of Molecular Surveillance and the key objectives of the Molecular Surveillance Network, before reviewing the key activities for FY09. Activities included strengthening the supranational network for malaria control with the establishment of regional reference/support laboratories at Mahidol University Faculty of Tropical Medicine and University of Maryland School of Medicine. In addition, meetings were held with NMCPs, in-country partners and regional stakeholders. Laboratory capacity/needs were assessed in Cambodia, Lao PDR, Thailand & Vietnam. Local reference/support laboratories were identified in Cambodia and Vientiane. Training materials were developed for Network labs and the annual one-week training workshop was held. These initiatives were towards improving surveillance for drug-resistant malaria. Further, 11 Network SOPs were developed and Molecular Markers External Quality Assessment Program was piloted. Key challenges included delayed implementation of training & support due to the unanticipated need to recruit a network coordinator, administrative delay in approval of subcontracts and delays in identifying qualified IT specialist.

Questions, Comments and Discussion

Molecular markers: a question was asked in relation to molecular markers of drug resistance and where the blood samples would be taken from – whether it would be from on-going studies or other sources. The *response* by University of Maryland was that ideally samples would be

taken from studies where there was a clinical outcome. It was necessary to correlate various genes being looked at with clinical outcomes. It was possible that the Art 3 studies might provide a molecular marker (for example, from Bangladesh). It would then be possible to do cross-sectional surveys. Planning with countries on undertaking cross-sectional surveys was already underway in anticipation that these would be useful surveys.

Customized treatments for malaria: A question regarding customized health care was raised (health care tailored to the particular genotyping of the particular disease someone may be suffering from) and whether this might be possible for malaria in the future. The *response* was that, in principle this was possible, but the required resources would be huge, making it unlikely at present.

USAID commented on the rapid progress that the University of Maryland had made in its first year.

USAID/URC, Malaria Prevention and Control in Cambodia, Dr. Kheang Soy Ty, Chief of Party: Dr. Kheang provided a brief overview of the program objectives before reviewing key activities and challenges for FY09. Activities included identifying appropriate IEC/BCC materials for mobile and migrant populations and a mix of public and private groups. IEC materials were developed for pregnant women and taxi drivers and training given to key target groups. In addition 80 VHVs received refresher training and LLINs were re-impregnated and distributed in 41 target villages. Further, Malaria week was held in 150 villages and involved free screening, HE talks and distribution of IEC materials at schools and villages. For Laboratory QA, supervision and training was provided for 34 HFs. Training/Refresher training was also provided for communities on quality RDTs. In addition, an RDT Quality study was carried out and results were sent to the Pasteur Institute. Mapping of private sector providers occurred and a pilot project with 36 providers was launched. Strategic information work included follow-up and assessment of malaria information from HFs and communities. Mapping of drug resistant parasites was a key activity and finally, integration of VMW in the existing supplies system and an LLIN loan scheme for mobile and migrant populations was expanded to other districts.

Questions, Comments and Discussion

High rates of malaria amongst military families: there was much discussion around this issue. A question was raised about the level of collaboration that was occurring with the Ministry of Defense, and whether they provided treatment for families and nets, for example. The *response* was that there was no record of net coverage or distribution, although the MOD said they would provide for the families. In reality, the families of soldiers sought treatment at the village health centers.

Treatment failure study: A question was raised about the proportion of individuals who were positive at day 3 and the response was for artemisinin around 55% positive amongst admitted patients. A question on how these studies were carried out and what the level of confidence there was in the results was also raised. Was there actually a 1.65 failure rate? The *response* by URC was that they were working closely with the Pasteur Institute and that the study results needed to be discussed further with the Institute. This study was not a treatment efficacy study but a treatment failure study.

Utilizing existing information for targeted follow-up: A comment was made that such information could serve as an early warning system – it might include drug resistant parasites. In the absence

of molecular markers, could existing information be used to target patients that might need follow-up? The *response* by URC was that more work was needed on this and that the number of sites around the country should be extended. They had expected to find differences between the 2 sites but had not found any, which was a cause for concern.

USAID commented on the data from Malaria week that showed a very high percentage of positives for falciparum or mixed infections (67 of 889 – 7.5% in the community) and that this was very concerning since it was *before the rains*.

USP/PQM, Promoting the Quality of Medicines Program, Christopher Raymond: For FY09, USP/PQM had focused key activities on a number of targets which included: providing TA and equipment to enable data collection and analysis; supporting the obtainment of AML and ABTs quality data through regional monitoring program and supporting the strengthening of national and local authorities for timely reporting and information sharing. A key meeting was held in Laos where all countries adopted the programmatic guidance for timely reporting of enforcement actions that was developed by USP/PQM. The Laos meeting was held to examine the last five years of PQM program implementation and was an important milestone for PQM and partners. Further, on-going site visits to Cambodia and Thailand continued providing needed reagents, reference standards, USP-NFs and other lab essential supplies. Regular and ad hoc technical guidance was provided to the countries as appropriate. Efforts were made to sustain the MQM activities by integrating them into the routine MRAs' PMS. However, until government funding for MQM activities became available, the activities would be delayed. Finally, awareness raising activities were intensified and PQM continued to strengthen its on the ground presence and improve communication with partners, through hiring and investing in locally based consultants.

Questions, Comments and Discussion

Discerning counterfeit and real drugs: It was noted that many of the samples failed visual inspection and a question was raised about what steps were taken to teach the public to discern between counterfeit and real drugs. UPS *responded* by explaining that the examples of drugs that were shown had been tested chemically, although there was a way to visually inspect them. But the majority of patients would be better relying on robust post-marketing surveillance. However, the public could be taught to look at expiration dates.

Relationship with WHO and Interpol: In response to a question on progress working with Interpol, USP *responded* that formal clearance had been received to engage Interpol and they were currently looking at what the MOU would be in terms of sharing data. USP reiterated that it was not an enforcement agency but focused on data collection. Therefore, it was important to work closely with police and local authorities for enforcement.

Map of mini-labs in the region: What were the trends over the past 5 years regarding quality improvement? Secondly, as the project worked with the private sector, could partners have access to the information regarding the situation of the poor quality (sub standard) as well as counterfeit drugs? USP *responded* that it was very important to work with manufacturers and also pharmacists. It was also important to look at sub-standard drugs not just counterfeit and this would be discussed in more detail in later sessions.

WHO, Mekong Malaria Program, Dr. Charles Delacollette: Dr. Charles presented an overview of key activities before presenting more detail on each IR. Key achievements and activities

included: coordination and support to the Mekong Malaria in vivo TES Network and review of national drug policies; support to quality data and information (from microscopy, Combo tests, drug quality monitoring and national and cross-border surveillance); support to the development of policies related to malaria in pregnancy; private-public mix approaches; non-malaria fever algorithms, and malaria elimination. WHO collaborated with programmes and partners to work on improving the fit for global M&E tools and indicators to the GMS context. Further, facilitation of information exchange, cross-border initiatives and dissemination of best practices among programmes and partners occurred through the Asian Collaborative Training Network for Malaria and the Information Resource Centre. Containment activities were scaled up beyond the Cambodia-Thailand border with countries, donors and partners. *Key challenges* included slide bank management and a related shortage of funds. On-going cross-checking of data remained very important, as did documentation of progress. This underscored the need to improve information sharing, although issues around confidentiality of data remained challenging.

Clarifications, Discussion and other issues raised

How to engage with Burma/Myanmar: In 2009 permission was given for partners to work in Burma. Burma remained extremely important for malaria control but was a challenging environment to work in. How to work with IDPs presented different challenges in addition to working with migrants and refugees on the border. The US Government had demonstrated its commitment to working in Burma earmarking USD 500, 000 for FY11 for Burma.

Need for improved coordination of Partners: Improved coordination would help the response to all issues. For example, Artemisinin resistance in this region was a key issue and a lot of partners were involved in the response and coordination had improved. Many partners were working well on this although there was still a need to improve sharing of results and findings across the region. Although good data collection activities were on going, one of the challenges was to share the information and spend the necessary time discussing the results. A suggestion was made to consider slightly shifting the MMP Partners' meeting to facilitate such information sharing (e.g. poster presentations such as at API meetings). As the focus was moving more towards integration, it was important to improve the sharing of results.

Better engagement with Private Sector providers remained a challenge in the Mekong region. More work needed to be done on engaging the private sector.

Entomology: was raised repeatedly as an area that needed increased attention in the region and there was an indication from USAID and PMI that more funds could potentially be made available.

Slide bank management remained a significant problem. Additional resources were required to improve slide bank management and provide the necessary training and TA. A question was raised about whether USAID funds could be mobilized for this area.

AFTERNOON SESSION

Update on RDMA M&E Data Reporting System, Sujata Ram: Ms Ram informed participants that the existing RDMA ID PMP was in place with no changes to the Results Frame or Indicator Set. One change was that partners were now only required to submit reports on an annual basis. Before moving to this, partners were asked to review the current indicators they would be

reporting against. For the FY10 data submission for the period Oct 1 2009 to September 30, 2010, RDMA had requested the data form to be completed by mid-October. Ms. Ram presented the data form that partners were using to input their results and invited questions from participants.

Questions, Comments and Discussion

A number of clarifications were sought regarding the data-reporting sheet. MEASURE Evaluation provided clarification on key points: 1) the form was designed for countries to complete data only against the indicators they were reporting on; 2) Ideally, each partner would only see the indicators listed on the data sheet that they needed to report on and this would be looked into.

Containment of Artemisinin-resistant parasites on the Cambodia-Thailand border: Progress made, Dr. Stephen Bjorge: Dr. Bjorge presented an update on the program and reviewed the trends. Over the past 13 years, the general malaria trend was downward both in terms of incidence and death rates. Addressing the social and economic factors that increased risk of transmission remained a key challenge, particularly around palm oil and rubber plantations. In addition, military movements in the northern provinces (Oddar Meanchey) put military personnel at high risk as well as their families. However, while military personnel were treated, the families sought treatment from public sector providers, where regulation and control were not assured. Regarding artemisinin containment, there was almost no resistance in the north or east of the country (very low levels of treatment failure in efficacy studies), however, in the west there remained a high treatment failure rate (Artemisinin and others) as indicated from monitoring day 3 cases (which was taken as a proxy for the emergence of resistance). The results demonstrated a direct correlation in Zones 1 and 2 between the distribution of bed nets and a reduction in cases, but in Zone 2, this was not as directly evident. Securing additional funding for the program was a priority, as the Gates Foundation money would run out in 2011.

Questions, Comments and Discussion

Discussion was focused on the various factors that may contribute to a decline in malaria incidence beyond interventions such as distributing LLNs and IRS. For example, other factors such as social and environmental factors could be significant. Specific questions related to whether the data collected from HF's and MWs (which showed a reduction in cases in malaria), was a real reduction, or was a reduction in visits to HFs, as people now only accessed treatment at VMWs. The response was that most cases picked up by VMWs were the ones that used to be seeking treatment in the private sector. A question was also raised about whether there was any HH survey prevalence data showing that care-seeking behavior had shifted to the public sector from the private sector. If this was the case, any decline in rates of infection might be related to this shift. The response was that there was no firm evidence on this yet.

Therapeutic Efficacy failure rates in the GMS: Update, Dorina Bustos: Dr. Bustos provided an overview of the key successes and challenges of TES over the past 12 months. Results across all MMP countries were presented looking at the ACPR rates and 3-day parasitemia. As the results determined what would be tested and in what location for 2010, it was important to review data across all countries annually. The presentation also covered the failure rates of chloroquine to vivax. An overview of National Treatment Policies and Efficacy rates of the Mekong countries was also presented. Key achievements included: Sentinel sites maintained for several years; a training workshop conducted on the WHO TES protocol and Excel data entry with PIs and TES team; the development and utilization of laboratory and clinical data source

(logbook) for cross-checking; quality control of drugs use and data and slide validation by WHO consultants and external monitors. Key lessons learned included the need to ensure timely PCR confirmation; Day 3 parasite clearance time; to confirm artemisinin failures by testing AS7 monotherapy in defined sites, temporal and spatial data analysis, and finally, to consider all factors that may contribute to the development of resistance.

Clarifications, Discussion and other Issues Raised

There were some questions around how sites were selected within countries for the studies, and who conducted the tests at test sites and whether there were monographs for the tests. The *response* was that countries themselves defined the sites, but final decisions were made in consultation with WHO HQ and drug resistance experts. Since 2000, they were mostly the existing sentinel sites. Regarding the testing at test sites, all drugs were coming from WHO except for in Vietnam, where they were tested at a laboratory in Hanoi. Another question addressed the issue of countries improving their skills in this area. The *response* was that as this was the third year, it had become a priority activity of the control programs, and they were becoming much more skilled. However, there was still a need for more time from the Principal Investigators and good clinical practice training was still required. Ms. Doreen also noted that studies conducted by academic institutions were not included in the presentation but that other research institutions had a different focus/more intensive follow-up of patients. One comment was that it was important to have a standard protocol for minimum data and for national programs to be aware of this. A suggestion was made for MMP to contribute their data to WWARN as data was accepted from all sources.

Overview of Last 5-year Experience and Progress Made in Medicine Quality Monitoring and Control of Substandard and Counterfeit Medicines in the GMS: Dr. Souly presented an overview of activities over the past 5 years. Key activities included provision of training on basic medicines testing, sampling and compendial analysis to participating countries. MQM sampling was established, and monitoring of sites using GPHF Minilab® was conducted. Pharmacopeial Monograph Development was completed for 6 key drugs and collaboration with GPHF on Basic Test Methods for Solid Dosage Forms occurred. Awareness raising through media and peer-reviewed journals was also a key activity. Dr. Souly then presented results from the 5-year Summary Country Reports and also reviewed the impact of activities such as enforcement by MRAs, as well as the impact of actions beyond national borders. The MQM program in the Mekong Subregion now served as model in 25 countries in Africa, Asia, and Latin America. Finally, lessons learned and an overview of future activities and the regional strategy, BREMERE - Build Regional Expertise in Medicines Regulation and Enforcement, were presented. The new strategy would build on ANEQAM successes; develop training modules for medicine registration; develop local expertise in medicine regulation; share technical resources, expertise in problem-solving; increase exchange of scientists, research fellows in the region and beyond and promote south-south cooperation.

Questions, Comments and Discussion

Variation in failure rates: a question was raised regarding the evolution of failure rates from 2005-09 in Cambodia. As the rate rose in 2007 but then decreased, how was this variation in failure rates interpreted? The *response* was that in 2005, 1000 samples were selected; in 2009, fewer samples were collected, so the results were proportionate to the number of samples collected each year. Based on the country specific intelligence, both formal sampling (beyond the sentinel sites) and also “mystery shopping” approach was utilized.

Cross- country standard definition for counterfeit and substandard drugs: Why was there no standardized definition across countries? The response was that these standards were defined according to the definition of the particular country e.g. counterfeit for one country may be “contents below 80%” but that would differ for another country). Cross-country standards were not used because 2 countries would not necessarily agree because they have different standards.

Pharmacovigilance activities and containment strategy: were any key activities implemented in parallel with the containment strategy? If so, were adverse drug reactions monitored in any way? The *response* was that there were no significant activities in this area yet.

Changes in vector behavior and related use of LLNs and the drop of falciparum cases: there was considerable discussion around changes in vector behavior and how this would inform the use of LLNs. For example, in PNG there was a predominance of falciparum-infected mosquitoes early in the evening but the vivax later in the evening. This could be an explanation for Cambodia but needed to be looked at more closely. Regarding the interpretation of degrees of cases, it was also important to also look at changes in forest cover and the impact on vectors. For example, most of the forest around Pailin had disappeared and since 2005 malaria cases had decreased rapidly. So, while bed net distribution and early access to treatment all contributed to decreasing malaria these were not the only factors. Forest cover and related changes in human activities were significant – as was the relationship to Climate changes and its impacts.

Containment survey: In the 2009 containment survey, there were a low number of pf cases in Zone 1, but the final report was yet to be finalized. The survey would also be repeated in 2010 so data from the 2009 and 2010 surveys would then be comparable. The 2009 survey was conducted in December and January when there were always a low number of cases. There was concern, however, about the high number of cases found during malaria week pre-rainy season in active case detection. A related comment was that it was not wise to rely too much on short-term data as it was not reliable. It was very important to look at the longer-term trends.

Thailand: in Thailand it was no longer a pilot program, and there was a move towards integrated strategies as well as elimination. Vivax was increasing and falciparum was declining in the eastern part of Thailand. Through Gates support, all falciparum cases were being followed on days 3, 4, 6 and 28. Following all positive cases was very costly but in some cases there had been 50% positivity on day 3 cases, so the hypothesis is the strongest strains remain. It would be important to encourage collaboration between Thai and Burmese, especially in Ranong, as there were so many Burmese migrants living there. WHO had discussed with Dr. Wichai about monitoring the remaining pf cases closely. Although some of these cases were migrants, most were Thai and it would be helpful to liaise with other partners working on this (such as the University of Maryland). It was possible that some very strong strains remained and it would be important to look more closely at the data.

Low intensity vivax not being detected by RDTs: a question was asked about the approach used in Cambodia. The *response* was that most vivax was being detected by RDT so there was no information on density. However, the results were viewed as satisfactory. If a person was symptomatic with malaria parasites, then the RDT would probably be positive and if the person was asymptomatic it would be negative. This had been the case so far. An asymptomatic infection would only be detected through PCR. Dr. Bjorge believed if these activities were done at a high enough level of intensity there would be an impact. i.e. with coverage of 70-80% bed nets, infection stopped or at least decreased.

Addressing factors outside the traditional malaria control field such as rapidly changing landscape: A question was raised regarding whether any of these factors were taken into account for future plans for the containment project? It appeared that the focus was only at village level. The *response* was that up until 2010 in Cambodia, the epidemiology of malaria was unknown below HF level. Epidemiological analysis now needed to become more of a focus in order to find out where transmission was taking place to facilitate an appropriate response. This was particularly important in Cambodia because of the large-scale migration of populations across the country.

PMI and its introduction into the MMP, Dr. John MacArthur, Team Leader, President's Malaria Initiative/CDC

Dr. MacArthur reviewed the background of the PMI's establishment under President Bush and the goals and targets, interventions, and strategy and approach of PMI I. The Strategy outlined a commitment to working closely with host governments and to support activities contained in NMCPs. It called for close coordination with international and in-country partners and supported an integrated approach to malaria control and strengthening national capacity. Dr. MacArthur then outlined the Global Strategy and approach for PMI II and how the changes would affect the MMP and its partners. In the GMS the USG would: support the TES network; support national and regional systems to monitor antimalarial drug quality, and contribute to the reduction of malaria transmission of *Plasmodium falciparum* with a goal towards elimination by 2020. In addition it would allow strong NMCPs to continue to procure commodities through national budgetary lines, GFATM or other sources. PMI II would support the elimination of *pf* malaria as part of the effort to contain multidrug resistance and review the lessons learned from other disease elimination/eradication programs. For MMP specifically, there would be increased resources, technical assistance and planning. GMS Malaria Operational Plans (MOPS) would be developed with a focus on drug Resistance and elimination. The transition from USAID to PMI would occur during FY2010 and from 2011 onward, MMP would operate under the PMI.

Questions, Comments and Discussion

Engagement of programmatic people in the Mekong (such as NMCPs): What would the process of engagement/support be? PMI responded that the process in Africa had been supporting national strategies and plans, reviewing these plans, and talking to countries about their vision and needs. There was also discussion with other donors to identify gaps. The MOP visit for the Mekong region was still being planned. The aim was to meet with IPs, national programs, multilaterals etc and then start to develop a plan, (build on existing plans) and present it back to NMCPs. Thailand, Cambodia, Burma made up the "corridor of concern" and would likely be assessed during the first visit, with the other countries being assessed in later visits.

Breakdown of funding for the Mekong: As the focus on the Mekong was on elimination and control of drug resistance, could PMI provide any perspective on the breakdown of funding?

The response was that for the GMS there were no benchmarks that had to be met (as in Africa) but in the GMS the focus was not on commodities purchase.

Myanmar: how might the strategy toward Myanmar/Burma change? The response was that the Senate was already providing political support to move money into Burma. There was an increased political commitment to provide support, particularly through INGOs.

Entomological monitoring: In the coming years, there might be a gap covering zone 1 in Cambodia because of funding sources now/changes. How could this be addressed? PMI responded that there was a lot of discussion now about entomological monitoring and this could potentially become a focus area for the GMS.

Integration of PMI II with Global Fund: what was the extent of this? PMI responded that there was still a lot of discussion globally around coordination of funding. As the USG was only one of many contributors there was still a need for a lot more discussion on donor coordination. Locally, this was more difficult because MOP teams needed to pay close attention to where the Global Fund was putting its resources. However, the guiding principle would be the National Malaria Strategic Plan.

Role of implementing partners in the GMS under the transition to PMI: what would this look like? Related to the GMS MOP, were any linkages foreseen to currently developed global plan for Artemisinin resistance plan? The response to the first question was that this would change because there would be more scrutiny from Washington and Atlanta whereas previously it was just getting agreement from RDM/A. The response to the second question was that the MOP would consider whether new partners should also be joining the MMP or whether it would remain the same. It would depend upon the management burden but some changes were foreseen.

Integration: With the introduction of PMI would there be a focus more on integration with other disease areas? PMI responded that this was happening already (e.g. through Kenan/RID, AED and others) and would continue to be a focus. President Obama had requested more focus on integration (Women/Children, for example) so this would definitely be a big focus area. And finally, PMI would be looking to replicate models from the GMS for Africa particularly the drug quality work.

Day Two: Wednesday 22 October 2010

Session 1: Presentation of Partners activities planned for FY 2010 in the GMS

ACTMalaria: Ms. Cecilia Hugo: For FY2010-2011, ACTMalaria would focus on IR 4 and IR 5. Helping countries to manage the transition from vertical-to semi-vertical programs would be a priority. Activities would include: organizing the annual executive board meeting in Myanmar (March, 2011); continuing operations of the Secretariat and AIRC in the Philippines; collaboration with APMEN and WHO-HQ in the development and conduct of a training course on Malaria Elimination; participation in Network Advisory Committee and assistance with the organization of GF (or WHO/RBM-AusAID) supported national /local malaria trainings. All countries that had undergone the external competency review would be brought together to focus on strengthening **quality assurance for malaria diagnosis including establishment of national slidebanks**. The quality and Slide Bank procedures required improvement, particularly as slides were now used in multiple regions. Broadening of training for those moving towards elimination would also occur. Planned trainings included: Integrated Vector Management (TOT), Inter-country Training Workshops on Malaria Diagnosis QA (ECA & Slide banking) and Broadening Involvement Team Training Workshop. Finally, ACTMalaria would organize the Malaria Symposium in November 2011 in PR China. This will coincide with the 15th anniversary celebration of ACTMalaria.

Questions, Comments and Discussion

Future plans for Information Centre: the Centre would continue but activities would be outsourced due to budget constraints.

Call for increased participation of all MMP Members by ACTMalaria: all partners were invited to bring any ideas for trainings/sessions/joint activities to ACTMalaria and they could be included in the planning for the ACTMalaria Symposium.

Slide Banking: there was a comment that the WHO collaborating centre also wanted to do more on slide banking. There was already a WHO protocol in the manual but some things aren't covered and there was a need for additional assistance for some countries. ACTMalaria responded that Cambodia also had experience in developing slides and could share this experience.

AED/C – Change Communication: Robert Kelly: Dr. Kelly began by noting that in the previous day's meeting, *targeted* and *integrated* had become significant topics. These were also priorities for AED for 2010/2011. AED-C's key objectives were to: develop, refine and consolidate communication strategies that address the prevention and response to API, Malaria, and Dengue by use of appropriate formative research, targeted communications and effective information sharing. The communications program would continue to provide support to all MMP partners, and the focus for AED for FY2011 was to better understand the high-risk groups, taking a geographically targeted approach. Appropriate trainings would be provided for government stakeholders, village leaders, community health volunteers and owners/managers of high-risk work sites. In addition, AED would test new communications technologies such as SMS (using voice messages out loud to manage reading/language barriers). In addition to the on-going KAP survey in Phuket, an API KAP survey in Lao PDR (to include malaria treatment seeking) would be developed. A Social Indicator Study was also planned for Laos. Finally, Observational studies were also planned to facilitate better understanding of "reported" behaviour versus actual behaviour. AED would also be presenting at the Bangkok Malaria Conference in December 2010.

Questions and Comments

Linkages with MOH and national programs and other stakeholders: was this working well in ensuring uniformity and reinforcement of messages? AED responded that this was a big challenge. There had been significant progress in engaging the Laos and Thai governments working across the range of infectious diseases. However, in other countries, this had not yet occurred.

Engagement with business and corporate sector using the "business case" for malaria control: To what extent was this occurring? AED responded that this angle had been used for individuals but not yet with the owners of the businesses. They were beginning to address this issue, however, e.g. with Unilever and the hand-washing campaigns). There was a need to better define the focus groups and put together a targeted campaign. The point was well taken but there was also a need to better understand the triggers for effective behaviour change. For example, people often used malaria nets not to keep out mosquitoes but as fishing nets and other purposes. So there was a need to hang the campaign on the behaviours and triggers.

Collaboration with other partners: Had any interaction with the 'Voices' project at Johns Hopkins occurred? The Voices project was trying to develop a standardized set of questions

around BCC that could be used for BCC globally. They had not yet received input from Asia. AED *responded* that they had looked at RBM and PMI indicators but still needed to look more at indicators for communication and make them more regionally focused.

Closing the information gap: A comment was made on the importance of focusing on delivering products beyond the collection of data. For example, within the PMI TWG, there were many who did not appreciate or understand the benefit of BCC and they would need to be convinced through the delivery of products and closing of the information gap.

CDC/Malaria Consortium, Dr. David Sinsath: CDC/MC's key focus areas for FY11 were outlined as follows: strengthening surveillance, Monitoring and Evaluation and Operational Research. Towards strengthening surveillance, activities would focus on providing technical support through surveillance system evaluations. The focus countries for 2011 were (tentatively) Thailand western provinces, Cambodia and Burma. In addition, CDC/MC would continue to assist the Phuket provincial health department to develop collection tools and improve surveillance systems for case investigation and active case detection as carried out in an elimination setting. Support for building GIS capacity would also be provided. For M&E, CDC/MC proposed assisting interested programs in adopting the GMS M&E framework and indicators. Support would include helping with development of national and regional M&E bulletins, assisting programs in developing/ updating M&E plans, developing country field guides and tools, and assisting in adapting previously developed GF data management and M&E systems to incorporate the new indicators. For Operations Research, priority would be given to research that would contribute to containment and elimination of hard-to-treat, resistant strains of Pf through a regional effort. An OR framework would be developed to assist programs to implement OR activities identified as priority areas and to advocate for research funding.

Questions and Comments

Entomology: A comment was made that CDC was famous for a strong entomology branch with a long history in South Asia and Pacific. Was there any thought of bringing CDC's resources into the Mekong region? The response was that CDC had a lot of resources and could be used to partner with in the region. The current work plan did not include entomology because it wasn't a priority focus area for RDMA but it could include in the future. CDC/PMI commented that as of 2006, entomology was not prioritized but with PMI becoming involved in the Mekong, this issue could be revisited.

Kenan/GMS –Response to Infectious Diseases, Borderless Action Against Microbes Program (BAAM): Mr. James Hopkins: For FY11, Kenan planned a series of rapid assessments in Thailand, Savannakhet province of the Lao PDR and Quang Tri province of Vietnam, to design and support implementation of local and cross-border collaborative projects for malaria control/elimination. Support to Thailand's MOPH would continue across a range of areas. Collaboration with AED and Thai government partners in developing appropriate BCC messages would continue, as would the distribution of LLNs to at-risk Thai populations and foreign migrant laborers in malaria foci in Phuket. Kenan would also co-organize the annual Thailand-Burma border-wide stakeholders forum and training on malaria and infectious diseases with SMRU and the Thailand MOPH Bureau of Policy and Strategy (May 2011). A curriculum and training would be developed for provincial Rapid Response Teams on focal outbreak investigation, response and containment in targeted elimination areas in Thailand (in Phuket, Trat, Mukdahan, and Chiang Rai provinces). Support for development of models for malaria

elimination through a network of provincial pilot malaria elimination projects in Thailand would continue. Special studies, support and TA to a range of partners would also be on going.

Questions and Comments

Engagement with Myanmar: A comment was made about the importance of increased engagement with Myanmar. Malaria in Thailand could not be stopped if it was not addressed in Myanmar.

Measure Evaluation, Dr. Ravi Goud, Infectious Disease M&E Specialist: Dr. Ravi Goud Provided an overview of MEASURE's objectives for 2010/2011 which included: revising the RDM/A's ID Performance Management Plan (PMP); refining the Biregional Malaria Framework and assisting countries with updating the National Malaria M&E plans. Additional plans for strengthening included helping countries to identify and define their specific TA priorities and then providing appropriate assistance. Potential areas for assistance included: helping NMCPs to develop national strategies and associated M&E plans; strengthening country IT systems for M&E data collection (identifying funding/grants, DB improvement, feedback bulletin creation); developing M&E strengthening training curriculums for country staff based on needs and BMF; strengthening M&E data collection on vulnerable populations and strengthening CBIS. Dr. Goud then referred partners to the previous day's presentation and clarified that the Indicator data sheets would be set up to show only the relevant indicators for each countries. This should make it clearer and simpler for all partners to report. The strengthening of community-based information systems was very important for the future as it would enable a lot of data to be gathered if the systems were effective. *NMCPs were then asked to provide input on this issue.*

NMCP responses, Thailand, Dr. Wichai: Previously Thailand used only its national budget for the Malaria program, but as it moved towards elimination, there was a need for external support. For indicators for the Global Malaria Program, MC and MMP, there had been a lot of discussion around M&E indicators and alignment with routine activities. The Thai MOH wanted to avoid any extra burden for its staff. A lot of time had been spent discussing with partners but it became a burden for the staff and was difficult for them to complete routine work.

Myanmar:(Dr. Khin Mon Mon): For Myanmar, it was the need to strike a balance. If there were no resources it was difficult, but if there was too much, it also created difficulties. Because of the different donors, there were a lot of reporting requirements, especially in M&E and supply system management and BCC/IEC materials. Sometimes this caused confusion for program staff and IPs. There was a need for clearer TORs for countries and what would be required of them if they accepted external support.

Dr. Ravi responded by encouraging NMCPs to present 3 or 4 priority issues for each country that they would like to focus on and have technical assistance for. He also reiterated that there were gaps in existing malaria information systems and that these gaps needed to be addressed and systems improved.

Melissa Thumm, MSH/SPS: Ms. Thumm presented the key technical objectives and activities for FY11. These included improved governance in the pharmaceutical sector in the RDM/A region (medicines policies, regulation, quality assurance, procurement practices and pharmacovigilance for malaria), improved care and treatment of malaria and containment of resistance by strengthening pharmaceutical management systems. Strengthening regional and country-specific pharmaceutical management for malaria information systems to improve

evidence-based decision-making was also a priority. Other focus areas included increasing the technical capacity of country and regional institutions and networks in pharmaceutical management through sharing information, replicating best practices, and collaboratively addressing pharmaceutical management issues. The key focus of activities would be IR4 and IR5 and all activities were focused on addressing the highest priorities in the region. The development of a robust Pharmacovigilance system for all disease areas was a significant issue, and it would be important to build on the outcomes of the August 2010 global conference in Kenya. Looking forward, SPS would also welcome the opportunity to work in Myanmar, through an established partner.

Questions and Comments

MSH Budget: A question on MSH budget was posed. The response was that the budget remaining was just over 50,000 USD (from 2009) and the current year budget was USD 120,000. MSH/SPS was attempting to leverage additional funds by collaborating with the Global Fund and working with other partners. They had also collaborated with Kenan in the past, receiving financial assistance to facilitate the implementation of more activities.

Pharmacovigilance and Global Fund: Pharmacovigilance was high on the radar in Africa but for the Mekong region, the GF was also requiring countries to include it in their submissions. Was MSH liaising with the Mekong countries, which had included this as part of their budget for GF applications? MSH responded that no country in the GMS had approached MSH for TA regarding this issue. It was being raised now because MSH could provide TA on this and it was important for countries to know they could request this. Vietnam has moved forward on pharmacovigilance related to HIV/AIDS and this money had been used to implement the activities. It may be possible to incorporate what had been done on this so far.

University of Maryland

Molecular Surveillance of Drug-Resistant Malaria in the Greater Mekong Subregion, Dr. Christopher Plowe: The GMS Molecular Surveillance Network would focus on IRs 3,4 and 5 for FY11. On-going training would be provided for Network Laboratories; cross-sectional surveys would be implemented; IT support and technical assistance and other support would be provided to partners as necessary (such as assisting with ethical reviews & approvals as well as data analyses & manuscript preparation). Other activities would include the establishment of secure on-line forum for Network labs (Oct 2010); the assessment of laboratory capacity/needs in Myanmar and China (Jan-Mar 2011); the identification of support laboratories for Vietnam, Myanmar and China labs (Oct 2010 – Mar 2011) and the holding of an annual network meeting (Jul-Aug 2011). For the scaling up and expansion of pilot programs, the focus would be training in best practices (on-going); development and implementation of Network SOPs and the Molecular Markers External Quality Assessment Program. A summary of the capacity and gaps for the Molecular Surveillance Network was presented. The program would tailor the training and support for each lab so that over the next 2-4 years proficiency would improve and molecular surveillance could be scaled-up.

Questions, Comments and Discussion

Myanmar laboratory capacity: Myanmar had hired a consultant to conduct an assessment of laboratory capacity (part of WWARN) so it may be possible to use this as a basis for starting. The sharing and sending of samples outside of the country was a critical issue for Myanmar.

Laos PDR: commented that they had received an invitation to the training and would select individuals to attend the training and would start working on this after the meeting

USAID/ URC, Malaria Prevention and Control Activities in Cambodia: Activities Planned, FY 10 (Oct-2010 to Sep-2011) Dr. Kheang, Soy Tr, Chief of Party

URC's key objectives for 2010/2011 were as follows: contribute to reduction of malaria morbidity and mortality; strengthen malaria health education and behavior change; continue to strengthen diagnosis and treatment and to map malaria resistant parasites. The project would be expanded and coverage increased. Key activities would include: IR1: developing and implementing Malaria IEC/BCC Materials for Target Groups; a radio call in show, HE for taxi drivers and LLIN Distribution for Mobile and Migrant Populations. For IR2, activities to strengthen and maintain quality of diagnosis and treatment at facility & community levels would be prioritized as well as activities focused on the Public Private mix and RDA QA. An incentive scheme for private sector providers was already in place and a working group on the Private Sector would be established. For IR 3, data collection, quality improvement and analysis would be focus areas along with drug resistance surveillance. A consultative workshop on mobile and migrant strategic intervention would also be conducted. For IR4 support would be provided for key stakeholders to be part of an exchange visit for PPM. Under IR5, URC would advocate for the expansion of integrated drugs and medical supplies system for VMW through existing systems and share results of the LLIN loaning scheme for mobile and migrant workers. The lab QA model would also be expanded.

Questions and Comments

Need for a better forum for information sharing of IEC/BCC at regional level – a comment was made on the work being done on BCC and gaps in regional collaboration. Many countries had good collaboration at national level but it was important to have a regional forum in which to share this information, especially if duplication and mixed messages were to be avoided.

Loaning scheme for bed nets: Clarification was requested about this scheme. The response was that the goal was to ensure access for all. As mobile migrant populations were very dynamic (especially along the Cambodia/Thailand border, it was felt that (after discussion with national programs), if the bed nets were just distributed, there would be a concern regarding the number of nets distributed; if the nets were “loaned” to the farm owner, the farm owner would keep the nets in the area so that new people could access the nets. It was difficult for people to access nets from VMWs in the rainy season, so access was eased if the nets stayed with the farm owners. It was a question of individual needs versus the PH need and it was one method of maintaining good bed net coverage within a population at risk.

Convening of an Occupational Health Strategy Group: A suggestion was made to consider convening an occupational health strategy group around malaria to engage the vulnerable populations (forest workers, farmers etc). Participants were invited to consider this idea.

USP/PQM, Promoting the Quality of Medicines Program, Dr. Souly Phanouvong, Manager, Drug Quality Assurance and Policy Development: Dr. Souly outlined the proposed goal for USP/PQM in FY11, which was to establish sustainable mechanisms for quality assurance and quality control of medicines in the GMS. He then reviewed the key objectives for the Malaria

Program, for the Obtaining of quality medicines through MQM, and for Capacity Building in the region. He then presented the BREMERE program: Build Regional Expertise in Medicines Regulation and Enforcement and outlined the key objectives, which were to: build on ANEQAM success; establish a regional mechanism to prompt information-sharing and investigation and promote collective enforcement actions at national and regional levels; to strengthen medicine regulation, registration, post-marketing surveillance at country and regional levels through the review/update of regulations and policies, and to modernize medicine registration using computerized software, as well as intensifying the MQM program. The development of human resources through training and other capacity building activities was also a priority, as was increased public outreach and advocacy. In addition, a study protocol would be developed to conduct a survey on availability and evaluation of the quality of anti-malarial medicines used in refugee camps along the Thailand-Burma border.

Comments, Questions and Discussion

Difference in FY10 and FY11 work plan: USP responded that in the past the focus was on assisting countries with their TA needs, but now the goal was to look at ways to ensure the programs could be sustainable i.e. to help countries earmark different funding sources to continue this work, such as Global Fund, for example. USP planned to address the quality of medicines issue from a broader perspective – addressing human resources capacity building, through curriculum development at university level, for example. That was the major difference. USP had been active in the region since 2003, and was frequently asked about the sustainability plan. As the GF was now requiring countries to have accreditation (which facilitates the generation of revenue for laboratories) this was also a focus. In addition, USP standards were only relevant for the USA, so the idea was to establish an ASEAN reference standards program that would help sustain it regionally.

Cambodia: prequalification for anti malarial medicines (DHAPIP). Cambodia was planning to phase A-M out and give priority to the promotion and use of DHAPIP countrywide from 2011. The question was what could be done quickly to access prequalified DHAPIP. The response was that there had been a lack of communication on this. USP were trying to help the region establish some internationally recognized standards. The speed of this was a challenge because they were required to work closely with WHO pre-qualification team and the Malaria global program to discuss about which products weren't yet prequalified and what manufacturers in SE Asia could help with the process.

Cambodia: A further comment was made that support was needed to test the quality of the drug. Previously, the NMCP/government had collaborated with GFR9 and had proposed that the police be engaged in enforcement at the private sector level and confiscation of counterfeit drugs. The response was that USP had begun to work on this model (with some contribution from the French Embassy in Cambodia) to provide training on how to test anti-malarials and they were interested in collaborating with Customs and MOH. USP did not want to dilute the focus from PH to trade issues so they were endeavouring to build a model to ensure that health remained the focus and the MOH was involved.

WHO-Mekong Malaria Programme, Dr. Charles Delacollette, Coordinator,

For FY11, WHO would focus on providing coordination and support to the Mekong Malaria *in vivo* Therapeutic Efficacy Study (TES) Network and improving quality microscopy. Development of a QA/QC malaria diagnostic approach would also be an important task. In

addition to providing support in reviewing the national drug policy in Thailand, drug quality monitoring (collaboration with INTERPOL – IMPACT) remained a critical and sensitive issue and strengthening national and supranational malaria surveillance, would also remain priorities. Policies related to malaria in pregnancy and non-malaria fever algorithms would be established and operational research will focus on the safe use of primaquine either single dose together with ACT or 2-week to control vivax infections and to validate point of care rapid test to detect G6PD deficient patients. Technical assistance to countries to implement the M&E framework and indicators into the GMS context would be provided and containment activities beyond the Cambodia-Thailand border with countries, donors and partners including ASEAN, would be scaled up. In addition, TA would be provided to document VMWs performance and finalize the national malaria strategy in Cambodia. Support would also be provided for countries seeking or maintaining GFATM grants. Additionally, WHO had been approached by the Gates foundation to continue work on containment increasingly looking at extra operations on the Thai-Myanmar border and in Myanmar itself. WHO-MMP continues to be engaged in joint Cam-Thai containment operations including review of progress and facilitation of national and international task forces. WHO-MMP is also engaged with the ASEAN secretariat [health section] to recognize and better address from a multi-country perspective *P falciparum* resistance to artemisinins into the next 5-year ASEAN health strategy. Engaging with USP more closely on monitoring and addressing quality drugs would be beneficial, particularly in China but also in Burma. Regarding funding issues, WHO had not received much budget for significantly supporting and engaging the private sector [through PPM initiatives]. Private providers used by more than 50% of patients remain a yet neglected key player in disease control by most of national programmes.

Questions and Comments

Forensics for identifying counterfeit medicines in the region: there was discussion around the need to start to look at the sources of counterfeit medicines and to address the root causes of the problem rather than just removing what was found in the market. The Wellcome Trust had funded some forensic investigation in Cambodia but there was a need to continue and expand beyond this regionally. In China, Interpol had been working with WPRO to look at this issue in other countries in the region.

Vectors: there was also discussion around the need to look more closely at vectors, vector control and efficacy of personal protection measures and to improve information sharing on this. The MMP Repository and Containment Project was a good start along with the launch of the WHO (HQ) containment website.

MMP Repository and Containment Project website, T Wongsuerbkhao

The MMP Website and Repository and Containment Project website were presented. The repository is an online center where MMP materials are stored and can be retrieved for later use. It provides open access to both WHO staff member and outsiders but a level of access is set up for particular type of materials. In the open access area, the website contained 9 collections: – factsheet, journal articles, meeting/workshop reports, photos gallery, presentations, press release, publications. In the restricted area, the website contained - duty travel reports and project reports.

The website can be found at: <http://whothailand.healthrepository.org/handle/123456789/88>

Other MMP websites could be found at:

MMP website: http://www.whothailand.org/en/section3/section113_269.htm

Containment project website: http://www.whothailand.org/en/section3/section113_276.htm

AFTERNOON SESSION: Country / Regional Achievements and Next steps

Towards implementation of the updated 5-year national malaria strategy plan in Lao/PDR: Dr. Deyer Gopinath, Medical Officer/MVP, WHO-Lao PDR

Dr. Gopinath presented an overview of the history of malaria in Laos and the response strategies that had been implemented. The key strategies over the past 5 years were: early diagnosis and treatment; personal protection; targeting ethnic minority groups, and enhancing capacity building and program management. Over the past 10 years, malaria in Laos had decrease by almost 50%. With the rapid decline in reported cases, in 2007 the NMCP realized there was an urgent need to re-stratify malaria risk areas in the country. Laos received R1 and R4 GFATM support for the stratification program, and using the old stratification model as a base, risk areas were identified with a population of 3.6 million. Based on the findings of the re-stratification exercise (ACD, PCD, EMG survey) and from routine programmatic data, a revised National Malaria Strategy was developed. The strategy has 8 key program objectives. In addition, Laos would continue to give more attention to the adoption of effective pro-active strategies for addressing external risk factors like deforestation, plantation, mining and hydro dam and road development projects.

Questions and Comments

Micro-stratification as a tool to adjust control interventions: a comment was made that this was very interesting work, and many countries needed more work on this, particularly to address the diversity of external factors that impact upon malaria in the region. The GMS region required a comprehensive strategy to address this issue, as it was one of the driving forces of malaria in this part of the world.

Update of Malaria Control Activities in Vietnam: Dr. Nguyen Manh Hung, Director, National Institute of Malariology, Parasitology and Entomology: Dr. Manh Hung presented the general objective of the for National Strategy For Malaria Control And Elimination (2011-2015), which was to continue to roll back malaria in the high endemic areas and the high-risk groups and to develop and strengthen the sustainable factors for malaria control. A pilot implementation of malaria elimination would be carried out using a step-by-step approach that would later be expanded to the low malaria areas. The main malaria indicators for 2006-2009 were presented showing a reduction in cases from 91,635 in 2006 to 60,867 in 2009. Results from the Drug resistance (in vivo test) 2009 were also presented showing an adequate clinical and parasitological response rate of 85.4% with no early treatment failure observed. The Malaria stratification for the country was also presented. A total of 1.3% of the population were living in high malaria endemic areas, 62.7% in malaria free zones, 20.1% in at risk areas, 12.3% in low malaria areas and 3.6% in moderate malaria endemic zones. Specific project objectives were presented including strengthening programme management, strengthening community based monitoring, improving treatment-seeking behaviour and community awareness through IEC/BCC and implementation of the pilot project.

Towards Updating The National Policy To Manage P. Falciparum And P. Vivax Infections In Cambodia, Dr. K Sim and R. Abdur: The presentation reviewed drug efficacy monitoring results in Cambodia including percentage with treatment failure, percentage with Day 3 positivity and percentage of p.vivax treatment failure. Dr. Sim then reviewed the evolution of first line treatment of malaria in Cambodia beginning with Chloroquine in 1993 and moving through to DHA-Pip in the public sector in Zone 1 only for pf in 2009. For pv the treatment was still Chloroquine. Dr. Sim then reviewed the approach to diagnosis of malaria up to 2009 before presenting the WHO revised guidelines for treatment and the outcomes of the April 2010 National Drug Policy Workshop. In addition, she presented the recommendations around standards of malaria diagnosis, which were: to establish norms and standards for microscopy and RDTs (equipment, staff, incentives); establish national QA system involving all facilities with microscopy and to ensure QA at 3 levels: procurement, pre distribution and field (positive control wells). Finally, the general recommendations from the April 2010 drug policy workshop were presented as well as the 6 key steps that had been taken towards implementing a revised national drug policy.

Questions, Comments and Discussion

Challenges of selecting a new ACT: there was discussion around the difficulties of selecting a new ACT in the context of prequalified drugs. Even with the available resources and support, the problem in Cambodia remained the absence of a prequalified drug, and this needed to be addressed. A comment was made that the GF did pass a recommendation for certain critical drugs to be used for malaria. There was an exception for the procurement of DHAPIP which has not fully passed yet all requirements to be considered as a GMP product.

Towards revision of the national anti-malarial drug policy in Thailand: Dr. Wichai Satimai, Director, Bureau of Vector-Borne Diseases, Department of Disease Control, Ministry of Health: Dr. Wichai provided an overview of Thailand's drug policy changes since 1965 and also reviewed treatment efficacy. In 1995, ARS-MQ was introduced in selected provinces and by 2008, ARS (3 d)-MQ (2d) was promoted countrywide. Treatment of Pv, Pm, and Po was reviewed with no evidence of pv resistance but frequent relapse cases (Primaquine from 15 mg → 20 mg x 14 d). Drug efficacy monitoring occurred in 9 sentinel sites for the monitoring of the therapeutic efficacy and safety of a 3-day Artesunate-Mefloquine Combination for the treatment of uncomplicated falciparum malaria in 2008-2009. Treatment efficacies of pf and pv were reviewed including the parasetimia. Key challenges included the following: delay of Atovaquone-proguanil which may affect reduction of drug resistant pressure in the Zone 1; attitudes of the migrants on receiving diagnosis and treatment from Thailand; different drugs used in the two countries may cause confusion among patients; collaboration between the two countries and exchange of information and case follow up. Following this review, Dr. Wichai informed participants that 2010 marks the 60-year anniversary of the National Malaria Program in Thailand. To mark the occasion, the International Malaria Colloquium, would be held from 1-3 December, 2010 supported mostly by WHO. Further details of this could be found at <http://www.thaidvbd.com/imc2010.php> or www.jitmm.com/jitmm2010/

Questions and Comments

7-day follow-up of cases: clarification was sought on the follow-up of cases. Dr. Wichai clarified that the plan was to follow up each case 7 times but as it was not possible to follow all cases, the percentage presented was the percentage of cases followed up 7 times.

Molecular markers: A question was asked about who was processing molecular markers. This was asked in the context of the need to make better connections and collaborate more closely on molecular markers. All cases should be checked thoroughly, as the remaining cases were likely to be a very strong strain of malaria. The response was that it was either Chulalongkorn or Thammasat University. More data was available on day 3 parasite positives (but most disappeared at day 7).

A further comment was made that to confirm pcr, this could be done in the bureau, and for QC there was a network, but for other issues it was not certain. During previous months, the percentage of day 3 paracetemia was very bad and should be investigated.

Percentage of Parasite at day 0 and day 3: two questions were raised: one querying if there were any sites where at day 0 the percentage was high and not at day 3, and the second if there was any testing to determine if there was D5 in the patient at that time? The response was that there was not. The testing was done as part of routine containment and there was no system to follow-up beyond this. Normally there was a requirement to follow up 7 times as standard practice in every Malaria clinic. For containment areas, 300 baht was given to staff per visit/follow up as an incentive.

Towards implementing a Containment Strategy for Artemisinin resistant Pf strains in Myanmar, Dr. Khin Mon Mon, Deputy Director (VBDC) Program Manager, Malaria

Dr. Khin Mon Mon provided participants with an overview of the malarious areas in Myanmar, the percentage of the population at risk (63%) and the high-risk groups. She reviewed the yearly malaria morbidity and mortality rate from 1999-2009, the malaria species among confirmed cases, as well as vector habits. The National Malaria Control Strategies were presented and a summary of the efficacy results for 2009. Dr. Khin Mon Mon then reviewed some of the key factors that contributed to malaria in Myanmar (migration, unregulated drug market, overuse of AMS monotherapy, counterfeit drugs, amongst others). Dr. Khin presented the outcomes of the TSG (Malaria) meeting held in September 2010 to develop a Strategic framework on ARC. Key recommendations included (but were not limited to): rapid implementation of national drug policies based on research findings; obtaining wider coverage for free distribution of effective antimalarials and strengthening regulatory authority to monitor drug quality and enforce regulations related to quality and use of drugs.

Questions, Comments and Discussion

Draft containment strategic framework: WHO Myanmar clarified that this strategy had been developed for the eastern part of country but this would be refined to expand to other areas. A draft had been developed and would be finalized by early December. This would be used as an advocacy tool for Artemisinin resistance in Myanmar.

Factors contributing to resistance: a comment was made about the external factors that contributed to malaria that were labeled as “human factors” – that these were really “system factors” related to health systems.

Containment Strategies: As Burma and other countries move forward with containment strategies, they were advised to access the WHO document that delineated what should be in a containment strategy.

Vivax resistance in Cambodia: a question was asked about how Cambodia had calculated the cost of medication for using ACT to treat plasmodium vivax (according to its new guidelines, April 2010). The situation would be different to GFR9 as the majority of cases were now vivax. The response was that under GFR9, the budget had been approved and signed and Cambodia was now expecting that a new ACT would be available at country level soon and the cost was around 0.5 USD (subsidized).

Involvement of regulatory authorities in National Strategy: a comment was made that this was a positive approach as the involvement of the FDA could contribute a lot by banning mono-therapy, without registering or deleting from essential medicines. This could help the national program implement activities more effectively. URC/SPS was hoping to assist Myanmar with the introduction of the medicines monitoring program.

Malaria Situation and Control in China, Department of disease control and prevention, Dr. Qifa Gao, Deputy Director, Department of Disease Prevention and Control, Ministry of Health

The presentation provided an overview of the history of the Epidemiology of Malaria in China, from 1949 (30 million cases) when malaria was prevalent in 70-80% of all counties, to recent years when the caseload per annum had been reduced to less than 30-40,000 cases. Falciparum malaria was now confined to 2 provinces: Hainan and Yunnan, accounting for 4% of all cases. The Ministry of Health had taken a lead in developing strong National malaria control plans, regulation and technical schemes with very good results. Key achievements were outlined and a presentation on the future direction of Malaria control in China was provided. The plan for the next decade was to establish a *China Malaria Elimination Action Plan (2010 – 2020)* with the goal of achieving the elimination of malaria (and prevention of reintroduction) by 2020. In addition, China planned to strengthen financial support and continue to provide free antimalaria drugs for Chinese citizens. By the end of 2015, Yunnan border counties would achieve pre-elimination (incidence < 1/10,000) and by the end of 2015, most Type 1 and nearly all Type 2 counties would achieve elimination (zero locally transmitted malaria cases). Finally, Dr. Gao reviewed the achievements of the GF program in China and gave an overview of TES activities and results.

Questions, Comments and Discussion

Use of dosage of 180mg primaquine for 8 days: were there any negative problems associated with this high dose? The response was that the presentation focused on specific strategies not specific problems.

Quality of anti-malarials in Hainan or Yunan Provinces: further information was requested on this issue. The response was that in these 2 provinces, because of the ecology of southern areas, different strategies would be adopted for these 2 provinces in the future around falciparum malaria cases.

Discussing quality drugs testing/control with Chinese authorities: this was an important issue as 99% of chloroquine came from China. The chloroquine quality was acceptable (after QA) but it would be important to work more systematically with the Chinese authorities in the future.

Specific TA needs of MMP countries: USAID noted that the input from national programs had been very useful and that, overall, malaria incidence had declined significantly in the region.

However, each country had different needs and priorities in the control measures and was encouraged to specify the particular TA needs so that TA could be provided more effectively.

Inputs and suggested priorities from the National Malaria Program Managers and partners on 2011 MMP activities

Laos Priorities: Laos had already prioritized key activities in the national strategy and was looking for appropriate TA and moral support as they moved forward. The proposal for the second phase of Round 7 had been submitted to the Global Fund, although there were still a lot of questions to be addressed. *Capacity development for District staff*, particularly in improving management skills of District staff, was important. As the stratification level in Laos was looking at villages, the district staff were responsible for supervising villages and needed appropriate training. They also needed training for ACT combo treatment so they can properly implement this activity.

Myanmar priorities: 1) Continuation of the TES studies for Myanmar – for the long-term and for more activities like molecular markers; 2) Stopping the spread of resistant parasite transmission; improving insecticide control measures and vector control; more Operations Research for malaria control for migrant workers and a strategy to address targeting of migrant populations both internally and externally (from Kachin state up to Kawthoung/Ranong), also the ERC component; 3) Strengthen the FDA for quality control of drugs and to address counterfeit drugs; 4) Sustain what has been started regarding QA on microscopy and RDTs.

Thailand priorities: 1) Capacity building for both implementation and research / learning by doing. 2) Need for additional staff; 3) Effectively target mobile populations (both internal and external migrants) especially construction and rubber plantations workers; 4) Address cultural and language issues in the context of the *One World, One Health* focus; 5) Look into social, biological and ecological issues; 6) Improve vector knowledge to know more about biting times of vectors etc. and look at appropriate measures e.g. LLNs or insecticide spray; 7) Address financial constraints 8) Provide knowledge and resources for the public to store medicines appropriately.

China priorities: would be elaborated at a later date.

Cambodia: Priorities: 1) Improve engagement with the Private Sector. The PS was involved by providing treatment to patients but it needed to be better regulated to ensure quality of medicines and care. The issue remained of whether the PS should be permitted to provide treatment or not; 2) Procurement Supply Management Systems need to be improved to facilitate distribution of supplies before the rainy season. This issue has been on going for years; 3) BCC/IEC materials: specific groups have been targeted but need more effective approach to reach migrants and mobile populations; 4) Improve sharing of information at a regional level.

BCC/IEC: USAID RDM/A asked all countries if BCC was a challenge for them and if more assistance was needed. *Myanmar* responded that it was critical, as goals could not be achieved without effective BCC. The challenge was to reach ethnic minority groups (many are illiterate). It would be important in the future to revitalize and expand BCC programs.

Vietnam: Priorities: 1) How to improve control malaria while targeting mobile populations and seasonal migrants – people from non-malarial areas moving to high-risk areas?; 2) resistance of falciparum to artemisinin; in some districts parasites were found at day 3 so better follow up and

monitoring was required; 3) Assistance in implementing the Elimination model; the elimination program was being implemented in some provinces using WHO guidelines but an Elimination Workshop would be very useful, particularly focused on how to do surveillance, M&E and also BCC/IEC in an Elimination context 4) Artemisinin resistance – need to implement containment in the next year. But limited funding (only 500, 000 USD for containment).

USAID/PMI: Dr. John MacArthur provided a brief background to NMCP program managers of the USAID funding for Malaria in the region. In 2005 USAID funding was less than USD 2 million per annum. In 2006, USAID convened a Strategic Review in Chiang Mai and USAID-funded partners were asked to show how they had used the USAID funding over the previous 5 years and what their plans would be for the next 5 years. National Program managers were also asked to give input on the same issue and after discussion, this resulted in the development of the USAID framework of the MMP. At that time, the funded USAID-partners and the NMCPs as well as the non-funded partners were asked to focus on 2 key areas: 1) to improve effectiveness of case management in the region; 2) SI-monitoring and evaluation; surveillance and operational research. With only USD 2 million there was not enough resources to put into Entomology or vector control so the focus was on the priorities articulated by all the various partners. As the USAID portfolio grew from USD 2 to 6 million, these issues remained the focus. As USAID support to the region was now changing to the PMI focus areas, new resources would become available. Now all Partners would have the opportunity to re-think the current focus areas and articulate what changes they would like to see – and what additional areas, such as Entomology and Vector Control, that they may want to expand into. Dr. MacArthur also informed the NMCPs that PMI technical teams would conduct country visits to assess and review the different strategies and priorities.

Partners Priorities: Partners were asked to express and articulate their key priorities

ACTMalaria: 1) Competency Assessments in microscopy, 2) QA for vector control. ACTMalaria would follow up on integrated vector management. ACTMalaria did not want to push countries for regular monitoring of insecticide resistance but there was a need to ensure that data was of high quality and was comparable. WHO HQ [WHOPES??] had already set up a global database for QA for vector control. 3) Capacity Building on implementing Elimination model: all country programs were now presenting plans for elimination and capacity building remained a significant need. A module [yet to be finalized] on Malaria Elimination should be incorporated into trainings. GMP is already working on this.

AED: 1) Improved coordination across borders: establish a regional coordination mechanism to address the issues regarding mobile and migrant populations and ethnic minorities.

Malaria Consortium/CDC: 1) M&E and Surveillance and Operations Research; 2) The OR symposium coming up in Siam Reap would provide an opportunity to develop these ideas into something more concrete; 3) Elimination and reaching migrant populations: develop a regional forum for OR as this would help to determine how to fund OR activities for the region.

Kenan Institute Asia: 1) Elimination: improve information sharing around strategies. This was a new area for all and everyone could benefit from effective sharing of different approaches; 2) Research further how to reduce the outbreak risk through vector control; 3) Improve cross-border collaboration and information exchange – address importation at source (cross border and up-country); 4) Adapt Surveillance information systems to Elimination settings.

Comment from MEASURE Evaluation: Only one country mentioned M&E as a priority but M&E should be a priority for all, particularly with the increase in resources from PMI and the increased scrutiny that will come with these resources. It would be important for all partners to report strong results. An example of this was the recent IMPACT Evaluation of the first 3 countries from the PMI first round: No country had a baseline and much was centred on secondary analysis of DHS data, which was not appropriate for the Mekong region. All partners needed to think through an evaluation strategy at the outset: what data should be collected and how it would be collected and analyzed. This approach would enable partners to clearly demonstrate what progress/success had occurred and show progress towards elimination in 5 years time. All partners should include SI and M&E at both country level and regional level as they moved into the next phase of the program. It was important to move from a culture of reporting to a culture of data for management purposes. Building capacity to ensure the development of systems for reporting and management was very important. Although countries were focused on M&E for GF grants, M&E needed to be considered in a more holistic way, as PMI was now looking at all the resources going into a country to evaluate the totality of the program.

MSH: Informed all Partners that MSH planned to speak directly with each country about the specific needs in pharmacovigilance /medicine systems safety. As a region, everyone should be thinking about pharmacovigilance, as the GF was asking for this in its proposals and all countries should be prepared to meet this requirement, particularly with new first line medicines being introduced and primaquine being scaled up, as this required a new emphasis on Pharmacovigilance. Also, as countries were moving towards Elimination they needed appropriate information to adjust their situations to pre-elimination and elimination.

The representative from Thailand commented that Pharmacovigilance was essential and it was positive to see that USP would push for companies to be involved also in prequalification. All partners should focus on thinking about new needs for the future and plan accordingly, rather than repeating the same projects every year.

University of Maryland: Commented that if the region was going to eliminate malaria and contain artemisinin resistance, there was a need to better understand the spread and origin of malaria. TES required strengthening, and follow up on Day 3 positivity required a more comprehensive approach, which would be helped by an increase in resources. Identification of a potential Molecular marker for resistance and using it to map surveillance would be an important step. Since the end of Gates-funded ARC3 project, there had been little investment on this issue, and a collection of samples was needed for development – filter paper collections and simple cross-sectional surveys from existing labs (can quickly validate markers) could help in rapidly mapping the extent of resistance.

USP: 1) Intensify medicine quality monitoring – tailored to specific countries. For example, sampling to specific locations and product groups could improve the effective use of data and information sharing and this data could be used for awareness raising and education; 2) capacity building of regulatory authorities with respect to inspections and helping manufacturers to adhere to WHO prequalification etc; 3) Establish a regional mechanism on quality of medicines through country partners and collaboration with WHO and Interpol.

URC: 1) Increase focus on Military; 2) Scale up activities for reaching Migrant and mobile populations – particularly in terms of prevention. Develop a comprehensive package in terms of treatment and network with all countries on this issue. 3) Scale up interventions with the Private

Sector: Develop new approaches to engage the PS that are sustainable and promote long-term cooperation – particularly focus on how to maintain motivation amongst PS practitioners; 4) Mapping of surveillance: particularly drug resistant parasites but also spend the time to go to the community and try to eradicate the parasite in the community where it exists. 5) Molecular surveillance: prioritize maps - they remain very important and the MMP would benefit from putting together a regional map of malaria incidence / risk stratification measures and include forest cover. There was a need to better understand the dynamics of malaria and Maps were a great tool to look at flows and trends of migration.

Next mid-year MMP partners meeting: date and structure

Date: 26-27 April 2011. Venue: tentatively Bangkok.

The 2-day meeting would not involve program managers.

WHO-MMP was open to input from partners regarding the structure of the meeting. Suggestion was to make presentation by partner and by IR to better see how partners articulate by IR.

Closing Remarks: Chair

The meeting chair reiterated MMP priorities to focus on TES and response, to adjust [vertical] malaria programme in a context of decreasing transmission and to promote quality drugs.

Existing time consuming cross-border initiatives e.g. on containment have to some extent delayed the work on some of the above critical issues. However the emerging problem of artemisinin resistance and the above issues are showing we need to play a bigger role in terms of making the meeting not just about exchanging information but more action-oriented.

PMI could consider a multi-country action around these issues/

Next Steps: Dr Charles Delacollette, Coordinator, WHO-MMP Malaria Programme

Dr. Charles informed all participants that he was pleased to hear country program managers expressing their needs and views so clearly. The country program managers were the ones in the field and had a sound understanding of the technical assistance and financial requirements to enhance implementation and management of their programs. Over the course of the 2-day meeting, Dr. Charles had noted the following key words across participants' inputs:

- Improving collaboration on Migrant/mobile populations and cross-border issues
- Pre-elimination and Elimination: idea was expressed about holding an elimination workshop
- More research on impregnated bed nets /clothes etc
- Surveillance – WHO, Malaria Consortium and CDC to boost relevant surveillance systems including OR
- Quality drugs and quality data – WHO and USP to develop joint action plan

- Private sector: yet too much neglected from Programmes and partners. More initiatives to be piloted and existing ones to be better documented. AMFm in Cambodia to be closely monitored.

Finally, Dr. Charles reiterated WHO commitment to improving quality of data generated by TES sites in relation to cross country containment operations [magnitude of the response]. WHO would continue to work with and support all Mekong countries to ensure that all data was strong, reliable and valid.

Closing Remarks: Dr. Chansuda Wongsrichanalai, Infectious Diseases Strategic Information, USAID RDM/A

Dr. Chansuda thanked all partners and country program managers for attending the 2-day meeting and providing valuable input. She also reminded partners of the following:

- 1) Work plans: all work plans were required to be submitted to Dr. Chansuda before the beginning of the next fiscal year (by 1 October).
- 2) Indicators: partners were asked to complete the indicator sheets and return to Dr. Chansuda

Conclusions and Recommendations

Participants agreed that forums for exchanging information and ideas were extremely important as Partners could learn a great deal from one another and the different approaches adopted in different country contexts. Further to this, it was suggested that within the MMP Partners' meetings in the future, the structure be amended to include time for information exchange, such as Poster presentations, for example. WHO was open to a change in format of the meeting if it helped to improve communication and sharing of information.

Key areas identified during the course of the 2-day meeting that required further focus or scaling up of efforts and/or funding included:

- Prequalified drugs especially looking at the scaled up use of DHAPIP in the GMS
- Increased coordination and scaling up [through GF funding] of specific activities for Pharmacovigilance (e.g. primaquine, DHAPIP and ASPYR)
- More effective engagement of the Private Sector and documentation of existing PPM initiatives in the GMS
- Capacity Building for program management in a context of decreasing malaria transmission: curriculum, guidelines and training modules to be finalized
- Establishment of a Regional mechanism on quality medicines in collaboration with Interpol and WHO including regular exchange of some info [e.g. to media] through consolidated websites
- Establishment of a regional working group on migrant and mobile populations
- Vector control, Entomology and innovative personal protection measures
- Workshop on Pre-elimination and Elimination settings
- Quarterly reporting and Mapping of surveillance data
- Capacity building on Monitoring and Evaluation

Mekong Malaria Programme Core Partners' Meeting

21-22 September 2010

Laguna Beach Resort

Phuket, Thailand

TENTATIVE AGENDA

Tuesday, 21 September 2010 (DAY 1)

08:00	Registration of participants	<i>B Sae-Seai, K Laempoo</i>
08:30	Opening remarks <ul style="list-style-type: none"> ▪ USAID ▪ WHO 	<i>C Wongsrichanalai C Delacollette</i>
08:45	Introduction of participants, nomination of chairperson and rapporteur	<i>C Delacollette</i>
	<i>Review of FY09 partner's activities supported by USAID RDM-A in the GMS (Max 10 minutes / partner + 5 min clarification)</i>	<i>J MacArthur</i>
08:50	<ul style="list-style-type: none"> ▪ ACTMalaria ▪ AED/C-Change Communication ▪ CDC Atlanta / Malaria Consortium ▪ Kenan/GMS-Response to Infection Diseases (RID) ▪ MEASURE/ Evaluation ▪ MSH/SPS 	
10:30	<i>Coffee Break</i>	
11:00	<ul style="list-style-type: none"> ▪ University of Maryland ▪ URC ▪ USP/PQM ▪ WHO 	<i>J MacArthur</i>
12:00	Clarifications	<i>J MacArthur</i>
12:30	<i>Group Photo and Lunch</i>	
14:00	Update on RDMA M&E data reporting system	<i>R Goud & C Wongsrichanalai</i>
14:30	Containment of <i>artemisinin-resistant parasites</i> on the Cambodia-Thailand border: Progress made	<i>S Bjorge / N Habib</i>
15:00	Therapeutic efficacy failure rates in the GMS: Update	<i>D Bustos</i>
15:30	Clarifications	<i>J MacArthur</i>
16:00	<i>Coffee Break</i>	
16:30	Overview of last 5-year experience and progress made in drug quality monitoring and control of substandard and counterfeit drugs in the GMS	<i>S Phanouvong,</i>
17:00	PMI and its introduction into the MMP	<i>J MacArthur</i>
17:30	Clarification	<i>J MacArthur</i>
18:00	Closure of Day 1	



Wednesday, 22 September 2010 (DAY 2)

Presentation of partners' activities planned for FY10 in the GMS *L Ortega*
 (Max 10 minutes / partner + 5 min clarification)

- 08:30
- ACTMalaria
 - AED/C-Change Communication
 - CDC Atlanta / Malaria Consortium
 - Kenan/GMS-Response to Infection Diseases (RID)
 - MEASURE/ Evaluation
 - MSH/SPS

10:00 *Coffee Break*

- 10:30
- University of Maryland
 - URC
 - USP/PQM
 - WHO

11:30 MMP Repository and Containment Project website *T Wongsuebkhao*

11:45 Overall clarifications towards better articulation between partners' interventions in the GMS to support national and MMP goals *L Ortega*

12:00 *Lunch*

Country / regional achievements and next steps *L Ortega*

13:30 Towards implementation of the updated 5-year national malaria strategy / plan in Lao PDR *S Phompida / D Gopinath*

13:50 Update of malaria control activities in Viet Nam *N M Hung / T C Dai*

- 14:10
- Towards revision of the national antimalarial drug policy in Thailand
 - International Malaria Colloquium in Bangkok, 1-3 December 2010

14:30 Towards implementing the updated national policy to manage falciparum and vivax infections in Cambodia *K Sim / R Abdur*

14:50 Towards implementing a containment strategy for artemisinin-resistant Pf strains in Myanmar *K Mon Mon / L Ortega*

15:10 Malaria elimination in China *QF Gao / Y Qian*

15:30 *Coffee Break*

16:00 Inputs and suggested priorities from national malaria programme managers and partners on 2011 MMP activities *L Ortega*

17:15 Next mid-year MMP partner's meeting date and structure of the meeting *L Ortega*

17:25 Next steps

- WHO *C Delacollette*
- USAID *C Wongsrichanalai*

17:35 Day 3 and 4 agenda *C Delacollette*

17:45 Closing remarks *L Ortega*

18:00 Closure of the partners' meeting



**Mekong Malaria Program Partners' Meeting
September 21-22, 2010
Laguna Beach Resort
Phuket, Thailand**

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