

# American Red Cross

## ANNUAL REPORT

(Year 1)

October 31, 2005

### Siem Reap Integrated Child Health Project

**Siem Reap Province, Cambodia**  
**October 1, 2004 – September 30, 2008**

Funded by the United States Agency for International Development  
Bureau for Global Health  
Office of Health, Infectious Disease, and Nutrition

FY-2004 Child Survival and Health Grants Program (CSHGP)  
Grant No. GHS-A-00-4-00007-00



*Together, we can save a life*



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FROM THE AMERICAN PEOPLE

## ACKNOWLEDGMENTS

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## ABBREVIATIONS

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AD	Administrative District
ADRA	Adventist Development and Relief Agency
ARC	American Red Cross
APVOFM	Association of PVO Financial Managers
ANC	Antenatal Clinic
ARI	Acute Respiratory Infection
CVCG	Community Volunteer Care Group
BCC	Behavior Change Communication
BF	Breastfeeding
BTC	Belgian Technical Cooperation Agency
CATCH	Core Assessment Tool on Child Health
CBSS	Community-based surveillance system
C-IMCI	Community-Integrated Management of Childhood Illnesses
CRC	Cambodian Red Cross
CS	Child Survival
CSHGP	Child Survival and Health Grants Program
CVCG	Community Volunteer Care Group
DIP	Detailed Implementation Plan
DTK	Diarrhea Treatment Kit
FO	Field Officer
FY	Fiscal Year
GAAP	Generally Accepted Accounting Principles
HFA	Health Facility Assessment
HKI	Helen Keller International
HMIS	Health Management Information System
HQ	Headquarters
ICH	Integrated Child Health
IEC	Information, Education, and Communication
IMCI	Integrated Management of Childhood Illnesses
IR	Intermediate Results
ITN	Insecticide Treated Mosquito Net
IYCFWG	Infant and Young Child Feeding Working Group
M&E	Monitoring and Evaluation
MOH	Ministry of Health
NECHR	National Ethics Committee for Health Research
NGO	Non-Governmental Organization
NIP	National Immunization Program
OD	Operational District
ORS	Oral Rehydration Solution
ORT	Oral Rehydration Therapy
PHCCG	Primary Health Care Coordinating Group

PHD	Provincial Health Department
PSI	Population Services International
PROCOCOM	Provincial Coordinating Committee
PVO	Private Voluntary Organization
RACHA	Reproductive and Child Health Alliance (local NGO)
RCV	Red Cross Volunteer
SO	Strategic Objective
SOP	Standard Operating Procedure
SR	Siem Reap
TBA	Traditional Birth Attendant
TRM	Technical Reference Materials
TT	Tetanus Toxoid
TOT	Training of Trainers
URC	University Research Corporation
UNICEF	United Nations Children's Fund
USAID	United States Agency of International Development
USG	United States Government
VHSG	Village Health Support Group
UNICEF	United Nations Children's Fund
VSO	Volunteer Service Overseas
WHO	World Health Organization
WUHE	Water Use Hygiene Education

# **Child Survival and Health Grants Program Project Summary**

**Oct-26-2005**

## **American Red Cross, International Services (Cambodia)**

### **General Project Information:**

**Cooperative Agreement Number:** GHS-A-00-04-00007  
**Project Grant Cycle:** 20  
**Project Dates:** (9/30/2004 - 9/29/2008)  
**Project Type:** Standard

**ARC HQ Backstop:** Sujata Ram

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### **Funding Information:**

**USAID Funding:(US \$):** \$1,500,000      **PVO match:(US \$)** \$500,096

### **Project Information:**

**Description:**

The project goal is to reduce the high morbidity and mortality through Nutrition (LOE 15%) and Breastfeeding (20%), Immunization and Vitamin A (LOE 25%), and Community management of the sick child (LOE 30%) and Maternal Newborn Care (LOE 10%).

The project interventions will be implemented through the following four major cross-cutting strategies: (1) Health education/coaching for behavior change through an extensive network of CRC volunteers; (2) Community mobilization for behavior change achieved by engaging opinion leaders and motivating community-based activities to reinforce health communication through the CRC volunteers; (3) Coordination and continued involvement of other implementing partners to ensure synergistic program approaches; and (4) Community-based surveillance systems that complement and support existing Health Management Information Systems (HMIS).

**Project Partners:**

Cambodian Red Cross  
Ministry of Health  
RACHA  
Population Services International  
Plan International  
Belgium Technical Cooperation  
CARITAS  
University Research Cooperation

**General Strategies Planned:**

Social Marketing

**M&E Assessment Strategies:**

KPC Survey  
Health Facility Assessment  
Organizational Capacity Assessment with Local Partners  
Participatory Learning in Action  
Community-based Monitoring Techniques  
Participatory Evaluation Techniques (for mid-term or final evaluation)

**Behavior Change & Communication (BCC) Strategies:**

Social Marketing  
Interpersonal Communication  
Peer Communication  
Support Groups

**Groups targeted for Capacity Building:**

<b>PVO</b>	<b>Non-Govt Partners</b>	<b>Other Private Sector</b>	<b>Govt</b>	<b>Community</b>
US HQ (General) US HQ (CS unit) CS Project Team	Local NGO	(None Selected)	(None Selected)	Other CBOs CHWs

**Interventions/Program Components:**

**Immunizations (15 %)**

- (IMCI Integration)
- (CHW Training)
- Classic 6 Vaccines
- Vitamin A

**Nutrition (15 %)**

- (IMCI Integration)
- (CHW Training)
- Comp. Feed. from 6 mos.
- Cont. BF up to 24 mos.
- Growth Monitoring

**Vitamin A (10 %)**

**Pneumonia (10 %)**

- (IMCI Integration)
- (CHW Training)
- Recognition of Pneumonia Danger Signs

**Control of Diarrheal Diseases (10 %)**

- (IMCI Integration)
- Hand Washing
- ORS/Home Fluids
- Feeding/Breastfeeding
- Care Seeking
- Case Mngmnt./Counseling

**Malaria (10 %)**

- (IMCI Integration)
- (CHW Training)
- Access to providers and drugs
- Antenatal Prevention Treatment
- ITN (Bednets)
- Care Seeking, Recog., Compliance

## Maternal & Newborn Care (10 %)

(IMCI Integration)

(CHW Training)

- Recog. of Danger signs

## Breastfeeding (20 %)

(IMCI Integration)

(CHW Training)

- Promote Excl. BF to 6 Months

### Target Beneficiaries:

Infants < 12 months:	6,362
Children 12-23 months:	6,238
Children 0-23 months:	12,600
Children 24-59 months:	17,966
Women 15-49 years:	48,521
Population of Target Area:	213,749

### Rapid Catch Indicators:

Indicator	Numerator	Denominator	Percentage	Confidence Interval
Percentage of children age 0-23 months who are underweight (-2 SD from the median weight-for-age, according to the WHO/NCHS reference population)	122	342	35.7%	8.1
Percentage of children age 0-23 months who were born at least 24 months after the previous surviving child	16	38	42.1%	25.9
Percentage of children age 0-23 months whose births were attended by skilled health personnel	27	177	15.3%	7.8

Percentage of mothers of children age 0-23 months who received at least two tetanus toxoid injections before the birth of their youngest child	<b>106</b>	<b>177</b>	<b>59.9%</b>	<b>13.5</b>
Percentage of infants age 0-5 months who were exclusively breastfed in the last 24 hours	<b>43</b>	<b>112</b>	<b>38.4%</b>	<b>14.6</b>
Percentage of infants age 6-9 months receiving breastmilk and complementary foods	<b>49</b>	<b>60</b>	<b>81.7%</b>	<b>24.9</b>
Percentage of children age 12-23 months who are fully vaccinated (against the five vaccine-preventable diseases) before the first birthday	<b>48</b>	<b>141</b>	<b>34.0%</b>	<b>12.4</b>
Percentage of children age 12-23 months who received a measles vaccine	<b>151</b>	<b>170</b>	<b>88.8%</b>	<b>14.9</b>
Percentage of children age 0-23 months who slept under an insecticide-treated bednet the previous night (in malaria-risk areas only)	<b>6</b>	<b>347</b>	<b>1.7%</b>	<b>1.9</b>
Percentage of mothers who know at least two signs of childhood illness that indicate the need for treatment	<b>201</b>	<b>347</b>	<b>57.9%</b>	<b>9.5</b>
Percentage of sick children age 0-23 months who received increased fluids and continued feeding during an illness in the past two weeks	<b>65</b>	<b>121</b>	<b>53.7%</b>	<b>15.8</b>
Percentage of mothers of children age 0-23 months who cite at least two known ways of reducing the risk of HIV infection	<b>22</b>	<b>170</b>	<b>12.9%</b>	<b>7.4</b>

Percentage of mothers of children age 0-23 months who wash their hands with soap/ash before food preparation, before feeding children, after defecation, and after attending to a child who has defecated	1	170	0.6%	1.6
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**Comments for Rapid Catch Indicator**

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## **I. MAIN ACCOMPLISHMENTS**

### **PROJECT PLANNING**

#### *Accomplishments*

- Completion of sub-recipient pre-award survey with the Cambodian Red Cross (CRC)
- Completion of baseline survey, policy and strategy review, market study, health center visits, constituency focus group discussions, and a branch capacity assessment to re-validate and fine tune proposed project interventions
- Completion of highly participatory detailed implementation planning process involving unprecedented representation from national, local, and community level stakeholders
- Production and presentation of the Detailed Implementation Plan (DIP) at the Child Survival and Health Grants Program (CSHGP) mini-university in Baltimore, Maryland
- Revision of DIP based on reviewer comments as well as additional in-country stakeholder input

#### *Contributing factors*

- Collaborative, existing in-country relationships with CRC and government authorities
- Experience and lessons learned from other American Red Cross (ARC) and CRC community-based health programs
- Mobilization of existing human resources including reassignment of both international and local staff to the Integrated Child Health (ICH) Project
- Existing CRC Siem Reap branch office and local stakeholder relationships
- Participation and technical input from other international and local non-governmental organizations (NGOs), government authorities, and USAID/Phnom Penh

### **ADMINISTRATIVE**

#### *Accomplishments*

- Signing of project sub-agreement with CRC
- Signing of partnership agreement with Volunteer Service Overseas (VSO)
- Negotiation and agreement on supplemental staff policies related to project-specific issues including transportation and allowances

#### *Contributing factors*

- Prioritization of the ICH Project by the International Services Department of the ARC to expedite all administrative aspects of the project
- Existing collaborative relationship with the CRC
- Participation of VSO and Population Services International (PSI) in the detailed implementation planning process

## **PARTNER MANAGEMENT & POLICY STRENGTHENING**

### *Accomplishments*

- Formation of the Primary Health Care Coordinating Group (PHCCG) of the CRC Program Department; the group is tasked with developing common programmatic approaches for all CRC health programs based on best practices to serve as a critical input for the 2006-2010 health strategic planning process
- Review of existing staff policies; development of supplemental ICH Project specific policies as needed
- Strengthening CRC accountability and capacity to manage USAID funds
- Technical resource material support to the recently established CRC technical library
- Exchange visit to Danish Red Cross funded primary health care project in Sotr Ni Kum (Siem Reap Province)

### *Contributing factors*

- CRC initiative to strengthen its community-based health programming, development of common approaches, and integration with planned development of health strategic plan
- Management and policy guidance from the International Federation of Red Cross and Red Crescent Societies in-country representation
- Existing staff policies; dialogue to establish supplementary policies
- On-going coaching, review, and feedback of CRC budgeting and expense reporting; Association of PVO Financial Managers (APVOFM) USAID Rules and Regulations training in Bangkok, Thailand
- Influx of new child survival information and resources from increased contact with in-country child survival partners as well as increased technical support from ARC

## **COORDINATION AND INVOLVEMENT**

### *Accomplishments*

- Ongoing consultation and coordination with local partners including Provincial Health Department (PHD), Operational District (OD), Reproductive and Child Health Alliance (RACHA) and PSI; local partner participation in annual planning workshop
- Ongoing participation in Provincial Coordinating Committee (PROCOCOM) meetings
- Partnership workshop with VSO and local stakeholders to define the role of the VSO volunteer advisor as well as discuss expectations
- Private sector donation of 26 motorcycle helmets to promote staff safety
- Distribution and review of project description with key local stakeholders

### *Contributing factors*

- Local partner participation and input during the detailed implementation planning process
- Commitment and proactive approach to involve local partners (including private sector) to the greatest degree possible

## **STAFFING AND LOGISTICS**

### *Accomplishments*

- ARC field manager relocated and executing the DIP
- Sub-branch/project field office set-up and operational in Angkor Chum District
- Ten ARC project staff recruited, hired, and trained
- Twenty CRC project staff recruited, hired, and trained

### *Contributing factors*

- Prioritization of the ICH Project by ARC to expedite staffing and procurement
- Existing in-country finance system to expedite procurement
- Existing CRC branch office in Siem Reap from which to launch sub-branch/project field office setup
- Relationships with district governors to support field officer recruitment
- Prioritization of ICH Project by CRC to mobilize human resources and program department staff to undertake large-scale recruitment, hiring, orientation, and training

## **OPERATIONS RESEARCH**

### *Accomplishments*

- Involvement of the Ministry of Health National Malaria Center (CNM), Provincial Health Department (PHD), Operational District (OD), and RACHA in the development of objectives and protocol, field work, and report production for malaria prevention and control qualitative research; involvement of the Belgian Technical Cooperation Agency (BTC), and PSI in reviewing research protocol and discussion guides (see annex I)
- Involvement of the Ministry of Health National Immunization Program (NIP), PHD, OD, Helen Keller International (HKI), RACHA and BTC in the development of research objectives and protocol for immunization and vitamin A communications qualitative research
- Application submitted to the National Ethics Committee for Health Research (NECHR) for completion of immunization and vitamin A communications research

### *Contributing factors*

- DIP reviewer comments regarding baseline results and recommendations relating to malaria and immunization intermediate results (IRs)
- Local partner participation and input during the detailed implementation planning process
- Commitment and proactive approach to involve in-country partners to the greatest degree possible
- Newly available Cambodia-specific strategies, research reports, and national guidance including the second draft *USAID Cambodia Malaria Strategic Plan 2006-2011*

**Table 1. Progress by Strategic Objective (SO)**

SO1: Improved nutritional status of children under 2	Progress
Nutrition and breastfeeding objectives are not scheduled to begin until Q3 FY2006.	No
SO2: Improved immunization rates	
Formative research protocol developed and submitted to NECHR; field work scheduled for December 19-23.	Yes
SO3: Enhanced community prevention and management of sick child	
Formative research completed related to malaria prevention and control, including care-seeking behavior for the sick child; stakeholder dissemination and planning workshop scheduled for December 12, 2005.	Yes
SO4: Improved partner management capacity	
<p>ARC has worked closely with the CRC to improve management capacity in several areas:</p> <ol style="list-style-type: none"> <li>(1) Support to the formation of the CRC PHCCG to develop common approaches for all CRC health programs</li> <li>(2) Review of staff policies and the development of supplemental policies</li> <li>(3) Ongoing coaching, review, and feedback of CRC budgeting and expense reporting</li> <li>(4) Discussion of lessons learned from the recruitment process resulting in standardization of recruitment procedures</li> </ol>	Yes

## PHASE OUT ACTIVITIES

Both the ARC and CRC are committed to sustainable programming. As described in the DIP, the ICH Project supports the CSHGP *Intermediate Result 2: Increased sustainability of child and maternal health and nutrition and infectious disease programs/interventions initiated by PVOs and their partners*. Our primary strategy to achieve this is through a high level of stakeholder participation throughout each project stage to foster shared ownership and responsibility beyond the project life. Over the first year of the project, staff members have encountered a high level of interest and willingness to participate from stakeholders at every level. We believe that this report reflects that we have taken every opportunity to promote and capitalize on stakeholder interest and participation.

Additionally, as described in Section IX, the formation of the PHCCG will provide the mechanism by which project approaches will be institutionalized by the CRC as well as ensure integration into the 2006-2011 CRC's health strategic plan.

## II. Factors impeding progress toward achievement of objectives and actions taken

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A. Progress for the project's first-year activities was hindered by the delay in signing the grant agreement until January 2005. Subsequently, every possible effort is being made to advance activities over an accelerated timeline without undermining the project's third cross-cutting theme of "coordination and involvement of other implementing partners to ensure synergistic program approaches and local ownership." Presently, the ICH project has moved forward significantly while continuing engagement and maximum feasible stakeholder participation. Actions taken to overcome delayed start-up included:

- (1) Mobilization of existing human resources including reassignment of highly efficient and qualified staff, both international and local, to the ICH project
- (2) Prioritization of the ICH project by the ARC International Services Department to expedite administrative issues<sup>1</sup>

B. Related to management, the recruitment of professional Cambodian staff, particularly women, has proven challenging. There is a dearth of highly qualified candidates to manage and technically support community-based child health projects. The few well-qualified candidates stipulated a salary that is up to double any previous salary they had received and excessive when compared to salaries cited in the Cooperation Committee for Cambodia's *Survey of Salary and Benefits for National Staff of International and Cambodian NGOs 2004*. Actions taken to remedy this constraint included:

- (1) Renewed commitment to local capacity building including making hiring decisions based on candidate potential
- (2) Re-advertisement affected positions
- (3) Augmentation of the ARC field program manager project time to 100 percent
- (4) Relocation of the ARC field program manager from Phnom Penh to Siem Reap to facilitate capacity building with ICH project staff

C. Furthermore, relating to professional staff recruited from outside the project area, there was concern about possible abandonment within a short period of time due to unrealistic expectations of the working environment and future employment opportunities (due to the issue described above). Actions taken to mitigate this risk included:

- (1) Sub-branch/project field office located centrally (in Angkor Chum) and set up with simple, but comfortable overnight accommodation to facilitate work throughout the project area
- (2) Stable employment history as a criteria for employment
- (3) Pre-employment visit to project area to see the office and overnight accommodation as well as refresh candidates' experience of the working environment in rural Cambodia

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<sup>1</sup> Prioritization has been repeatedly tested over the past year due to the unprecedented response by the organization to the Southeast Asia tsunami as well as Hurricanes Katrina and Rita.

D. The Cambodian NECHR is now requiring all research proposals to be submitted for review and approval. This requirement surpasses present international standards by requiring ethical approval for health research that are experimental or involve clinical trials, invasive methods or the collection of sensitive or personally identifying information. This issue affects planned operations research that in other contexts would not require ethical review and approval. Actions taken to overcome this constraint include:

- (1) Researching related national guidance on the submission of research proposals
- (2) Consultation with other Private Voluntary Organizations (PVOs), NGOs, and the USAID Mission
- (3) Preparation and submission of formal research proposals before initiation of field-level data collection

E. In relation to programmatic constraints, the CRC and ICH project staff agree with the Community Volunteer Care Group (CVCG) model in principle, but they have not yet fully embraced the concept as a viable and sustainable volunteer model. A field visit to World Relief's Child Survival project "Light for Life" in Pohnea Kriek District, Kampong Cham Province has been scheduled for January 2006. The goal of the field visit is to strengthen the CRC and ICH project management staff's understanding of the Care Group model as implemented by World Relief, including possible pitfalls and overall potential.

### **III. Technical assistance needs**

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Technical assistance for the ICH project will come primarily from the ARC maternal child health advisor, senior monitoring and evaluation (M&E) technical advisor, finance officer, and field program manager. ARC technical specialists from the Technical Solutions Unit within the International Services Department of the ARC will also provide support as needed. Additionally, regional and in-country resources will complement this technical support to ensure the highest quality implementation for the ICH Project. Additional technical assistance needs have been identified along with an action plan to address each need as further described below. Technical assistance needs will continue to be identified over the life of the project.

1. Local staff understanding of behavior change communication (BCC) is low. To address this issue, the ARC project coordinator will participate in the training for "Management of Behavior Change Communication Interventions" in Bangkok, Thailand. This course is organized by the Asia-Pacific Development Communication Centre and will take place from November 22 through December 2, 2005. The course focuses on planning, managing, monitoring, and evaluation of results-oriented BCC strategies and programs. It will provide the project coordinator with a solid framework for BCC focused project implementation that can be backstopped by the ARC field project manager.

2. Staff need technical training in each of the project's intermediate results (IR) areas. The primary training curriculum for the ICH Project, as described in the DIP, is the *Training Curriculum for Cambodian Community Health Volunteers on IMCI Key Family Practices*. The MOH National Center for Health Promotion and the MOH Communicable Disease Control

Department are planning a training of trainers (TOT) of this curriculum in December, 2005 in Kampong Cham Province. The MOH national child survival coordinator has invited ICH project staff to participate in this training. He has also offered field support to the ICH project as needed and requested. Additional training and technical support for each IR has been identified and is outlined in the table below.

**Table 2. Technical training needs and resources**

<b>ICH Project Technical Area</b>	<b>Technical Training Resource</b>	<b>Notes</b>
<i>SO1: Improved nutritional status of children under 2</i>		
IR 1.1 Improved care of pregnant women	Infant and Young Child Feeding Working Group (IYCFWG); UNICEF, RACHA	Meeting set-up with Dr. Indira Narayanan, Senior Technical Officer for Newborn Health, BASICS in late October, 2005 to further discuss this and link project activities to the MOH strategy and newly developed MOH workplan
IR 1.2 Increased early and exclusive breastfeeding		
IR 1.3 Improved appropriate use of complementary foods		
<i>SO2: Improved Immunization Rates</i>		
IR 2.1 Improved routine immunization rates	NIP and OD	Already discussed with NIP
IR 2.2 Improved Vitamin A coverage	HKI and OD	Already discussed with HKI and OD
IR 2.3 Improved community participation in immunization	ARC field program manager	Related resources: project specific operations research on immunizations
<i>SO3: Enhanced Community Prevention and Management of sick child</i>		
IR 3.1 Improved home management-Diarrhea Treatment Kit	PSI	TOT scheduled for November, 2005; staff are scheduled to participate
IR 3.2 Early identification and referral for danger signs	OD staff, Health Center staff, Village Health Support Groups (VHSG)	Related resources: Review of Cambodian Referral Systems (August 2005); project specific operations research on care seeking
IR 3.3 Improved malaria prevention	National Malaria Center  ARC field manager and maternal child health advisor	Already discussed with Department of Health Education; project-specific operations research on malaria prevention and insecticide-treated net (ITN) use; Technical review and update of prevention interventions in March 2006
Handwashing	ARC field program manager/ARC project	ARC field program manager has ample experience with hygiene

	coordinator	promotion
<i>SO4: Improved Partner Project Management Capacity</i>		
IR 4.1 Improved coordination with health community	CRC branch director ARC field project manager and project staff	High level of involvement with the PROCOCOM and IYCFWG meetings
IR 4.2 Improved CRC project management policies and skills-general (volunteer, health, staff, etc.)	ARC HQ finance officer ARC field project manager and project coordinator  ARC field project manager, project coordinator and maternal child health advisor	Finance training scheduled January 2006; ARC financial officer has extensive experience with USG-funded programs and Generally Accepted Accounting Principles (GAAP). High level of involvement with the PHCCG; BCC strategy workshop to review best practices and BEHAVE Framework
IR 4.3 Improved CRC volunteer network	ARC technical training officer	ARC technical training officer has extensive experience with PRA and CRC volunteer recruitment, orientation, and motivation training

3. CRC's ability to ensure compliance with the rules and regulations of USG-funded programs is low. As an initial step in addressing this, ARC sponsored the CRC liaison officer's attendance at the APVOFM USAID rules and regulations workshop in April 2005. It was critical to begin the necessary training with the project's primary point of contact at the CRC. ARC will work to ensure that the benefits from these types of training extend to other parts of the CRC as well.

At the CRC headquarters level, ARC's Phnom Penh-based finance manager serves as an active, daily resource to the CRC Finance Department. At the branch level, the ARC's ICH project accountant will serve as a locally based counterpart and resource to the CRC finance officer. In each case, ARC will routinely monitor CRC to: ensure the internal controls in its financial management and accounting systems are sufficient to account for program funds; help CRC build its long-term financial management capacity by developing skills in areas such as procurement, budgeting, reporting, and auditing and ensure professional competence, organizational transparency, and regulatory compliance of its project finance staff.

In response to specific needs identified by the finance manager, ICH project accountant, field project manager and CRC, the Washington-based finance officer will conduct a training session on USAID rules and regulations, which will be held in January 2006. The training will be interactive and characterized by incorporating relevance to the daily program issues; explaining technical issues to the layperson; and building participants' confidence and technical skills. The finance officer will conduct additional training as needed on financial reporting; time and effort reporting; budgeting and forecasting; and cash management.

#### **IV. Changes in program description described in the *revised* DIP**

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None.

#### **V. Specific information requested during the DIP consultation**

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The DIP consultation provided an opportunity for additional technical review of the DIP. This has undoubtedly served to strengthen the DIP project document and therefore the ICH Project. The response for each recommendation was integrated into the revised DIP submitted on June 15, 2005. Each recommendation (*in italics*) and response is described in detail below.

*1. Elaborate on the work being done at the health facility level by the project partners, and the Cambodian Red Cross' role in this (i.e. discuss the feasibility of CRC participating in a health facility assessment with RACHA, include other partner's efforts in the complimentary activities matrix.*

Currently, three organizations are providing support at the health facility level in Angkor Chum OD: University Research Corporation (URC), RACHA, and BTC.

**URC** support is limited to the annual operational planning process. Specifically, URC provides limited technical support (review and comment on the plan) as well as per diems and transport and meeting costs for the development and production of the annual operation plan.

**RACHA** planned support for health center-level activities for FY2006 include: (1) conducting OD planning for Integrated Management of Childhood Illnesses (IMCI) for integration into annual OD planning before the technical training course; (2) organizing a clinical training course on IMCI-provided technical assistance by the MOH IMCI team (11-day course); (3) organizing TOT and follow-up courses for the provincial health department, OD staff who have attended 11-day and TOT course; (4) continuing to support and strengthen existing IMCI Health Center focus RACHA OD Information, Education and Communication (IEC) materials, checklist; (5) organizing follow up and supervision to all existing IMCI health centers and provide feedback on practical issues; and, (6) payment of staff per diem and travel. Selected ICH Project staff will participate in the clinical IMCI training course to ensure consistency and synergistic interaction between the clinical and community IMCI.

**BTC** support focuses on five major activities. Complementary areas identified for each activity are outlined in the matrix below.

**Table 3. Complementary areas of BTC and ICH activities**

BTC Activity	ICH Activity	Complementary Areas
<i>Improved Hospital Access</i>		
Development of free, high-quality health care for the poor through health equity funds used to pay for the hospital expenses of the poor	<ol style="list-style-type: none"> <li>1. Improve awareness of the fund through the community-based early identification and referral mechanism</li> <li>2. Possible provision of emergency transport seed funds as a performance-based incentive to villages</li> </ol>	<p>Early identification and referral of emergency cases through the health centers to the referral hospital presently in Siem Reap will improve timely provision of care and lead to improved survival rates</p> <p>Emergency transport funds will remove the cost barrier of transport to the health facility</p>
<i>Health Promotion through Medical Community</i>		
Promotion of better health behavior through a periodic medical newsletter, road safety campaign, improved marketing of public health services, and a health education training course	<ol style="list-style-type: none"> <li>1. ICH success stories submitted for publication in the medical newsletter</li> <li>2. Development and submission of a series of articles relating to improved breast feeding (BF) practices to encourage medical/health center staff to promote exclusive BF practices (no water)</li> <li>3. Collaborate on the development of the health education training course</li> </ol>	<p>Research in Cambodia suggests that positive influences appear strongest in areas where the community has been exposed to a combination of change agents, all promoting the same message</p>
<i>Improved Health Center Access</i>		
Strengthening health services through incentives and bonuses paid to the health center according to their performance and activity (Health Center contracting). Health center officials sign contracts to maintain official service fees; agree not to remove or sell health center drugs, materials, or equipment for personal benefit; complete	<ol style="list-style-type: none"> <li>1. Create awareness at the community level of improved services at health centers</li> <li>2. Increase demand for health services through community-based early identification and referral mechanism</li> <li>3. Organize communities</li> </ol>	<p>Increased quality of services at health center will reduce resistances to health care seeking; increased use of services by communities will reinforce health center staff motivation (through more appropriate referrals and increased activity); CVCGs will organize communities for health center outreach activities,</p>

<p>a 40 hour work week; and work in accordance with medical ethics</p>	<p>for health center outreach activities</p> <p>4. Joint monitoring (BTC/ICH) of increase in demand for service</p> <p>5. Improve community feedback to health centers</p>	<p>making more efficient use of health center staff time; improved community monitoring and feedback on health center services will further improve quality</p>
<p><i>Improved quality</i></p>		
<p>Support for quality improvement initiatives and training through the development of quality standards and incentives to health facilities for reaching quality criteria</p>	<p>1. Improve community feedback to health centers</p> <p>2. Information sharing between ICH/OD/PHD/BTC on quality issues raised by communities</p>	<p>Community perceptions are critical in the development of quality, improved feedback from communities to health centers will permit health centers to identify areas for quality improvement; information sharing will highlight health center quality strengths to be used as models as well as weaknesses needing management involvement</p>
<p><i>Planning, Monitoring, Health Management Information System (HMIS)</i></p>		
<p>Strengthen management and capacity building through planning, monitoring and supervision, and the computerization of resource management and the health information system</p>	<p>1. Joint monitoring visits</p> <p>2. Participate in the annual operational planning process</p> <p>3. Strengthening of HMIS</p>	<p>Joint monitoring visits will permit standardization of monitoring tools, information sharing, and cross-fertilization; participation in the annual planning process will strengthen community perspective during planning (currently dominated by clinicians); as the ICH builds on the existing HMIS, it will strengthen community-based data collection and provide monitoring of some additional basic health indicators to complement and corroborate the HMIS</p>

BTC recently completed a Health Facility Assessment (HFA) in Angkor Chum OD through a local contractor. Unfortunately, the results from this research were not available to include in

the DIP resubmission or in the annual report. ICH project staff have begun to talk with BTC, the OD, PHD, and RACHA to identify how the ICH activities may support areas of concern identified in the HFA as well as identify appropriate indicators for joint activity and performance monitoring. One identified area, lack of transport for referrals, has been addressed in the revised submission of the DIP through the possible provision of matching seed funds as a performance incentive to CVCGs.

*2. Discuss strategies to channel health data back into the community as opposed to only flowing information up into the health system.*

The primary monitoring tool will be the community-based surveillance system (CBSS). CBSS will empower communities with information necessary to recognize their accomplishments and identify areas needing further attention. CBSS data, including nutritional surveillance, vital events, and selected disease incidence as well as monthly activity reporting will be tabulated and reviewed by each CVCG with the field officer, VHSG, and other community leaders to ensure progress, analyze the results and develop an action plan as needed. This process will hold CVCG members accountable to their communities in fulfilling their agreed upon roles, improve awareness of the health situation among community leaders, and facilitate joint action for improvement. First use and analysis of data by the CVCG will serve as a motivational tool and ensure that data is used on a timely basis. Each field officer will attend the monthly VHSG meetings at the health center to ensure that all village-level data is also presented by the respective VHSGs to be integrated into the HMIS. The field officer will provide coaching support to a volunteer to aggregate all village level information for the health center. Administrative District (AD)-level data will be aggregated by each CRC operations manager. Monthly, ICH project-wide data will be compiled and disseminated by the M&E technical officer to all project staff and stakeholders. This information will be reviewed by the project management team to ensure progress and used for management decision making over the course of the project. Field officers will share selected project-wide data with CVCGs to motivate improved performance.<sup>2</sup> This system will ensure the first review, analysis, and action planning from data at each level as it is compiled while providing a mechanism for stakeholders at each level to compare their progress with that of the project as a whole.

*3. It is recommended that the DIP included “trained TBAs” with assurance of access to clean delivery kits, as the second strategy after skilled health personnel rather than non-trained TBAs.*

In relation to planning and arranging for skilled health personnel, health center staff will be promoted as the definitive first choice to attend delivery. Trained traditional birth attendants (TBAs) with clean delivery kits will be recommended as an alternative if skilled health personnel cannot be arranged from the health center. Delivery by non-trained TBAs will be discouraged at all levels of the ICH project.

*4. Address the feasibility of incorporating bed net promotion with ANC.*

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<sup>2</sup> Time constraints will prohibit review of all project-wide data on a monthly basis.

Bed net promotion is already incorporated with antenatal clinics (ANC). Specifically, ICH Project staff will work with health center staff to set up a system to provide free or highly subsidized insecticide treated bed nets (ITNs) to pregnant women as an incentive for seeking ANC care (see Section C.2.3). Distribution follows completion of both shots of tetanus toxoid (TT) as recorded on the pink index card currently used to track ANC services. CVCG members will promote ANC attendance and awareness of this incentive to newly pregnant women among their catchment households during regular home visits.

*5. Ensure consistency between the M&E and the program strategy portions of the DIP.*

The M&E and program strategy sections of the DIP were reviewed for consistency. Corrections were made where needed.

*6. With respect to addressing “volunteer fatigue”, include information on lessons learned from ARC’s ARCHI program in Africa and outline planned incentives and benefits for all volunteers (CVCG members and leaders).*

The care group model relies primarily on intangible incentives to motivate participants, prevent volunteer burnout, and ensure sustainability of the interventions. In accordance with the *CRC Volunteer Policy, 2005*, volunteers are asked to commit to approximately 10 hours of volunteer work per month. This helps to prevent volunteers from becoming overwhelmed and burning out. Intangible incentives that will be promoted over the life of the ICH project include: public and private recognition of work by project staff by community leaders and high ranking government officials; increased health knowledge for personal development; organizational affiliation (CRC); group affiliation (CVCG); community respect; and understanding of the impact of their work through group review and analysis of monthly statistics.

Material incentives will include a light snack during village-based training session; a CRC identification badge as well as project tee-shirts and scarves over the life of the project to promote a sense of organizational and group identity. Following successful completion of each training cycle, each CVCG member will receive a certificate of completion signed by the PHD, OD director, and AD governor.

Performance-based incentives for achievement of CVCG-developed targets will be decided upon by the respective CVCG. To promote group cohesion, these incentives will be awarded to the CVCG and not to individuals. Such incentives may include umbrellas to all members (making it easier for the volunteer to visit households during the rainy season), exchange visits to nearby villages (to share best practices), matching for the purchase of a bicycle or boat to reduce transportation as a barrier to referral, or the establishment of a community-managed transportation fund for referrals.

All material incentives (except the light snack) will be provided in a public forum to reinforce community recognition.<sup>3,4</sup>

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<sup>3</sup> Laughlin M. *The Care Group Difference: A Guide to Mobilizing Community-Based Volunteer Health Educators*, World Relief/CORE, 2004

7. *Address the capacity indicator comments that were raised in the review (i.e., the feasibility of measuring the capacity of the MOH and the questions raised regarding the Branch Assessment Tool).*

In relation to measuring the capacity of the MOH, the PHD, OD, and BTC have recommended monitoring the completion rates for outreach sessions (planned vs. actual) as well as health center contacts/population/year (currently at 40 percent). Following the release of the recently completed HFA completed by BTC, the ICH project will review additional MOH capacity indicators as they relate to improved demand generation from community mobilization and ICH project referral activities.

8. *Given the low handwashing rates reported in the KPC survey report, it is recommended that handwashing messages be incorporated into BCC activities.*

CVCGs will promote improved handwashing practices. Handwashing has been shown to significantly reduce both diarrhea and acute respiratory infection (ARI) incidence. The Knowledge Practice Coverage (KPC) baseline survey revealed that less than one percent (0.6 percent) of mothers of children age 12 to 23 months reported washing their hands with soap or ash before food preparation, before feeding children, after defecation, and after attending to a child who has defecated. Segregating reported handwashing by critical moment reveals a significant opportunity for improved handwashing to interrupt the fecal transmission. Only 41.8 percent of caregivers reported handwashing after defecation and only 0.6 percent reported handwashing after attending to a child who has defecated. In contrast, report of handwashing before food preparation only was near universal (94.1 percent).

This discrepancy suggests an enormous potential for the ICH program to have an impact on hygiene behavior change among mothers. However, additional formative research will need to be undertaken to determine misperceptions or resistances to handwashing following fecal exposure. Research findings will be incorporated into the handwashing improvement strategy.

MEDICAM organized a national workshop on water use and hygiene education (WUHE) from July 27 to 29, 2005. This workshop included presentations on WUHE training and IEC materials and highlighted best practices in Cambodia. Materials presented at this workshop on appropriate handwashing during the five critical moments will form the basis of the handwashing training curriculum.

Training related to handwashing will include:

#### Handwashing<sup>5</sup>

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<sup>4</sup> Bhattacharyya K. *Community Health Worker Incentives and Disincentives: How They Affect Motivation, Retention, and Sustainability*, BASICS II. Arlington, Virginia, October 2001.

<sup>5</sup> The *Training Curriculum for Cambodian Community Health Volunteers on IMCI Key Family Practices* has no modules related to handwashing. Training and IEC material is currently being compiled by the Ministry of Rural Development's Department of Rural Health Care and will be presented at the Water Use and Hygiene Education Workshop in Phnom Penh from July 27-29, 2005. Training subjects listed here are illustrative and will be reviewed in detail and revised following the workshop.

1. Transmission routes (F-diagram activities)
2. Blocking transmission
3. Handwashing critical moments
4. Use of soap and ash
5. Handwashing correct practice
6. Addressing misperceptions and resistances

*9. The DIP states that written instructions for the products included in the Diarrhea Treatment Kits are provided as part of the kits; clarify the efficacy of this approach with respect to the literacy rates in the intervention areas and the relationship to the messages provided by community volunteers. Also address what products will be used in the interim until the DTK are released in 2006 as well as how these products will be obtained.*

Zinc is a new product in Cambodia. The concept of water-soluble tablets is not common, especially in the rural areas. Additionally, the treatment recommendation (one tablet dissolved in water for children 6 months to 5 years of age for 10 consecutive days even if the diarrhea episode has stopped<sup>6</sup>) is not consistent with the treatment recommendation for Oral Rehydration Solution (ORS) (continuous until the diarrhea episode has stopped). These issues complicate communication for correct and concomitant use of both products. PSI/Cambodia has undertaken formative research (in Siem Reap) to make the packaging and insert easily understandable with minimum text. Although it is recognized that only 23 percent of mothers have more than three years of schooling,<sup>7</sup> some text is required to support illustrations included in the consumer insert. Launching of the DTK by PSI/Cambodia in Siem Reap Province will coincide with local radio and television broadcasts, education through mobile video units, training of shopkeepers (via RACHA), and training of CVCGs via the ICH project.

PSI/Cambodia is also developing a training curriculum to ensure consistency in messaging. ICH project staff will be trained in and use this curriculum with village-based training. Additionally, the DTK insert will be a training tool for the CVCG; ICH project field officers will review the insert with CVCG leaders and volunteers in addition to practicing in role-plays with CVCG members to ensure that they understand how to communicate appropriate and effective use to their catchment households.

Until the DTK is released in 2006, mothers have access to ORS through village shops. RACHA has reported that at least two shops in each village have been trained in correct ORS use and linked with a private wholesaler to ensure supply. Additionally, for emergency cases, the VHSGs are supplied with ORS that are supplied by their respective health center. Visits to five of the 12 health centers visited as part of the detailed implementation planning process revealed that all had ORS in stock.

*10. Clarify the role of other caregivers in the project (i.e. male involvement).*

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<sup>6</sup> ZinCfant 20mg information sheet, [www.nutriset.fr](http://www.nutriset.fr), last update 11/2004.

<sup>7</sup> KPC Baseline Survey Report, Siem Reap Integrated Child Health Project, April 2005.

Although nine of every ten mothers claim to be decision makers for care seeking during child illness, four of every ten also reported that their husbands partake in the decision-making.<sup>8</sup> It is likely that husbands are also involved in other aspects of health behavior decision-making.

ICH project work during home visits will focus on mothers. Involvement of male community leaders including AD governors, commune and village leaders, monks, as well as male school teachers and VHSG members will be involved in monthly work plan development, review of monthly monitoring statistics and progress reports, and BCC activities. These opinion leaders will provide support to CVCG members during home visits as determined necessary to overcome resistances to behavior change resulting from other household members including men. Additionally, BCC activities that complement the home visit health themes will target the children and men.

*11. Include beneficiary population information on the CSHGP Project Data Form.*

This information has been included.

*12. If there are any changes to the budget, please submit a revised budget that includes a narrative discussion explaining any changes to the original budget, revised budget forms 424 and 424A, and a detailed budget narrative.*

A revised budget, budget narrative, and forms SF424 and SF424A were submitted with the DIP on July 15, 2005. As of this writing, ARC has not yet received an official approval letter from the agreement officer. However, the Global Health public health advisor did notify ARC via e-mail of an informal approval of the revised budget on September 7, 2005.

*13. In annual reports (including mid-term), continue to document successes in partnerships (i.e., with RACHA, CRC's involvement with MEDICAM) and the potential for mainstreaming this program in other provinces via other CRC branches.*

The CRC information officer will document success stories, particularly those relating to partnerships. These will be distributed to all stakeholders to strengthen partnership work. ARC will compile a PVO resource document highlighting the project's partnership success stories. Inclusion of other partnership success stories in the resource document from other ARC partnerships will be explored.

All comments received during the CSHGP mini-university in June, 2005 were carefully reviewed. Based on this feedback, other revisions were made to the DIP in the interest of improving the overall quality of the ICH project design. These revisions include:

- (1) Inclusion of "due lists" for health center outreach staff to aid in identifying children needing vaccinations
- (2) Addition of IR4.3 CVCG
- (3) Further development of the CBSS including the collection of vital event data

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<sup>8</sup> KPC Baseline Survey Report, Siem Reap Integrated Child Health Project, April 2005.

- (4) The inclusion of the Local Rapid Assessment as a project monitoring tool to improve tracking of project performance
- (5) Emergency transportation matching funds as a possible performance incentive for CVCGs
- (6) Integration of programmatic monitoring tools into the Program Description (Section 2)
- (7) Reorganization of the annexes

Finally, ARC has solicited additional technical input from one of the DIP reviewers, Robert Steinglass, on the ICH project's immunization formative research protocol.

## **VI. Projects Receiving Flexible Funding Support**

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The Cambodia Integrated Child Health Project does not receive any Flexible Funding Support.

## **VII. Project management system**

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### **FINANCIAL MANAGEMENT**

To date, the project has relied on the existing financial systems of the ARC in Cambodia (e.g., from the ARC office in Phnom Penh). This system has served to facilitate cash flow, procurement, and project activities. This centralized system has also permitted ARC to closely monitor CRC-proposed expenditures and has proven to be a good 'on-the-job' exercise to promote discussion and better understanding of allowable expenses; thus helping to mitigate future accounting issues.

Despite these benefits, the project will now need to set up its own financial management system. The ARC ICH project accountant is in the process of relocating to Siem Reap. The CRC project accountant has been hired. To flatten the learning curve for each of these positions, ARC will use best practices in establishing, monitoring, and managing a project office. Further, ARC plans to conduct supplemental finance training as needed. Examples of these types of training are described in Section III (technical assistance needs).

Related to financial monitoring, ARC has developed, tested, and implemented a sub-recipient monitoring checklist (see annex II). The checklist is an extension of the sub-recipient project agreement between ARC and CRC. It is a management tool that consolidates the results of ARC's monthly monitoring of CRC's financial systems and reporting. Ideally, the checklist emphasizes early detection of possible issues, enabling a more proactive management response.

ARC uses the checklist as a comprehensive tool to monitor all of CRC's financial, reporting, and programmatic activities. Additionally, the checklist is used to monitor grantee and sub-recipient obligations detailed in the cooperative agreement and project agreement.

## HUMAN RESOURCES

The ICH project human resources management system is designed so that CRC manages its extensive volunteer network through its project manager, operations managers (2), and field officers (15). ARC provides oversight, guidance, and technical support to ensure the achievement of planned results through its field project manager, project coordinator, M&E officer, and training officer. ARC has also assumed responsibility for large procurement (e.g., generator, motorcycles) as well as logistical support to expedite project startup as well as to avoid any compliance issues. To date, this system has functioned well and there are no issues to report. Factors that have influenced the overall management of the program are described below.

Despite the hiring issues described in Section II, the ICH project is fully staffed following the plan. All six ARC field positions have been filled. These include the field project manager, project coordinator, training technical officer, M&E technical officer, finance officer, and administrative manager. Additionally, a driver, three security guards, and a cleaner were employed.

The CRC's newly formed Human Resources Department has risen to the challenge of the large-scale recruitment effort needed for this project. Lessons learned from the recruitment process were discussed and have resulted in improvement and standardization of recruitment procedures. Additionally, ICH project start-up has resulted in the careful review of two CRC policies: salary scale and allowances. The review of each policy with CRC senior leadership as well as the Human Resources and Program Departments, has tested CRC's ability to adhere to existing policies and therefore has aided the institutionalization of its own sustainable management systems. When needed, project specific, supplemental policies were developed.

Also according to plan, the CRC has successfully hired twenty field project staff. These positions include the liaison officer, project manager, operations managers (2), finance officer, and field officers (15). The behavior change communication team positions (the promotions manager, the communication officer, and the social marketing officer) will be filled, as planned, in Q2 FY2006, following the recruitment and activation of the volunteer network and the arrival of the VSO volunteer advisor.

The VSO partnership workshop was completed with representation from ICH project staff, CRC volunteers, community leaders, and midwives. The purpose of this workshop was to define roles and expectations to initiate the recruitment of the VSO volunteer advisor. Following this workshop an agreement was signed with VSO and recruitment for the VSO advisor is underway. The VSO volunteer advisor will work with the mobile CRC BCC team, of three CRC staff, to organize BCC activities including dialogue, coordination, and motivation of the many and varied key opinion leaders at the village level. Community-based activities to be undertaken by the mobile BCC team include shadow puppet shows, public recognition of 'model' mothers, school contests, choirs, award ceremonies, high-level visitors, and radio and television interviews with 'model' volunteers. All activities will be coordinated with the village-based training and coaching schedule to reinforce interpersonal health communication transmitted through the CVCGs.

## **COMMUNICATION SYSTEM AND TEAM DEVELOPMENT**

Communication in the Kingdom of Cambodia is hierarchical. Input from the highest ranking person or the person *perceived* to be highest ranking often ends the discussion and therefore input. Undoubtedly, Cambodian project staff subscribe to this communication culture. This can result in the people of authority making decisions without having all of the information, resulting in bad decision-making that will go unchallenged. Diplomacy, especially from an outsider, has proven to be effective in renegotiating many of these occurrences that, left uncorrected could, albeit unintentionally, derail project activities. Opportunities are sought to encourage more democratic communication, but staff often revert to the hierarchical communication when outside the project office.

Cellular phone coverage has expanded over the past several months for decent coverage along the main road between Siem Reap to Angkor Chum town. Beyond Angkor Chum town to the more remote Varin Administrative District there is no cellular phone coverage.

In relation to team development, the ICH project team has planned a monthly team building activity. Weekend outings will include fishing and hiking trips as well as crocodile farm and temple visits. Each outing will include a team-building exercise to strengthen the project team's shared sense of responsibility. Additionally, group/shared rewards are being explored to recognize major project achievements.

## **LOCAL PARTNER RELATIONSHIPS**

The participatory detailed implementation planning process created an opportunity to renew and establish relationships with numerous stakeholders. These relationships have become invaluable and the project seeks continued involvement to enhance implementation.

Our local implementing partner, the CRC, has demonstrated an unprecedented level of interest, participation, input, and support over the past year at all levels of the organization. The CRC secretary general, as well as other senior CRC management have participated at critical project moments including the DIP workshops and project launching. The CRC independently convoked a one-day internal workshop to review and understand the sub-recipient project agreement. The Human Resources and Program Departments have repeatedly mobilized staff to forward project activities whenever needed. The Siem Reap branch has used its social capital with government authorities as well as its influence with existing CRC volunteers to facilitate project planning and start-up.

This strong interest and participation has strengthened the ARC-CRC organizational partnership and has created a foundation that will enable CRC to own this project.

As described previously, other local partners, which include the MOH, PHD, OD, RACHA, MEDICAM, and district governors, have all consistently demonstrated a high level of interest and participation. Local partners have participated in every aspect of the project over the past

year including the baseline survey, detailed implementation planning process, office selection and set-up, staff recruitment, development of formative research protocols, field data collection, annual project planning, village chief sensitization, and CRC volunteer recruitment.

## **PVO COORDINATION/COLLABORATION IN-COUNTRY**

Several PVOs and international organizations participated in the detailed implementation planning process, providing critical input into the project design. Those collaborators include BTC, Catholic Relief Services, HKI, Plan International, PSI, Caritas, University Research Corporation, VSO, World Health Organization, World Relief, and UNICEF.

Following the completion of the DIP, the ICH project has maintained ongoing coordination with BTC on the recently completed health facility assessment<sup>9</sup> as well as in further defining the project's early identification and referral strategy as it links to the improved quality of care at the health center. In support of the latter, the ICH project has shared additional relevant resources including the *Review of International, Regional, and Cambodian Referral Systems* (August 2005) as well as the new *Draft Guidelines for Referral Systems in Cambodia* (August 2005) with BTC and other partners. A joint planning session is being coordinated on November 24, 2005 to discuss and map out a unified, comprehensive referral strategy following the new guidelines with BTC, OD, PHD, Caritas, and RACHA.

Coordination continues with RACHA (both Phnom Penh and Siem Reap offices). RACHA participation in annual ICH project planning has resulted in plans to collaborate on breastfeeding training. Additionally, RACHA assisted with the technical review and fieldwork for the malaria prevention and control formative research. RACHA is particularly interested in shopkeepers' roles in malaria control and how they may use research findings to strengthen the shopkeeper project in the project area. The ICH project is coordinating a research dissemination and partner planning session on December 12, 2005 to align stakeholders in the development and implementation of a comprehensive, evidence-based strategy to overcome the challenges in effective malaria prevention and treatment in Angkor Chum OD.

Coordination also continues with PSI (both Phnom Penh and Siem Reap offices). ICH project staff are scheduled to participate in PSI's TOT course for their soon-to-be launched DTK. PSI also provided valuable input to define the malaria research protocol as well as participate in field work training. PSI is interested in the malaria formative research as this will inform their strategy to roll out ITN social marketing in Angkor Chum. Additionally, ARC met with PSI/Cambodia to discuss the recent USAID hold on the waiver for zinc. As DKT activities are not scheduled to begin until June, 2006, there is little concern at this time that this issue will affect the project.

As described above, ARC and VSO have signed a partnership agreement. A stakeholder workshop with other local partners resulted in further defining the role of the VSO volunteer advisor. VSO is currently recruiting through its worldwide network of recruitment bases to identify the right person for this position.

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<sup>9</sup> The BTC HFA was still in draft form at the time of writing this report.

As Adventists Development and Relief Agency International is working on agriculture in Varin and Caritas is working on school feeding in Angkor Chum, both have been invited to take advantage of the overnight accommodation at the CRC sub-branch/ICH project office in Angkor Chum.

Finally, staffs of Catholic Relief Services, HKI, and World Relief have been repeatedly consulted to seek their ideas and guidance on various project issues.

*Challenges to collaboration*

Although stakeholders have been highly responsive to calls for participation, it is important to note that this has been entirely driven by ICH project staff. Stakeholders may not yet fully understand the value of collaboration with this project. This will be remedied through persistent collaboration.

**OTHER RELEVANT MANAGEMENT SYSTEMS**

As part of its post-award, pre-implementation process, ARC completed a financial capacity assessment of CRC in October 2004. Findings and responses are contained in the table below.

**Table 4. CRC HQ Financial Capacity Assessment Findings and Responses**

<b>Finding</b>	<b>Response</b>
1. No finalized financial policies and procedures	Formation of finance working group (comprising Red Cross Movement societies operating in Cambodia) to assist CRC in the development and implementation of financial policies and procedures
2. No established SOPs for managing ARC-funded projects	Development of project agreements for all ARC-funded projects that define project parameters including roles, responsibilities, rules, and regulations
3. No integration of project management and finance staff	Convey financial responsibility to project management staff; transfer all financial reporting to finance department
4. No transparency in financial reporting	Transfer of expense reporting from project management team to finance department; embedding an accountant in a project management team for each ARC-funded project

Additionally, an organizational capacity assessment was completed with the CRC Siem Reap branch office as part of the detailed implementation planning process in May 2005. Findings and responses are summarized in the table below.

**Table 5. CRC Branch Capacity Assessment Findings and Responses**

<b>Finding</b>	<b>Response</b>
1. No code of conduct for volunteers	Code of conduct developed and being used for ICH project volunteer recruitment
2. No monthly work plan	Issue discussed, white board purchased and used for developing a monthly work plan
3. No M&E plan	The ICH project M&E plan will serve as model
4. No customer satisfaction survey	Survey will be conducted as part of mid-term evaluation for the ICH project
5. 430 regular volunteers	The ICH project represents a six-fold increase over the baseline number of branch volunteers; 15 field officers are considered adequate to support this increase
6. Branch income at \$30,000/year	Branch director scheduled to attend 14-day Proposal Development and Fundraising Training Course in Phnom Penh in early November, 2005

## VIII. Timeline of activities

Fiscal Year 2006													
ICH Workplan Overview and Operating Environment Calendar													
Activities	Fiscal Year 2006												Personnel
Overview	Oct.	Nov.	Dec.	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	
1. Complete staff induction and training	X												ARC, CRC, OD, AD governors
2. Sensitization/village chief meetings	X	X											ARC, CRC
3. Volunteer recruitment/election by villages		X											ARC
4. Volunteer orientation and induction		X											ARC, CRC, OD, PSI, VSO
5. Training of project staff	SO4		SO3		SO3		SO2		SO3		SO1		ARC, CRC
6. Village-based training of CRC volunteer leaders and CVCs		X	X	X	X	X	X	X	X	X	X	X	CRC, ARC
7. Formative research to fine tune training/interventions									SO1				ARC
8. BCC unit community mobilization activities									X	X	X	X	VSO, CRC, opinion leaders
9. Quarterly progress review meetings and reports	X			X			X			X			All partners

10. Stakeholder coordination	X	XX	X	X	X	X	X	X	X	X	X	All partners
11. Supportive supervision and joint monitoring		X	X	X	X	X	X	X	X	X	X	ARC, CRC, RACHA, HCs
12. Mid-term evaluation											X	ARC, CRC
<b><i>Operating Environment Calendar</i></b>												
1. Rainy season (June- October)	X							X	X	X	X	
2. Hot season (February- May)				X	X	X	X					
3. Diarrhea season (follows rainy and hot seasons) March-April and June-December	X	X	X			X		X		X	X	X
4. Malaria season (follows rains) June-August and December-January			X	X				X	X	X		
5. HC Vitamin A and de-worming outreach (MOH schedule) March and November		X				X						
<b>Detailed Activities by Intermediate Result</b>												
<i>Interventions: MNC (10%), BF (20%), NUT (15%) SO1: Improved Nutritional Status of children under 2</i>												
IR1: Improved care of pregnant women												
IR2: Increased early and exclusive breastfeeding												
IR3: Improved use of complementary foods												

Major Activities	2006 Fiscal Year												Personnel
	Oct.	Nov.	Dec.	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	
1.1 Staff TOT training BF											X		ARC, CRC, HCs, TBAs
1.2 Village-based training in BF											X	X	CRC, ARC, RACHA
<b>Interventions: EPI (15%), Vit A (10%)</b>													
<b>SO2: Improved Immunization Rates</b>													
IR1: Improved routine immunization rates													
IR2: Improved Vitamin A coverage													
IR3: Improved community participation in immunization													
Major Activities	2006 Fiscal Year												Personnel
	Oct.	Nov.	Dec.	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	
2.1 Staff TOT training in immunization and micronutrients						X	X						ARC, CRC, HCs
2.2 Village-based training in immunization							X	X					CRC CVCGs, VHSGs
2.3 Village-based training in micronutrients						X							CRC Field Officers
2.4 Home visits and women's groups to improve turn-out							X	X	X	X	X	X	CVCGs, TBAs,
2.5 Follow-up visits with outreach no-shows								X	X	X	X	X	CRC VLs, VHSGs, opinion leaders
2.6 Coordination meetings with VHSG (pre and post outreach)					X	X	X	X	X	X	X	X	CRC VLs, VHSGs



3.2 Village-based training in DTK									<b>DTK</b>	<b>DTK</b>			CRC, PSI, RACHA, VHSGs
3.3 Home visits and WGs to improve home management*		<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	CVCGs							
3.5 Staff TOT in early identification and referral strategy													all partners
3.6 Village-based training in early identification and referral													ARC, CRC, CVCGs
3.7 Village-based referral system operational													CRC, CVCGs
3.8 Mosquito net social marketing (promotion and sales)													VLs, CVCGs
3.9 Related community-based BCC activities													VSO, CRC, PSI, opinion leaders
3.10 Supportive supervision and monitoring *includes handwashing		<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	ARC, CRC							
<b>Interventions: Local Capacity Building (integrated)</b>													
<b>SO4: Improved Partner Project Management Capacity</b>													
IR1: Improved coordination with health community IR2: Improved project management policies and skills													
<b>Major Activities</b>	2006 Fiscal Year												Personnel
	Oct.	Nov.	Dec.	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	
4.1 Coordination meetings with stakeholders (PP, SR, and AC)	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	All

4.2 Progress reporting with stakeholders	X	X	X	X	X	X	X	X	X	X	X	ARC health officer
4.3 Joint village-based training and monitoring visits			X	X	X	X	X	X	X	X	X	ARC, CRC, RACHA, HCs, OD
4.4 Participation in technical working groups	X	X	X	X	X	X	X	X	X	X	X	ARC, CRC
4.5 Exchange visits (World Relief)				WR						X		ARC, CRC, CRS, PFD
4.6 Technical resource sharing	X	X	X	X	X	X	X	X	X	X	X	ARC
4.7 Support development of Volunteer Management Training Curriculum and Volunteer Reward and Recognition Plan	X	X	X	X	X	X	X	X	X	X	X	ARC, CRC, IFRC
4.8 On-the-job training/coaching	X	X	X	X	X	X	X	X	X	X	X	ARC, CRC
4.9 Adult learning, communication, and volunteer management training	X				X			X				ARC, CRC

## **IX. Other relevant issues and results**

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Exemplifying CRC's interest and commitment to strengthening its community-based health programming, the Program Department has developed terms of reference (see annex III) and contracted a consultant to:

- Facilitate the adoption of common approaches to community-based health care programs with Program Department and partners
- Support the Program Department health team to establish standardized CRC health program methodologies, terminology, guidelines, IEC materials, reference materials, tools, and training packages that are well accepted by all partners
- Liaise with the CRC Human Resource Department regarding the standardization of guidelines, incentives and support for Red Cross volunteers and Red Cross youth engaged in Community-based Health Care programs
- Assist CRC to develop the health strategic planning process 2006-10, through supporting assessment of current capacity for implementation of Community-based Health Care programs, potential for expansion, and identification of community health priorities with key partners

In support of these efforts, ARC is a founding member of the CRC PHCCG. The PHCCG is tasked with the development of common approaches for all CRC health programs. These approaches will be agreed upon based on research and best practices, and will serve as a critical input to the 2006-2010 health strategic planning process. The CRC PHCCG will serve as the mechanism by which lessons learned and best practices demonstrated through the implementation of the ICH project may be adopted by CRC to strengthen its primary health care implementation capacity.

Additionally, through project implementation, two (2) CRC policies have come under review: salary scale and allowances. The review of each policy with CRC senior leadership as well as the Human Resources and Program Departments, has tested CRC's ability to adhere to existing policies and therefore has forwarded the institutionalization of its own sustainable management systems. Supplemental, ICH project specific policies have been developed where existing policies do not provide sufficient guidance to ensure compliance with USAID rules and regulations relating to property and allowances.

Finally, the large-scale staff recruitment effort undertaken for this project proved to be a successful capacity test for CRC's newly formed Human Resources Department. Lessons learned from the recruitment process were discussed and have resulted in standardization of recruitment procedures. New procedures include specifying salary levels at the time of scheduling interviews to eliminate false expectations, and therefore unnecessary interviews.

In relation to staff training, all ICH project staff participated in a three-day orientation and training. This included administrative processing, organizational orientation, ICH Project orientation, training in village sensitization and volunteer recruitment, and the development of detailed work plans in partnership with the OD and AD governors.

Finally, CRC has recently begun a technical library to support staff development, and therefore, program development. ARC has contributed a myriad of research articles and technical resources relating to child survival, community health promotion, and volunteerism. Project activities, supported by these technical resources, will form the basis for regular information sharing sessions to be organized with CRC HQ staff.

- DRAFT -

# Understanding Malaria Prevention & Control in Rural Cambodia: A formative research study

FY-2004 Child Survival and Health Grants Program (CSHGP)  
Grant No. GHS-A-00-4-00007-00



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The Reproductive and Child Health Alliance (RACHA), Population Services International (PSI) and Belgian Technical Cooperation (BTC) provided review and editing of the survey instruments. Noteworthy is participation from RACHA and PSI in the survey training, as well as RACHA's participation in field data collection.

Special recognition is owed to the district governors of Angkor Chum and Varin for their support in coordinating the field schedule as well as informing commune and village leaders of the study. The efforts of numerous village leaders are also appreciated as they organized participation from their respective communities.

Perhaps most importantly, this study is indebted to the participating villagers who have shared their views and experiences, helping us to better understand malaria prevention and control in rural Cambodia.

*Note: The research protocol was submitted to the National Ethics Committee for Health Research, Ministry of Health*

## ACRONYMS AND ABBREVIATIONS

AD	Administrative District
A+M	Artesunate and Mefloquine
BTC	Belgian Technical Cooperation
CNM	National Malaria Center
CSHGP	Child Survival and Health Grants Program
CRC	Cambodian Red Cross
FGD	Focus Group Discussion
HMIS	Health Management Information System
ICH	Integrated Child Health
IDI	In-depth interview
ITN	Insecticide Treated Bed net
KPC	Knowledge, Practices, and Coverage
M&E	Monitoring & Evaluation
MOH	Ministry of Health
OD	Operational District
p.	plasmodium
PHD	Provincial Health Department
PSI	Population Services International
RACHA	Reproductive and Child Health Alliance
USAID	United States Agency for International Development
VMW	Village Malaria Worker

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Annex I: Focus Group Discussion Guide 1: Malaria Prevention

Annex II: Focus Group Discussion Guide 2: Malaria Identification and Care-seeking

Annex III: In-depth Interview Guide 2: Malaria Treatment

Annex IV: Malaria modules extracted from the KPC questionnaire

# EXECUTIVE SUMMARY

## Background

Malaria continues to be a major public health problem in Cambodia. Cambodia has Southeast Asia's worst malaria mortality and morbidity rates, and the malaria transmission region covers large portions of the country. Factors such as poor health infrastructure and communications systems, remoteness and inaccessibility of affected areas, drug resistance, and shortages of diagnostic kits have all contributed to the ongoing threat of malaria in the country. Deaths attributed to malaria are especially high from hyper-endemic *Plasmodium falciparum* and *Plasmodium vivax* malaria in heavily forested areas of the country.

In 2004, the American Red Cross (ARC), along with its partner the Cambodian Red Cross (CRC), was awarded a Child Survival and Health grant by the United States Agency for International Development (USAID). The Siem Reap Integrated Child Health (ICH) Project is being implemented in one of Cambodia's poorest provinces with the aim of reducing child morbidity and mortality in a sustainable fashion. This research study was carried out by ARC in partnership with CRC, the National Malaria Center, the Siem Reap Provincial Health Department and the Angkor Chum Operational District.

## Goals and Objectives

The primary goal of the research study is to align stakeholders in the development and implementation of a comprehensive, evidence-based strategy to overcome the challenges to effective malaria prevention and treatment in Angkor Chum Operational District. Specific objectives have been formulated related to malaria prevention, early identification, referral and treatment.

## Study Design and Methodology

Three research modules focusing on malaria prevention (1), early identification and referral (2), and treatment (3) were designed and developed for this study. Secondary quantitative analysis of relevant data from the population-based KPC survey of March 2005 was also completed to augment findings of study modules.

Residents from 18 malaria-affected villages in Angkor Chum and Varin districts participated in focus group discussions and/or in-depth interviews conducted by trained facilitators and interviewers. Target groups consisted of female caregivers aged 19-49 with children under the age of 5, married men aged 19-49 with children under the age of 5, village malaria workers (VMWs), village leaders, shopkeepers, and midwives. A total of 46 focus group discussions and 16 in-depth interviews were held in the identified villages.

## Findings

Data extracted from the March 2005 KPC survey revealed striking differences in the level of knowledge amongst caretakers about modes of malaria transmission. While 86 percent of caretakers from Angkor Chum district identified "mosquito bites" as the cause

of malaria, only 64.9 percent of Varin district caretakers cited the same response. Participants of the focus group discussions, both women's and men's, generally had a better understanding of malaria transmission and most frequently stated mosquito bites as the primary cause of malaria.

According to KPC survey data, 67.9 percent of households in Angkor Chum have a mosquito net compared to 58.4 percent of households in Varin. Responses given during the focus group discussions suggest that most people view mosquito nets as important and beneficial. The chief motivating factor for mosquito net use was the prevention of mosquito bites whilst the single de-motivating factor reported was the unpleasant smell of new nets.

Of caregivers reporting their youngest child having fever in the previous two week period, 46 percent declared that they sought advice or treatment outside the home. The remaining 54 percent stated that they did not. Less than half of those that sought treatment outside of the home went to a health center or hospital for care.

## Definitions

**Clinical malaria** is defined as the presentation of malaria symptomatology without a positive blood test.

**Confirmed malaria** is defined as those cases that have a positive diagnostic test. In Cambodia, the MOH aims for all malaria cases to be confirmed.

The terms **cause** and **transmission** are used interchangeably in this report. Although, technically, malaria is caused by the *p. falciparum*, *p. vivax*, and *p. ovalae* parasites transmitted by mosquitoes, villagers have a more pragmatic understanding of malaria causation which is based on transmission pathways.

**Barriers** refer to external factors that prevent or hinder a behavior.

**Resistances** refer to individual, group, or cultural beliefs, ideas, or thoughts that prevent or hinder a behavior.

## Introduction

Malaria is a significant public health issue. In Cambodia, the presence of *plasmodium (p.) falciparum*, *p. vivax* and *p. ovalae* is complicated by one of the highest rates of drug resistance in the world. *P. falciparum*, the most potentially deadly type of malaria, accounts for an estimated 60-90 percent of rural cases.<sup>1</sup> With a malaria incidence (treated cases) of 7.5 per 1000 and 382 deaths in 2004, malaria poses a considerable disease burden, especially in high transmission areas.<sup>2</sup> New settlers in high transmission areas, people living or working in proximity to medium and high forest-covered zones, people who are immune compromised, pregnant women, and children are at greatest risk of infection. One study documented malaria parasite rates in children to be 47 times higher in villages surrounded by forest than by rice fields.<sup>3</sup> Non-use of mosquito nets further increases malaria risk among the vulnerable.<sup>4</sup>

In Angkor Chum Operational District (OD), a recent cross-sectional survey (2005) documented two-week fever prevalence for children under two years of age at 38 percent.<sup>5</sup> Prevention, as well as timely and correct treatment, will reduce the malaria burden and avoid unnecessary deaths.

Recognition of danger signs is a precursor to seeking prompt care and treatment that can greatly improve chances for child survival. Children with uncomplicated malaria must be

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<sup>1</sup> Population Services International, Annual Report 2004 p.12

<sup>2</sup> USAID, Malaria Strategic Plan 2006-2011, p.10

<sup>3</sup> Royal Government of Cambodia Ministry of Health, Country Update on Malaria Control, 2001

<sup>4</sup> Royal Government of Cambodia Ministry of Health, National Centre for Parasitology, Entomology and Malaria Control, November 2004 p.5

<sup>5</sup> Integrated Child Health Project Knowledge, Practices and Coverage Survey, American Red Cross/Cambodian Red Cross, March, 2005

given prompt treatment (recommended within 24 hours of fever onset) with an effective anti-malarial drug to avoid subsequent progression to severe malaria.<sup>6</sup>

Providing evidence of the importance of the health center in malaria treatment, the *Community drug use practices in malaria in Cambodia study* revealed that treatment efficacy is highest among public health facilities and lowest among village providers. Furthermore, with the exception of *malarin*, malaria treatment provided outside of the formal health system may only succeed in delaying effective treatment, and needlessly increase the risk for death. However, commercially available *malarin* is only available in pre-packaged doses for children over five years of age.

The National Malaria Center (CNM) has taken steps to increase drug access and availability in the most remote villages through its Village Malaria Worker (VMW) program. VMWs are trained in malaria prevention, identification, and treatment; they are also provided with malaria drugs (A+M). At the time of this study, the CNM had in place 17 VMWs in Angkor Chum and Varin Administrative Districts.

*The Community drug use practices in malaria in Cambodia study* also revealed that amongst people with suspected malaria within the previous two weeks, 74 percent received anti-malarials. However, only nine percent received a recommended first line treatment of A+M (6 percent) or *malarine* (3 percent). Such practices are likely to increase multi-drug resistance.

Of those families who had never used A+M or *malarine*, or who had used it but who expressed a refusal to take the treatments again, the vast majority did not have a reason. It is hypothesized that these families were never advised to take it – the next more frequently cited reason. These two categories (blank or no advice) comprised 69 percent of the total.<sup>7</sup>

In Cambodia, the recommended treatment for uncomplicated malaria for children aged 6 months to 5 years is artesunate suppositories for 5 days followed by mefloquine. For this age group, *the Community drug use practices in malaria in Cambodia study* documented that only 3.4 percent received artesunate and mefloquine with a further 2 percent receiving A+M. Only one child received artesunate by suppository, and a further child received an artemisinin suppository. Neither of these also received mefloquine. Only 48 percent of children in this age group with suspected malaria received any artemisinin.

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<sup>6</sup> Crawley, J. Reducing deaths from malaria among children: the pivotal role of prompt, effective treatment in Technical Reference Materials Malaria, PVO Child Survival and Health Grants Program, revised 2004

<sup>7</sup> National Maria Centre of Cambodia, *Community drug use practices in malaria in Cambodia: a cross-sectional study*, March 2003

## Background

The American Red Cross, Cambodian Red Cross, the Provincial Health Department and the Operational District, are working in partnership to implement a Child Survival Project hereafter called the Integrated Child Health (ICH) Project. The ICH Project, funded by the United States Agency for International Development, focuses on the child survival "scorecard" interventions identified as priorities during the December, 2004 National Child Survival Partnership Workshop in Phnom Penh, Cambodia. These interventions have been demonstrated to have the greatest impact on child mortality and include use of insecticide-treated mosquito nets as well as improved access to appropriate anti-malarials through early identification and referral.<sup>8</sup>

In Angkor Chum Operational District, numerous stakeholders are working towards improving effective malaria prevention and control. Population Services International (PSI) is socially marketing *malacheck*, a rapid test kit to confirm *p. falciparum* malaria, to trained, private pharmacists. PSI is also socially marketing *malarin*, a highly effective three-day treatment combining artesunate and mefloquine, the current regimen recommended for *p. falciparum* malaria by the World Health Organization and the National Malaria Center. Three-day treatments are pre-packaged for adults and children over five years of age. Additionally, PSI is currently preparing to market a bundled mosquito net with an insecticide treatment kit as well as individual insecticide re-treatment kits around June 2006. Both products will be sold at a subsidized price.

The local non-governmental organization Reproductive and Child Health Alliance (RACHA) is working with two shopkeepers in each of the 274 villages of Angkor Chum OD to simultaneously reduce distribution of counterfeit anti-malarial drugs while increasing access to *malarine*. RACHA is also training shopkeepers in early identification of malaria symptoms to improve early referral to the health center.

The Belgian Technical Cooperation, through its Provision of Basic Health Services project, is supporting the improvement of health service delivery focusing on extending hours of operation at the health center.

With the support of the National Malaria Center, the Siem Reap Provincial Health Department and Angkor Chum Operational District have successfully distributed approximately 2,000 mosquito nets to villagers in priority zones 1 (in the forest) and 2 (less than 200 meters from the forest). Additionally, they have treated over 600 mosquito nets with insecticide and put in place 17 village malaria workers (VMWs) to facilitate malaria education and access to anti-malarials in the most remote villages. Unfortunately, monthly stock-outs of dip-sticks and anti-malarial drugs at the health centers continue to be a barrier to effective treatment provision.

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<sup>8</sup> Jone G, Steketee R, Black R, Bhutta ZA, Morris SS., How many child deaths can we prevent this year? *The Lancet* Vol 362, July 5, 2003

The qualitative piece of this study was undertaken in partnership with the above stakeholders (PSI, RACHA, BTC, CNM, PHD, and OD) to better understand limiting factors to effective malaria prevention and treatment with the aim of aligning stakeholders in the development and implementation of a comprehensive, evidence-based strategy to overcome these challenges.

## Goal and Objectives

The goal of the study is to align stakeholders in the development and implementation of a comprehensive, evidence-based strategy to overcome the challenges to effective malaria prevention and treatment in Angkor Chum Operational District. The secondary goal is to forward the understanding and strategic development of malaria prevention and control activities in Cambodia. Specific objectives related to malaria prevention, early identification, referral and treatment are detailed below.

### *Prevention*

1. Identify and document motivating factors as well as resistances and barriers to year-round mosquito net use.
2. Understand mosquito net practices among villagers including priority usage within the family/household, attitudes related to insecticide treatment including KO tabs, and removing infants and small children from under the net to carry them on their backs during the night.
3. Understand attitudes relating to insecticide re-treatment campaigns through expanded health center outreach.

### *Early Identification*

4. Understand caretaker perceptions of fever, high fever and convulsions as malaria danger signs.
5. Identify and develop messaging that alerts caretakers to the malaria danger signs.
6. Identify and document perceptions of *malacheck* as well as barriers and resistances to its use.

### *Referral and treatment*

7. Understand preferred malaria treatments and the reasons for preference among caregivers.
8. Understand caretaker motivating factors as well as resistances and barriers in prompt care seeking at the health center following identification of malaria danger signs.
9. Understand caretaker perceptions of *malarin* as well as barriers and resistances to its purchase and use.
10. Understand the role of opinion leaders and shopkeepers in promoting and distributing ineffective/sub-optimal malaria treatments.
11. Understand shopkeeper perceptions of *malarin* as well as barriers and resistances to stocking it.

## Methodology

The methodology section describes the study modules, sampling and recruitment, team training, and logistics, in addition to recording and analysis.

The research protocol consisted of three modules focusing on malaria prevention, early identification, referral and treatment. To complement qualitative data, quantitative data related to malaria knowledge, mosquito net use, and treatment seeking patterns, collected in March, 2005 as part of the baseline cross-sectional survey was re-analyzed.

**Table 1. Research modules, planned target groups and methodology**

Module	Planned Target Groups (and number FGDs/IDIs)		Planned Methodology
1-Prevention	1. Female caregivers aged 19-49 of children <5	a. self-reporting year-round mosquito net use (8) b. self-reporting seasonal mosquito net use (1) c. self-reporting no mosquito net use (4)	Focus Group Discussions
	2. Married men aged 19-49 with children <5	a. self-reporting year-round mosquito net use (7) b. self-reporting seasonal mosquito net use only (4) c. self-reporting no mosquito net use (1)	
2-Early Identification and Referral	1. Female caregivers aged 19-49 of children <5 (9)		Focus Group Discussions, In-depth interviews
	2. Married men aged 19-49 with children <5 (10)		
3-Treatment	1. Commune/village leaders (3/3)		In-depth interviews
	2. Village Malaria Workers (3)		
	3. Shopkeepers (3)		
	4. Midwives (4)		
4-Knowledge, Practice, and Coverage (KPC)	1. Caregivers with child under 2 years of age 2. Caregivers reporting child under 2 years of age with fever in the previous 2 weeks		Secondary quantitative analysis of relevant baseline survey data

## Sample and Recruitment

The Angkor Chum and Varin administrative district governors selected 18 malaria-affected villages for participation in the study. A visit schedule was jointly developed. The selected villages were geographically spread out over each district. The district governors informed commune and village leaders about the study and asked them to

organize target group participation on a voluntary basis following the agreed upon schedule. Village leaders attempted to pre-select participants to meet the criteria of the target groups as requested by the district governors.

Focus group discussions were segmented by gender. This was done following concern about the possibility for limited participation and free expression of female participants in mixed gender groups. In practice, segmentation by gender proved challenging as men often gravitated to participate in women only groups. The study team resolved this issue by creating a 'faux' group discussion when necessary. That is, upon arriving in the village, pre-selected participants were screened by the study team. Only those fulfilling the selection criteria were brought out of earshot from the waiting point to conduct the focus group discussion. Villagers remaining were engaged in a general discussion about malaria prevention and control. However, the later or 'faux' group discussion was not recorded or analyzed.

For the prevention module (1), focus groups were also segmented by self-report of mosquito net use. The plan was to conduct three (3) focus groups with each of the six (6) target groups. However, self-report of seasonal mosquito net use and non-use was scarce. In one village, following village leader report of universal mosquito net use, the primary investigator went to every house in that village to locate non-users; none were found. This was repeated in another village where the only houses that were reported not to have a mosquito net, were those where nobody was home (and those were very infrequent). Field teams were only able to complete one FGD with men reporting seasonal use. In the villages, many men were reported to be either working in rice fields or in the jungle (cutting wood). A total of 26 focus group discussions were completed for module 1. Table 1 above details the number of groups by target group.

In relation to the early identification and referral model (2), the plan was to conduct four male and four female focus groups. A total of nine (9) male and (10) female groups were completed as the planned number of groups proved to be inadequate in exhausting new information. Additionally, sixteen (16) in-depth interviews were conducted using this same module: commune leaders (3), village chiefs (3), Village Malaria Workers (3), shopkeepers (3), and midwives (4). These same 16 key informants were also interviewed using module 3.

The fourth module, knowledge, practice, and coverage (KPC), was derived from a secondary analysis of relevant data from the population-based survey carried out in Pourk, Angkor Chum, and Varin districts in March, 2005. This survey used a randomized, two-stage cluster methodology to achieve a representative sample for the three districts. The survey tool included a series of questions (see Annex 4) to investigate care-seeking practices for caregivers of children under two years reporting their youngest child to have had fever within the last two weeks. Relevant data from Angkor Chum and Varin districts was re-analyzed to enhance the findings from the qualitative modules of this study. Additionally, behavioral recall has been demonstrated to increase validity when linked to an actual event (e.g. care-seeking for a recent illness episode). Therefore,

the data is considered to be relatively valid (accurate). Finally, quantitative data from the KPC survey relating to malaria transmission knowledge and mosquito net use has also been integrated into this report to provide a more comprehensive understanding of the actual situation in Angkor Chum and Varin.

## **Training**

The study team conducted a one-day training on September 19, 2005. The training included a review of qualitative study skills including facilitation of focus group discussions and note-taking. The training also encompassed a detailed discussion of the study objectives and discussion guides. The training ended with logistics planning.

## **Logistics**

From September 20 through 24, the study team focused on completion of focus group discussions for modules 1 and 2. During that week, the study team was organized into two teams, each of which consisted of two, two-person interview sub-teams. Each two-person sub-team rotated facilitator and note-taker responsibilities.

Module 3 in-depth interviews were completed from September 27 through 30.

## **Recording and Analysis**

Each sub-team was responsible for joint review of the notes before submission to the American Cross M&E officer each day. All focus groups and in-depth interviews were also recorded using digital MP3 recorders. Recordings were downloaded each night onto a computer to facilitate detailed review of each session during analysis.

Data analysis was done by hand in order to permit it to be done in Khmer (Cambodian language), with the intent of reducing the time involved with translation and minimizing the potential for loss of information from pre-mature translation. Data analysis involved classification of interviewer notes by topic and target group. Recordings were repeatedly checked to supplement interview notes for clarity or additional detail when needed. Summary tables were developed in Khmer for comparison and cross-referencing of data. Summary matrixes and findings were translated into English. These were reviewed and discussed in detail with the primary investigator for production of this report.

## Findings

### *Prevention knowledge and understanding of transmission*

Quantitative KPC survey data shows significant differences in caretaker knowledge about malaria transmission between Angkor Chum and Varin. Eighty-six (86) percent of Angkor Chum caretakers cited "mosquito bites" as the cause of malaria compared to 64.9 percent of Varin caretakers. Residents of more rural Varin District were more likely to identify incorrect transmission routes such as witchcraft, intravenous drug use, blood transfusion, injection, and sharing razor blades (cumulative total of 18.2 percent).

"Other" responses included: acclimation to new place (lack of environmental immunity), travel to and return from the forest or mountain, ingestion of bad/dirty/un-boiled water, no bed net, small ponds (breeding sites), and sleeping in the rice field. The association of malaria with bad/dirty/un-boiled water, while technically not accurate, is a constructive health belief for diarrhea prevention.

**Table 2. Reported cause of malaria by administrative district**

Cause	Angkor Chum			Varin			Chi2 for difference in %
	n	N	%	n	N	%	
Mosquito bites	72	84	<b>85.7</b>	50	77	<b>64.9</b>	0.0021
Witchcraft	0	84	<b>0.0</b>	2	77	<b>2.6</b>	0.1372
Intravenous drug use	0	84	<b>0.0</b>	2	77	<b>2.6</b>	0.1372
Blood tranfusion	0	84	<b>0.0</b>	4	77	<b>5.2</b>	0.0056
Injection	0	84	<b>0.0</b>	1	77	<b>1.3</b>	0.2948
Sharing razor blades	1	84	<b>1.2</b>	5	77	<b>6.5</b>	0.0760
Other	3	84	<b>3.6</b>	10	77	<b>13.0</b>	0.0240

Corroborating quantitative data shown above for both women's and men's focus groups demonstrated a great deal of understanding about malaria transmission. Both groups most commonly identified mosquito bites as the cause of malaria. Most other causes identified by both groups were attributable to un-boiled/dirty drinking water, no hygiene, non-use of mosquito nets, and lack of insecticide. Of interest is the fact that these causes were expressed from the perspective of non-action on the part of the individual or family, thus suggesting there is potential to take action, and therefore control over transmission.

The only notable difference between the men and women's groups was that women were more descriptive and detailed when discussing the causes of malaria.

**Table 3. Causes of malaria reported during focus group discussions**

Women's FGDs	Men's FGDs
<ul style="list-style-type: none"> <li>-Mosquito bite</li> <li>-Drinking dirty/un-boiled water</li> <li>- Sleep without mosquito net</li> <li>- No hygiene</li> <li>-No insecticide</li> <li>-Cha Baum bite*</li> <li>- Travel/overnight in stay at the mountain or in the forest (looking for food or wood)</li> <li>- Dirty water in small pond surround the house (breeding sites)</li> <li>-Lack of vitamins (general)</li> </ul>	<ul style="list-style-type: none"> <li>-Mosquito bite</li> <li>-Drinking dirty/un-boiled drinking water (including mountain water)</li> <li>- No hygiene</li> <li>- Sleep without mosquito net</li> <li>-No Insecticide</li> <li>- Lack of clothing to protect skin</li> <li>-Drinking water contaminated by limestone</li> <li>-Children taking a dirty shower</li> <li>- "Affected land" meaning malaria endemic area</li> <li>-Not enough food</li> </ul>

\*Cha Baum is a large flying insect

Although not as common, there is some understanding of the connection between illness and nutrition. Women associated lack of vitamins with malaria; men mentioned not enough food. That is, women were more concerned about the nutritional quality of the food, in contrast to men who were concerned with quantity and feeling full after eating. One older woman commented, *"Everyday we only eat salt and chilly water with rice and prauhawk (salt flavored with fish), we do not have enough money to buy pork, fish, and vegetables. If we eat like that how can we have enough vitamins? If I had enough money, I would buy meat and vegetables to give my family good vitamins"*.

When asked what people do to prevent malaria, focus group participants commonly cited burning wood, palm leaf, cow and buffalo dung to repel mosquitoes, use of mosquito nets, cutting grass around the house, as well as avoiding contact with people that have malaria.

#### *Mosquito nets*

Data from the KPC survey showed that 63.4 percent of households in Angkor Chum and Varin had a mosquito net in the home (seen by the interviewer). Boys were more likely (68.3 percent) than girls (58.2 percent) to live in a home with a mosquito net. Stratification by mother's age revealed that young mothers (under 25 years of age) are more likely to have a mosquito net (nearly four out of every five), compared to older mothers (25 years of age and older), of which only 54.9 percent have a net.

Stratification by AD also showed that surveyed households in Angkor Chum (67.9) are more likely to have a mosquito net than households in Varin (58.4).

**Table 4. Mosquito net in home by child gender, mother's age and administrative district**

Background Characteristic				
	n	N	%	CI
Mosquito net in home	102	161	<b>63.4</b>	52.8 - 73.9%
<i>Child's gender</i>				
Female	46	79	<b>58.2</b>	42.8 - 73.6%
Male	56	82	<b>68.3</b>	54.0 - 82.5%
<i>Mother's Age</i>				
<25 years	46	59	<b>78.0</b>	63.0 - 92.9%
25 years and over	56	102	<b>54.9</b>	41.2 - 68.6%
<i>Administrative District</i>				
Angkor Chum	57	84	<b>67.9</b>	53.7 - 82.0%
Varin	45	77	<b>58.4</b>	42.9 - 74.0%

Logistic regression analysis failed to detect a correlation between households reporting fever (as the outcome variable) with correct transmission knowledge or presence of a mosquito net in the home. One plausible explanation is that mosquito nets are not effective in reducing fever report as they are not treated with insecticide and commonly have holes or tears.

Focus groups and in-depth interviews provide insight into motivating and de-motivating factors related to mosquito net use. Information summarized below is for all target groups as inter-group comparisons revealed no notable differences.

**Table 5. Motivating and de-motivating factors for use of mosquito net**

Motivating	De-motivating
<ul style="list-style-type: none"> <li>- <i>To prevent mosquito bite</i></li> <li>- <i>Disease prevention</i></li> <li>- <i>Malaria prevention</i></li> <li>- <i>Easy/improved sleeping</i></li> <li>- <i>Protect child health</i></li> <li>- <i>Reduced medical costs</i></li> <li>- <i>Avoidance of fever</i></li> </ul>	<ul style="list-style-type: none"> <li>- <i>Unpleasant smell</i></li> </ul>

Focus group participants were easily able to identify many benefits of using mosquito nets. Consistently, people expressed that mosquito nets are important and useful.

New nets were reported to have a slight, unpleasant smell. People noted that this is not a major concern, and would not prevent them from using a net. One woman stated, *"My child had difficulty sleeping under the mosquito the first night because they were not used to it and because of the smell, after the first night my child sleeps well."*

Focus group participants commonly complained that they did not have an understanding of insecticide treatment, only having one net in the home, and that mosquito nets often tear or rip easily. One man stated, *"I have seven children and only one mosquito net, which the health center gave me in 2003. Now it is broken and has holes."*

Women mosquito net users were more likely to be familiar with insecticide treatment. They reported that health center staff had provided insecticide treatment in the community within the last six months and previously in 2003. Several people stated that the more recent treatment was not effective as it did not kill lice as it did following the 2003 treatment. Men reported having heard about insecticide treatment, but not having experience using it. Mosquito net non-users had never heard about insecticide treatment.

Focus group participants consistently cited their desire to have more mosquito nets in the home; they described one net as being too small or narrow to accommodate all family members. One mother stated, *"Because I have four children and only one mosquito net, all my children must sleep under that net, because it is too narrow they are not able to sleep well; too many people are sleeping together and they are not getting enough air."*

With limited net capacity, priority use becomes an issue. Among doer focus groups (those reporting to use mosquito nets), both women's and men's groups consistently reported giving priority use to small children. The primary reason for this is that people recognize that young children are more vulnerable to malaria. One father explained, *"My youngest children are more easily affected by disease and need protection. I am afraid the child will get sick"*.

Women commonly sleep with their children if there is space under the mosquito net. However, there was no mention in any group about increased malaria risk or priority net use for pregnant women.

Other research<sup>9</sup> has suggested that small children are frequently removed from under the mosquito net after dusk. This practice seems to be common as approximately half of all focus groups confirmed this practice. This is linked to a cultural taboo against leaving small sleeping children unattended; this taboo is related to the belief that spirits may wake the baby, causing it to cry which may result in the child becoming sick. Children are often left in the care of somebody else of the house while sleeping, while the mother spends time visiting with family, neighbors and/or watching television. When other

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<sup>9</sup>cited in Ministry of Health, Kingdom of Cambodia, *Annual progress report*, National Center for Parasitology, Entomology and Malaria Control, 2004

household members are not available to watch the sleeping child, the mother will take the child with her.

Non-doers, or those people who currently do not use a mosquito net, expressed strong interest to have a mosquito net, but reported that cost was the barrier. One mother reported, *"the Indian seller charges 15,000 Riel for one mosquito net, this is too high, so people are not able to buy it"*. Cost was also cited as a barrier to taking a mosquito net when traveling to the forest or rice field. Not surprisingly, non-users were unable to describe the advantages of mosquito net use as easily as users.

Focus group members' concerns about lack of insecticide treatment information is consistent with findings from the KPC: only seven (7) households reported to have soaked or dipped their mosquito net in a liquid that repels mosquitoes or insects. None reported to have had done so within the past 12 months (not shown).

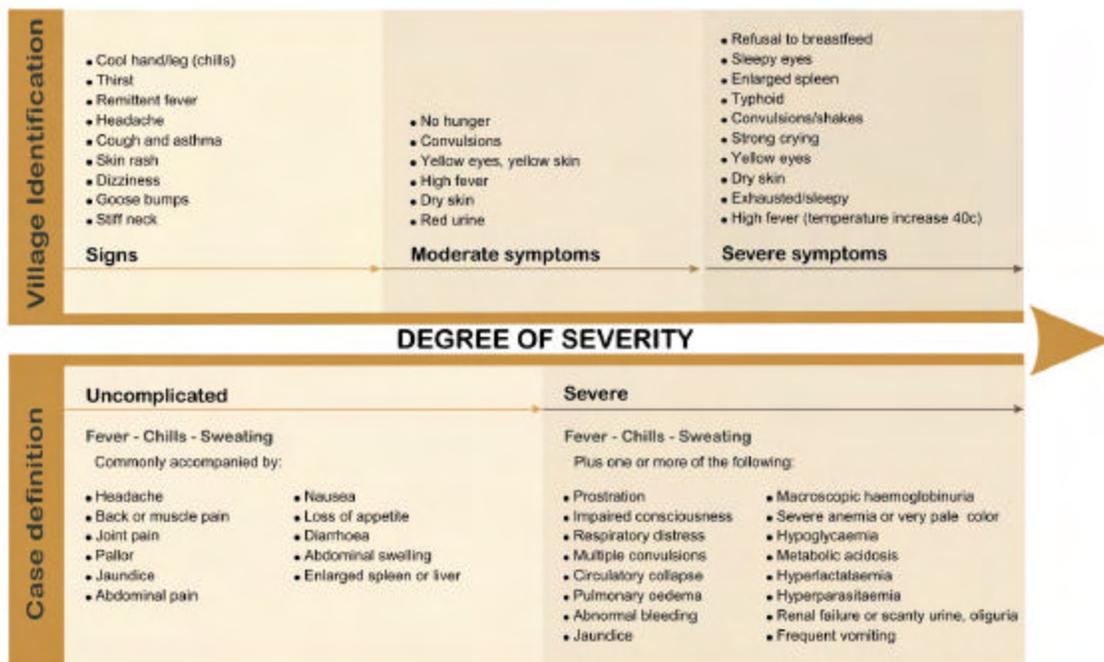
Female interviewees were excited to learn more about insecticide treatment. They overwhelmingly responded that they would bring their net to health center outreach if this was offered as a *free* service. One woman explained, *"if the health center gives insecticide, I will bring my net for treatment because I want to protect my family against mosquito bites so they are not effected by mosquito diseases."* Although men did not disapprove of insecticide treatment, they were less interested. One man explained, *"I know that health center staff come to explain about insecticide treatment, but I have not been involved with that."*

Another important aspect of insecticide treatment of mosquito nets is the washing interval. Data from the KPC survey showed that frequency of mosquito net washing as follows: 30.2 percent once a week, 51.2 percent once a month and 18.5 percent less than once a year.

*Early identification and referral*  
*Symptomology*

Focus group participants and interviewees easily understood the Khmer term for malaria: *kruun chang*; this term was frequently interchanged with *g'dao k'lang* literally translated as *strong heat*, and *roung ngiem* the localized term for exhaustion associated with malaria. People were readily able to describe signs and symptoms that they associate with malaria. Focus group participants were asked to categorize each sign or symptom they described as a sign, moderate symptom, or severe symptom. A severe symptom was defined as one that is life threatening, indicating the need for immediate attention from the health center or hospital. Both men and women provided similar information, although, women were able to provide more detailed information. The illustration below summarizes malaria signs and symptoms by village identification and case definition.

**Illustration 1. Signs and symptoms of malaria: village recognition vs. case definition<sup>10</sup>**



There was no consensus or clear understanding of the degree of severity for convulsions/shaking and high fever; there was significant discussion in most focus groups about this as they were both identified as moderate and severe symptoms. There

<sup>10</sup> Case definitions taken from the National Treatment Guideline for Malaria, National Centre for Parasitology, Entomology and Malaria Control, November 2004, p.7-8.

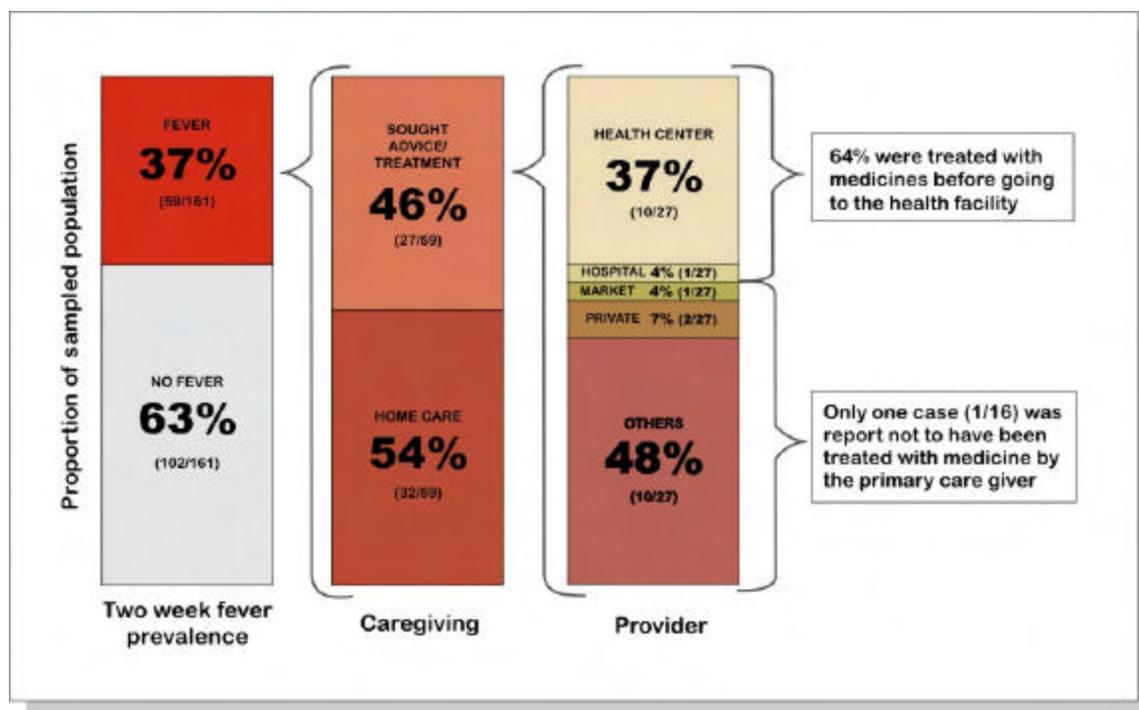
was some agreement that convulsions and high fever become very serious, but only after 2-3 days. This confusion can result in delayed care-seeking at the health center.

Villagers are able to identify remittent fever and chills (cold hand/leg) as a malaria sign. Sweating was not mentioned at all as a sign or symptom. This is likely due to the perception of sweating as normal (not surprising for rural Cambodia). Several other symptoms identified by villagers are being confused with other illness (cough and asthma, typhoid). Additionally, there is a common association of red with heat. Therefore, red urine should logically indicate overheating from high fever. However, this is not a common symptom of malaria following the case definition.

*Care-seeking behavior*

According to the KPC survey, 37 percent of mothers reported that their youngest child had fever in the last two weeks. These mothers were asked more detailed questions concerning treatment and care seeking for this illness episode.

**Graph 1. Report of care-seeking behavior among children with fever in the past two weeks**

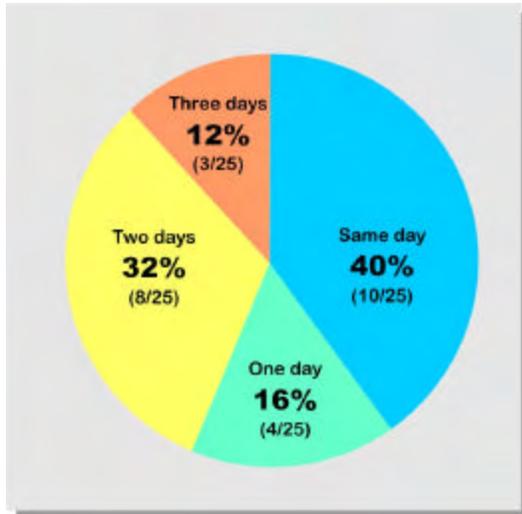


Of caregivers reporting their youngest child had fever in the past two weeks, 46 percent stated that they sought advice or treatment outside the home; 54 percent stated that they did not. Of those 27 cases reporting treatment outside the home, 10 cases went to the health center, 1 case went to the hospital, 1 case went to the market, and 2 cases went to a

private provider; 14 cases reported "other", detail for "other" was not recorded at the time of the survey.

Among those cases going to the health center or hospital, 64 percent were treated with medicines before going to the facility. Among those cases going outside of the formal health sector, only one case was reported not to have been treated with medicine by the primary caregiver. This data suggests that almost all fever is treated first by the primary caregiver; at least half of first care/treatment for fever is administered in the home.

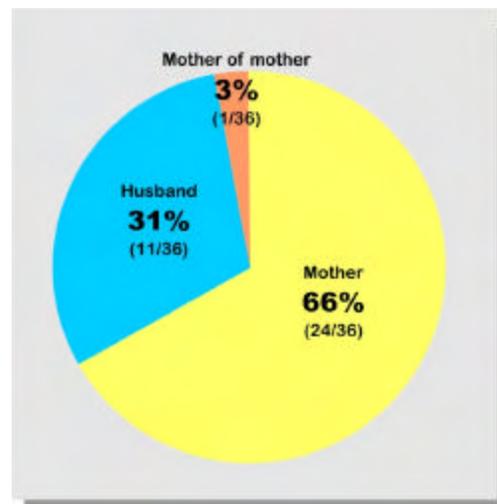
**Chart 1. Time-lapse for fever care-seeking**



Data from the KPC survey revealed that, for those reporting treatment outside the home, 40 percent reported care-seeking the same day as signs or symptoms, 16 percent report waiting one day, 32 percent report waiting two days, and 12 percent cited waiting three days.

Also of interest is decision making regarding care seeking. According to the KPC survey, less than one-third of husbands get involved with the decision to take their child for care. By contrast, key informants interviewed as part of the qualitative modules of the study perceive that the community is involved in

decision-making regarding care. People involved include village health workers, village health support group member, their family, village leader, elders, traditional birth attendants, and shopkeepers. One midwife stated, *"Mothers consult with their village leader or the village health worker because they trust them and they believe they have been educated by the health center staff."* One village leader informed, *"I have advice from the district chief and information from the health center to give information to the community people when they get sick. It is my job to know what is going on in this community and the people always report to me when there is any problem. I am the leader of the people and when I say anything the people listen."* One village health worker noted, *"I am always the first to get information"*.



**Chart 2. Decision maker for care-seeking**

Data from focus group discussions and in-depth interviews with villagers and key informants corroborates the quantitative findings described above, providing a more detailed account of what is happening with care-seeking for fever in the village.

Following recognition of malaria signs, a mother typically forages on the mountain or around the village for traditional medicines including the Persian lilac leaf and other non-specified, edible plants to crush with unheated water to make a tea. The tea is sponged or wrapped on the child's body to reduce the child's temperature. Some people give the tea to the child as a drink. This homecare is used for the first one to two days of onset of signs.

Also, not uncommon, was report of food preparation to offer to the spirit. By contrast, mention of the consultation with *kru k'mai* or traditional healers/witch doctors was isolated.

If the child's symptoms persist or get worse, the mother will most frequently go to the shopkeeper to purchase paracetamol, ampicine, tetracycline, novazine, quinine, yakhamchai (medicine from Thailand), powder ampicine, powder cloramphenical, and sombucmum (medicine from Thailand). The shopkeeper is most often consulted for their recommendation on treatment.

Shopkeepers stated that people always come to them to discuss treatments. Shopkeepers reported providing medicines to villagers. One shopkeeper explained, "*Many people come to ask me about what to do for their sick child. When they have fever I give them paracetamol because my supplier, the big pharmacy in Pourk, uses this for fever. If the sick child's condition has not improved after two days I will recommend that the mother takes the child to the health center or hospital.*"

If the child's symptoms persist or get worse following self-treatment, most people reported that they will then take their child to the health center or hospital. Considering homecare is approximately two days and medicine treatment from shopkeeper for an additional two days.

If this is not possible (no transportation, etc.) or if treatment at the health center is not effective, mothers will resort to the preparation of traditional teas (described above) in her home.

#### *Treatment*

Only one traditional midwife and one private clinic were able to identify malacheck. In relation to malarin, approximately 20 percent of study participants were able to identify malarin. Those people were also knowledgeable about correct use and expressed confidence that it is very effective treatment of malaria. Furthermore, they understood that malarin is not for use by children under five years of age. Everybody noted that the price of malarin is expensive. One mother stated, "*Malarin is very effective, but it is expensive, one box, it can cost up to 16,000 Riel. This medicine has very good quality.*"

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## **Limitations**

The purpose of the qualitative research presented in this report is not to find out how many people engage in a certain behavior or hold certain opinions, but to identify the kinds of behavior and opinions that do exist, and the possible reasons for this behavior.

Therefore, the results of these discussions should be looked at as hypothetical, based on a description of the reactions of a non-projectable sample. Further quantitative research is recommended to verify the hypotheses set forth in this report.

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## **Annex I- Focus Group Discussion Guide 1- Malaria Prevention**

### **Target Groups (CIRLE ONE):**

- (1) Female caregivers aged 19-49 of children <5 *doers* (self-report of year-round mosquito net use);
- (2) Female caregivers aged 19-49 of children <5 *doers1* (self-report of seasonal mosquito net use);
- (3) Female caregivers aged 19-49 of children <5 *non-doers* (self-report of no mosquito net use);
- (4) Married men aged 19-49 with children <5 *doers* (self-report of year-round mosquito net use);
- (5) Married men aged 19-49 with children <5 *doers1* (self-report of seasonal mosquito net use only);
- (6) Married men aged 19-49 with children <5 *non-doers* (self-report of no mosquito net use)

### **I. Introduction**

Welcome and thank you for taking time to participate in this discussion today. My name is [moderator] and this is [note-taker] and we are working with the Red Cross and Operational District to help find solutions to the problem of malaria. Your comments will be used to help the development of effective programming to improve malaria prevention and control.

### **II. Ground rules**

We are interested in all your opinions and feelings. There are no right or wrong answers. We need your ideas, so any criticisms you have will not hurt our feelings. We encourage you to provide frank comments. We encourage you to share openly your ideas. Do not wait for the moderator to ask for your opinion, feel free to speak at any time. You will have a chance to speak and all ideas, concerns and opinions are of value. The session will last approximately 1-1.5 hours.

### **III. Confidentiality/Informed Consent**

Everything that is said in this group is confidential and we will not tell anyone that you participated in this discussion. My assistant will take some notes to help us remember comments from the group.

I also want to make sure that everybody knows that your participation is voluntary. You are under no obligation to be here or participate in this group if you do not want to do so. You may leave at any time. Is there anybody who would prefer to leave at this time?

### **IV. Introduction of participants**

We would like each of you to introduce yourself. Also, please tell us how many children you have and tell me the age of your youngest child.

**V. Research questions**

- 1.1 All of you said that you had a young child. Could you tell me what are the main illnesses of young children in your community?
- 1.2 Could you tell me what causes malaria?
- 1.3 Could you tell me how people in this village prevent malaria?
- 1.4 Can you tell me more about mosquito nets... what are some advantages to using one? PROBE: Please tell me more about that... What else?....
- 1.5 What are some disadvantages to using a mosquito net?... PROBE: Please tell me more about that... What else?....

FOR *doers* and *doers1* ONLY:

- 1.6 Everybody here told me that they have a mosquito net in their home. Can you tell me who sleeps under it every night?... PROBE: What about your small children? What about your youngest child?...
- 1.7 Is there ever a time when your youngest child does not sleep under the net? PROBE: Can you tell me more about that?... Why?...
- 1.8 Is there ever a time when your youngest child is removed from under the mosquito net after dusk?... PROBE: Can you tell me more about that?... Why?....
- 1.9 What could somebody do or say to make you want to always have your youngest child sleep under the net?.... PROBE: Can you tell me more about that?...

FOR non-doers ONLY

- 1.10 Have you ever considered using a mosquito net?...
- 1.11 What has stopped you from using one?....PROBE: What else?.. Can you tell me more about that?...

ALL

- 1.12 What could somebody do or say to make you want to use a mosquito net all year long?.... PROBE: Can you tell me more about that?...

- 1.13 Have you ever heard about KO-trine or insecticide treatment to dip/soak your mosquito net? Has anybody here used KO-trine or another insecticide treatment for soaking/dipping a mosquito net? PROBE: Can you tell me more about your experience with treating/re-treating a mosquito net?
- 1.14 During health center outreach, has the staff ever brought insecticide treatment for people to be able to re/treat their net here in the community?..
- 1.15 If the VMW or the health center outreach staff were to provide insecticide treatment during health center outreach, would you bring your net (if you had one) ?...
- 1.16 Let's suppose that you have a mosquito net, how much would you be willing to pay to have it treated with insecticide?
- 1.17 What are the *advantages* to KO-trine or insecticide treatment for a mosquito net?... PROBE: Can you tell me more about that?...
- 1.18 What are the *disadvantages* to KO-trine or insecticide treatment for a mosquito net?... PROBE: Can you tell me more about that?...
- 1.19 Is there anything that anybody could do or say that would convince you to seek insecticide treatment for your mosquito net? PROBE: Can you tell me more about that?...

## **VI. Wrap-up**

We have discussed a lot of issues about malaria today. We want to thank you for your participation. Your comments and ideas you have shared will help us to better plan prevention promotion in your community. Before we finish, do you have any questions or us?

## **Annex 2- Focus Group Discussion Guide 2-Malaria Identification and Care-seeking**

### **Target Group (CIRLE ONE):**

- (1) women caregivers 19-49 years of age with children <5; and
- (2) married men aged 19-49 with children <5

### **I. Introduction**

Welcome and thank you for taking time to participate in this discussion today. My name is [moderator] and this is [note-taker] and we are working with the Red Cross and Operational District to help find solutions to the problem of malaria. Your comments will be used to help the development of effective programming to improve malaria prevention and control.

### **II. Ground rules**

We are interested in all your opinions and feelings. There are no right or wrong answers. We need your ideas, so any criticisms you have will not hurt our feelings. We encourage you to provide frank comments. We encourage you to share openly your ideas. Do not wait for the moderator to ask for your opinion, feel free to speak at any time. You will have a chance to speak and all ideas, concerns and opinions are of value. The session will last approximately 1-1.5 hours.

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Everything that is said in this group is confidential and we will not tell anyone that you participated in this discussion. My assistant will take some notes to help us remember comments from the group.

I also want to make sure that everybody knows that your participation is voluntary. You are under no obligation to be here or participate in this group if you do not want to do so. You may leave at any time. Is there anybody who would prefer to leave at this time?

### **IV. Introduction of participants**

We would like each of you to introduce yourself. Also, please tell us how many children you have and tell me how old is your youngest child.

### **V. Research questions**

- 1.1 All of you said that you had a young child. Could you tell me what are the main illnesses of young children in your community?
- 1.2 I would like to talk more about malaria, could you tell me what causes malaria?

- 1.3 Could you tell me how you know that your child has malaria?... PROBE: Please tell me more about that... What else?.... Anything else?... RECORD ALL SYMPTOMS

GET AN EXHAUSTIVE LIST OF SYMPTOMS TO USE FOR Q1.4 AND Q1.5

- 1.4 I want to talk about each of the symptoms that were mentioned by the group. You told me that \_\_\_\_\_ (high fever, convulsions/shakes, etc.) indicate that your child has malaria. How serious is that symptom?...

IF GROUP HAS DIFFICULTY EXPRESSING THIS, USE THE LIKERT SCALE.

- 1.5 If your child has \_\_\_\_\_ (high fever, convulsions/shakes, etc.) what would you do first? What would you do next? And after that?... PROBE: Please tell me more about that...

REPEAT Q1.4 AND Q1.5 WITH EVERY SYMPTOM MENTIONED BY THE GROUP FROM QUESTION 1.3.

- 1.6 Have you ever used or heard of *malacheck*?... SHOW SAMPLE PROBE: Can you tell me more about your experience with *malacheck*?

IF THEY HAVE NEVER HEARD OF *malacheck* SKIP TO Q1.10

- 1.7 What do you think of *malacheck*?... Is it worth the cost and effort to purchase in order to diagnose malaria? Why?....

- 1.8 What prevents people from using *malacheck* every time they suspect malaria?...

- 1.9 What could somebody do or say that would convince you to use *malacheck* every time you suspect your youngest child has malaria?... PROBE: Can you tell me more about that?...

- 1.10 Now I would like to talk about treatment for malaria. I know that different people use different treatments. When your youngest child (under 5 years of age) presents the symptoms [name symptoms] that we discussed earlier, what do you do?... PROBE: Can you tell me more about that?... What are the advantages/benefits to that treatment? After you do that, what do you do next?... What do you do if the symptoms do not improve?...

- 1.11 Do you give that child any medicines?... Which ones?... Why do you give your child [name medicine]?... PROBE: Can you tell me more about that medicine?... Where do you get those medicines?....

- 1.12 At what point do you decide that you need to go to the health center?... What alerts you that the situation is very serious?... What are the words that people use to identify that [symptom] is very serious?... REPEAT ALL MENTIONED SYMPTOMS FROM Q1.3 AND RECORD ALL MENTIONED WORDS INDICATING SERIOUSNESS
- 1.13 Sometimes you may talk with other people when your child gets sick with [symptoms], with whom to you talk and who gets involved in making the decision to take your child to the health center for care?.... PROBE: Please tell me more about that...
- 1.14 Who in this community could tell you to take your child to the health center that would obligate you to do so? Who else?... PROBE: Please tell me more about these people and why they have this influence...
- 1.15 What could somebody do or say that would make you want to seek care for your child at the health center?... PROBE: Please tell me more about that...
- 1.16 Have you ever used or heard of *malarine* for treatment of children over 5 years of age and adults?... SHOW SAMPLE; PROBE: Can you tell me more about your experience with *malarine*?

IF THEY HAVE NEVER HEARD OF *malarine* END FOCUS GROUP

- 1.17 What do you think of *malarine*?... Is it worth the cost and effort to purchase in order to treat malaria? Why?....
- 1.18 What prevents people from using *malarine* when their child over 5 years of age has malaria?...PROBE: Can you tell me more about that?....
- 1.19 What could somebody do or say that would convince you to use *malarine* every time your child over 5 years of age has malaria?... PROBE: Can you tell me more about that?...

## **VII. Wrap-up**

We have discussed a lot of issues about malaria today. We want to thank you for your participation. Your comments and ideas you have shared will help us to better plan prevention promotion in your community. Before we finish, do you have any questions for us?

## **Annex III- In-Depth Interview Guide 2– Malaria Treatment**

### **Target Groups (CIRCLE ONE):**

- (1) Commune or Village leader
- (2) Village Malaria Worker (VMW)
- (3) Mid-wife
- (4) Shopkeepers

### **I. Introduction**

Welcome and thank you for taking time to participate in this discussion today. My name is [interviewer] and I am working with the Red Cross and Operational District to help find solutions to the problem of malaria. Your comments will be used to help the development of effective programming to improve malaria prevention and control.

### **II. Ground rules**

We are interested in all your opinions and feelings. There are no right or wrong answers. We need your ideas, so any criticisms you have will not hurt our feelings. We encourage you to provide frank comments. We encourage you to share openly your ideas. The interview will last approximately 1-1.5 hours.

### **III. Confidentiality/Informed Consent**

Everything that you say in this interview is confidential and we will not tell anyone that you participated in this discussion. I will take some notes to help me remember your ideas.

I also want to make sure that you know that your participation in this interview is voluntary. You are under no obligation to be here or participate if you do not want to do so. Are you agreeable to continuing with the interview?

### **I. Introduction**

Could you tell me about what you do for work?...

### **II. Research questions**

1.1 I would like to talk to you about malaria, could you tell me what causes malaria?

1.2 Could you tell me how people in the village know that their child has malaria?...  
PROBE: Please tell me more about that... What else?.... Anything else?...  
RECORD ALL SYMPTOMS

1.3 Frequently, people in the village talk with other people when their child gets sick with [symptoms], with whom do they talk most? RECORD ALL MENTIONED  
Where do people most commonly go for advice on treatment for malaria?  
RECORD ALL MENTIONED

- 1.4 Do people ever ask you how to treat malaria?... How often do people consult with you? If somebody were to ask your advice on treating the symptoms you mentioned [name symptoms] what would you tell them?... PROBE: What else?... Can you tell me more about that?...
- 1.5 What medicines do you recommend?.. **RECORD ALL MENTIONED** Why would you recommend [name medicine]? PROBE: Can you tell me more about that one?... Do you believe it is effective?.... **REPEAT TO EXHAUST ALL MENTIONED MEDICINES**
- 1.6 In the village, who gets involved in making the decision to take a sick child to the health center for care?.... PROBE: Please tell me more about that...
- 1.7 In the village, who could tell a mother to take her child to the health center that would obligate her to do so? Who else?... PROBE: Please tell me more about these people and why they have this influence...
- 1.8 What could somebody do or say that would make a mother want to seek care for your child at the health center?... PROBE: Please tell me more about that...
- 1.9 What prevents people in the village from seeking care for a sick child at the health center? PROBE: What else? Please tell me more about that...
- 1.10 Have you ever used or heard of *malacheck*?... **SHOW PRODUCT SAMPLE**; PROBE: Can you tell me more about your experience with *malacheck*? Do people in the village use *malacheck*? Why or why not?...

IF THEY HAVE NEVER HEARD OF *malacheck* SKIP TO Q1.14

- 1.11 What do you think of *malacheck*?... Is it worth the cost and effort to purchase in order to diagnose malaria? Why?....
- 1.12 What prevents people in the village from using *malacheck* every time they suspect malaria?...
- 1.13 What could somebody do or say that would convince people in the village to use *malacheck* every time you suspect a child over 5 years of age has malaria?... PROBE: Can you tell me more about that?...
- 1.14 Have you ever used or heard of *malarine*?... **SHOW PRODUCT SAMPLE** PROBE: Can you tell me more about your experience with *malarine*?

IF THEY HAVE NEVER HEARD OF *malarine* END INTERVIEW

1.15 What do you think of *malarine*?... Is it worth the cost and effort to purchase in order to treat malaria? Why?....

1.16 What prevents people from using *malarine* when their child has malaria?...PROBE: Can you tell me more about that?....

1.17 What could somebody do or say that would convince people in the village to use *malarine* every time their youngest child has malaria?... PROBE: Can you tell me more about that?...

### **III. Wrap-up**

We have discussed a lot of issues about malaria today. I want to thank you for your participation. Your comments and ideas you have shared will help us to better plan prevention promotion throughout Angkor Chum OD. Before we finish, do you have any questions for me?

## Annex IV. Malaria modules extracted from the KPC questionnaire

VIII. MALARIA				
<b>MA1</b>	Has <NAME> been ill with fever in the last two weeks?	Yes	1	<b>If no or don't know, go to MA22</b>
		No	2	
		Don't not	8	
<b>MA2</b>	Did you seek advice or treatment for <NAME'S> fever?	Yes	1	<b>If no, go to MA22</b>
		No	2	
<b>MA3</b>	<p><i>Where did you <u>first</u> go for advice or treatment?</i></p> <p><b>Circle only one answer.</b></p> <p><b>If 1, 2, 3, or 4 (Hospital, Health Center or Private Hospital, Clinic, or Practitioner).....</b></p> <p><b>Write the Name</b></p>	Hospital	1	
		Health Center	2	
		Private Hospital/Clinic	3	
		Private Practitioner	4	
		Village Health Worker/TBA/VHC	5	
		Traditional Healer	6	
		Market	7	
		Pharmacy	8	
		Community Distributors	9	
		Friend/Relative	10	
		Other	88	
<b>MA4</b>	How long after you noticed <NAME's> fever did you seek treatment from that person or place?	Same day	0	
		One day	1	
		Two days	2	
		Three days	3	
<b>MA5</b>	<p>Why was &lt;NAME&gt; taken to this &lt;PROVIDER&gt;?</p> <p>Anything else?</p> <p><b>Circle all answers.</b></p>	Cost less money	A	
		Can pay on time	B	
		Practitioner known	C	
		Practitioner trusted	D	
		Closest distance	E	
		Other	X	
<b>MA6</b>	<p>Who decided that you should go there for &lt;NAME's&gt; illness?</p> <p>Anything else?</p> <p><b>Circle all answers.</b></p>	Mother	A	
		Husband	B	
		Mother of mother	C	
		Mother-in-law	D	
		Friend/Neighbors	E	

		Others	Z	
<b>MA7</b>	How was the child taken there?	Walk	1	
		Own transportation	2	
		Motor taxi	3	
		Friend	4	
		Car taxi	5	
		Other	96	
<b>MA8</b>	How much did it cost for transportation?			
<b>MA9</b>	Did you/they have to pay for the consultation and treatment?	Yes	1	<b>If no, go to MA11</b>
		No	2	
<b>MA10</b>	How much did you have to pay?			
<b>MA11</b>	After the health provider saw the child did s/he ask you to bring the child back for a check in a few days?	Yes	1	<b>If no, go to MA15</b>
		No	2	
<b>MA12</b>	Did you take <CHILD> back to the same health care provider?	Yes	1	<b>If yes, go to MA14</b>
		No	2	
<b>MA13</b>	If not, why?			<b>Go to MA15</b>
<b>MA14</b>	When did you take the child back?	Same day	1	
		One days	2	
		Two days	3	
		Three day	4	
		Other	5	
<b>MA15</b>	Where <u>else</u> did you go for advice or treatment? Anything else? <b>Circle all answers.</b>  <b>If A, B, C, or D (Hospital, Health Center or Private Hospital, Clinic, or Practitioner).....</b>  <b>Write the Name</b>	Hospital	A	
		Health Center	B	
		Private Hospital/Clinic	C	
		Private Practitioner	D	
		Village Health Worker/TBA/VHC/VH	E	
		Traditional Healer	F	
		Market	G	
		Pharmacy	H	
		Community Distributors	I	
		Friend/Relative	J	
		Nowhere else	K	

		Other	Z	
<b>MA16</b>	Did you consult with the VHV, VHC, TBA or Key Mother?	Yes	1	<b>If no, skip MA17</b>
		No	2	
<b>MA17</b>	What did they do? Anything else? <b>Circle all answers.</b>	Nothing	A	
		Refer	B	
		Health Education	C	
		Gave Treatment	D	
		Follow up	E	
		Other	X	
<b>Attention! Read and follow below:</b> <i>If &lt;NAME&gt; was ever taken to a Hospital or Health Center ® MA18</i> <b>If &lt;NAME&gt; was not ever taken to a Hospital or Health Center ® MA19</b>				
<b>MA18</b>	Was <NAME> treated with any medicine(s) before going to the Hospital or Health Center?	Yes	1	<b>If no or don't know, go to MA22</b>
		No	2	
		Don't Know	8	
<b>MA19</b>	Was <NAME> treated with any medicines by you?	Yes	1	<b>If yes, go to MA20. If no or don't know, go to MA22</b>
		No	2	
		Don't Know	8	
<b>MA20</b>	Which medicines were given to <NAME> for his/her fever?  <b>If mother cannot remember the names of the medicine, ask to see the medicine. If she does not have the medicine, show her the pictures of the medicine and ask her to identify them. Circle the letter next to the name of the medicine below once you have identified it.</b>  <b>For each medicine checked ask:</b> How long after the fever did <NAME> begin to take the medicine? <b>Circle the answer</b>			
<b>A</b>	CHLOROQUINE	Same Day (Day 0)	0	
		Day 1	1	
		Day 2	2	
		Day 3 +	3	
		Don't know	8	

<b>B</b>	FANSIDAR	Same Day (Day 0)	0
		Day 1	1
		Day 2	2
		Day 3 +	3
		Don't know	8
<b>C</b>	MEFLOQUINE	Same Day (Day 0)	0
		Day 1	1
		Day 2	2
		Day 3 +	3
		Don't know	8
<b>D</b>	RECTOCAP SUPPOSITORY	Same Day (Day 0)	0
		Day 1	1
		Day 2	2
		Day 3 +	3
		Don't know	8
<b>E</b>	A+M2 (ENFANT)	Same Day (Day 0)	0
		Day 1	1
		Day 2	2
		Day 3 +	3
		Don't know	8
<b>F</b>	A+M3 (ADOLESCENT)	Same Day (Day 0)	0
		Day 1	1
		Day 2	2
		Day 3 +	3
		Don't know	8
<b>G</b>	A+M4 (ADULT)	Same Day (Day 0)	0
		Day 1	1
		Day 2	2
		Day 3 +	3
		Don't know	8
<b>H</b>	QUININE	Same Day (Day 0)	0
		Day 1	1
		Day 2	2
		Day 3 +	3
		Don't know	8
<b>I</b>	TETRACYCLINE	Same Day (Day 0)	0
		Day 1	1
		Day 2	2
		Day 3 +	3

<b>J</b>	ARTESUNATE	Don't know	8	
		Same Day (Day 0)	0	
		Day 1	1	
		Day 2	2	
		Day 3 +	3	
		Don't know	8	
<b>MA21</b>	<b>OTHER MEDICINES GIVEN. Circle all answers.</b>	Aspirin	A	
		Paracetamol	B	
		Co-Trimoxazole	C	
		Ampicillin/ Amoxicillin	D	
		Other	E	
		Unknown Medicine	F	
<b>MA22</b>	Were any of these injections?	Yes	1	
		No	2	
		Don't Know	8	
<b>MA23</b>	What causes malaria? Anything else? <b>Circle all answers, and write down any 'other' responses.</b>	Mosquito Bites	A	
		Witchcraft	B	
		Intravenous drug use	C	
		Blood transfusions	D	
		Injections	E	
		Sharing Razor Blades	F	
		Kissing	G	
		Other	W	
		Other	X	
		Don't Know	Z	
<b>IX. MOSQUITO BEDNET USE AND MAINTENANCE</b>				
<b>BE1</b>	Do you have any bednets in your house?	Yes	1	<b>If no or don't know, go to HC1</b>
		No	2	
		Don't Know	8	
<b>BE2</b>	May I see the bednet? <b>Observe if bednet is hung over the bed and circle the answer.</b>	Hung over bed	1	
		Not hung	2	
<b>BE3</b>	Was the bednet ever soaked or dipped in a liquid to repel mosquitoes or insects?	Yes	1	<b>If no or don't know, go to BE5</b>
		No	2	
		Don't Know	8	
<b>BE4</b>	<b>Inspect bednet for holes or tears.</b>	No obvious holes/tears = Good Condition1	1	

		Any visible holes/tears = Damaged2	2	
<b>BE5</b>	How long ago was the bednet last soaked or dipped? <b>Record answer in months</b> <b>Less than 1 month = 00</b> <b>Don't know = 99</b>	_____ months		
<b>BE6</b>	Have you or someone else in your house ever washed the bed net? <b>Record the number of times.</b> <b>None = 00</b> <b>Don't know = 99</b>	_____ times		<b>If none, go to BE8</b>
<b>BE7</b>	How often do you wash your bednet?	Once a week Once a month Less than once a month	1 2 3	
<b>BE8</b>	How long have you had your bednet?  <b>Write down the number of months</b>			
<b>BE9</b>	Who slept under the treated bednet last night? <b>Circle all answers.</b>	Child <NAME>  (the one chosen for the interview) Mother Husband Other	 A B C Z	

# **TERMS OF REFERENCE**

## **CAMBODIAN RED CROSS**

### **COMMUNITY-BASED HEALTH PROGRAM STRENGTHENING**

#### **Background:**

Health care of the population, particularly in remote rural areas, is still in a poor state in Cambodia requiring improvement in basic health care and public health services. The Cambodian Red Cross, in partnership with the Ministry of Health, is committed to assist vulnerable populations affected by disasters, epidemics, and with basic health care in the present ongoing development situation. CRC, with branches throughout the country and a nationwide volunteer network, is uniquely placed to play an effective role in this.

In recent years, CRC has made considerable progress in developing skills and competence to implement programs in a professional way. Now it is high time to consolidate our efforts and develop our organization further. It is crucial to develop the health strategy 2006-2010 and establish strategic directions to strengthen the Red Cross health response and develop wider partnerships to improve the health of vulnerable populations in a sustained way.

Since the formulation of the health strategy 2003-2007 up to present, CRC has aligned its activities to follow the guidelines of strategy. Some of these activities have included streamlining and focusing programs that are more preventive in nature, such as Primary Health Care, WatSan, Integrated Child Health, Community-based First Aid, Commercial First Aid, Dengue Hemorrhagic Fever, Health and Nutrition for School Children, HIV/AIDS and Blood Donor Recruitment.

The existing health strategy 2003-2007 is in line with the CRC long term strategy 2007-2010, that guides all programs in CRC in a common vision to contribute to poverty reduction, as well as to be more focused and able to prioritize implementation according to actual capacity available at the NHQ and Branches.

Discussions during the Health Working Group have highlighted the need for CRC and their present partners to share their knowledge, skills, expertise, methodologies, tools and resources. This will ensure that core health programs implemented by CRC, with support from partners, have common approaches to community-based health care.

This work should provide a strong foundation to develop a viable and effective Health Strategy 2006-2010 that has ownership by all within CRC and their partners.

#### **Objective:**

To support the CRC Program Dept. to strengthen their Community-based Health Care program through establishing a unified approach to health program delivery with key partners, and planning for the development of the CRC Health Strategy 2006-10.

#### **Major Inputs:**

- Facilitate the adoption of common approaches to community-based health care programs with Program Dept. and partners.

- Support the Program Dept. health team to establish standardized CRC health program methodologies, terminology, guidelines, IEC materials, reference materials, tools and training packages that are well accepted by all partners.
- Liaise with the CRC Human Resource Dept. re the standardization of guidelines, incentives and support for Red Cross Volunteers and Red Cross Youth engaged in Community-based Health Care programs.
- Assist CRC to develop the health strategic planning process 2006-10, through supporting assessment of current capacity for implementation of Community-based Health Care programs, potential for expansion, and identification of community health priorities with key partners.

### **Statement of Work:**

- Desk review of relevant documents, including CRC strategy 2003-7, CRC Health Strategy 2003-7 and CRC Community-based health project documents 2005-7; MoH Health Strategy 2003-7; health resources, IEC materials, advocacy and promotional resources; Federation policies, procedures, guidelines, tools and training curricula.
- Develop implementation plan, in consultation with Program Dept. Director and health team.
- Develop question guides and conduct comprehensive interviews with Community-based Health program partners and stakeholders, in collaboration with CRC health team.
- Facilitate group sessions with relevant stakeholders to share information and discuss alternatives and solutions for improved implementation of community-based health care programs.
- Work closely with the CRC health team and partners to standardize identified aspects of community-based health program delivery and prepare for the strategic planning process.
- Report on progress and outcomes to Federation, CRC and RC partners.

### **Outputs:**

- Clearly articulated approaches to community-based health programs that CRC will employ with the support of Red Cross partners, and other relevant stakeholders.
  - Including: Terminology  
Program methodologies  
Resources and materials  
Training packages  
Assessment  
Beneficiary identification and involvement  
Monitoring and follow-up

- Clearly identified process for involving volunteers in community-based health program delivery, in alignment with CRC guidelines and procedures.
  - Including: Recruitment  
Incentives  
Role and responsibilities  
Training and support
- Review of existing CRC capacity to support and implement community-based health programs, and recommendations from partners and stakeholders for future program delivery and possible expansion from 2006.
- Progress and final reports to CRC, Federation and RC partners.

**Duration:**

The consultancy will comprise 40 days worked on a flexible basis during the period 22 August 2005 to 14 January 2006, to include submission of a draft report and a follow-up meeting with CRC and Federation to be scheduled at a mutually convenient time. An extension to the consultancy may be negotiated by mutual agreement and if funding can be identified.

**Supervision and Support:**

The consultant will report to the Director CRC Program Dept. and the Federation Representative on progress of work and outcomes. The consultant will also advise the Health Working Group on progress made, either in person or through the above persons.

The Director CRC Program Dept. will be the principal focal point for the consultancy and will be responsible for designating relevant staff to work with the consultant on identified activities, and for ensuring staff availability.

The Program Dept. will provide timely logistical and administrative support to the consultancy, including oral and written translation, assistance with organizing provincial field visits and meetings, transport to provincial field visits and meetings held in Phnom Penh, a meeting space and relevant documentation, as required.