

USAID/PAHO Project for the Prevention and Control of Anti-Malaria Resistance in the Amazon:
Proposed Workplan for the Period October 2002 through September 2003--
Country Workplan, Colombia

Intermediate Result 1 - Reliable and standardized malaria drug efficacy information available. **Process Indicators:** a) Percent of sentinel sites where data collection has been initiated, b) Percent of functioning sentinel sites that comply with quality control procedures, as defined by country protocol. **Milestones:** a) Studies sites have been identified; b) Study protocol has been prepared and approved by Ethical Committee; c) Surveillance site staff have been trained in use of the study protocol; d) National level reference laboratory has been identified.

Activities	Tasks	Staff , Other Human Resources, and Other Inputs	Product	Month/ Year	Remarks
A1.1. To establish a regional nodo to monitoring the malaria drugs resistance, and to monitor activities under PAHO coordination.	1. Participate in annual technical meeting: Monitoring of PAHO/WHO protocol's, progress adaptation, monitoring the evaluation indicators, execution project evaluation, quality control, as well as to obtain consensus regarding tests in vitro and genotyping.	3 persons		Mar-03	Costs included in task A.3.1.1.
	2. Participate in a technical meeting for discuss the last modifications of the protocols for in vivo studies produced for WHO	3 persons	Agreement about new protocols	Mar-03	Costs included in task A.3.1.1.

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A.1.2 To establish a national sentinel surveillance net with quality control in each targeted country to assess the efficacy of anti-malaria drugs.	1.Operational evaluation of the net at national level (realization of 5 national committee meetings): to evaluate the protocol execution, quality control system, the nodo management and the operation of the monitoring instruments.	Investigators, VBD departmental coordinators, national technical committee, national reference Centre, and Ministry of Health. Displacement and per diem for 5 people for 2 days = USD2.000	Strategies designed to improve the net operation	Dic/02 Feb/02 Apr/03 Jun/03 Ago/03	
	2. To provide two new SS with materials and equipment for in vivo protocols	To acquire material (2 microcopies, 2 tensiometros, etc)	Materials and equipment for two new SS provided		
	3. Quality control of blood smear lecture in sentinel sites	Bacteriology of the INS, visits 4 sentinel sites, 2 by site.	Supervision carry out twice on every sentinel site.	Oct /02 - Agu/03	Laboratory technicians financed by research centers and INS
	4. Creation (design and implementation) of a net of pilot sites for "passive surveillance of therapeutic failure" in the health system	Displacements and per diem to 3 departments and preparation the operating manual.	Instruments and process designed- Sites selected	Oct/02 Mar/03	
	5. Supervision and monitoring of surveillance system operation for "passive surveillance of therapeutic failure"	Supervision visits to 12 sites , plan of analysis	100% of pilots sites supervised, 100% of epidemiology offices at departmental level supported 100% of pilots sites supervised.	May/03 Sep/03	Participation of microscopists and professionals of Health Services.
	6. Pilot study of adherence for the TX schemes in patients and service providers	Literature review, design of research tools, meetings with VBD programs coordinators, field work (6 visits to two pilots places.	Tools designed, pilot study carried out in two localities.	Oct /02 - aug/03	

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A.1.3 Provide training to improve national capability to conduct the surveillance nodo of anti-malaria drug resistance in all target countries.	1. Training of promoters in each sentinel site in standardized protocol to monitoring patients	Physicians of the sentinel sites, promoters and assistants of the nodo (4 promoters by sentinel site in 6 sentinel sites, Total=24), printed material for promoters, per diem = \$2,200, transportation = \$500	Promoters trained in monitoring of patients	Oct-02	
	2. Evaluation and retraining to physicians and bacteriologists from the sentinel sites in diagnostic activities, application of standardized protocols, taking and shipment of samples, data collection, and analysis (One 5 days workshop at national level).	Per diem for 15 persons US\$3.276 Transport for 15 persons = 4,200 Materials =160, others 252	Technical deficiencies in doctors and microbiologist corrected	Jun-03	
	3. Training for doctors and microscopist from 2 new SS	Per diem for 6 persons =US\$1920 Transport= 960 Materials= 280	Staff from 2 new SS trained		
	4. Training for microscopists from the health system for "passive surveillance of therapeutic failure"	3 departmental workshops with microscopists and Secretaries of health.	Training of Microscopy (15) sites for "passive surveillance of therapeutic failure"	Apr-03	
	5. Workshop on standardization of techniques for in vitro studies.	10 Assistants (professionals of the northern and southern nodo, INS, and other centers) Transportation and per diem for 6 people x 6d = \$3,098	Training of the nodo human resources that will carry out in vitro studies.	Jun-03	
	6. Workshop of standardization of techniques for genotype studies.	10 assistants (professionals of northern and southern nodo, INS, others centers) Transportation and per diem for 6 people x 6d = \$3,098	Training of the nodo human resources that will carry out the genotype studies		

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	7. Workshop in EPI info training and data management. It replicates regional workshop.	10 assistants (professionals of northern and southern nodos, INS, others centers) Transportation and per diem for 6 people x 6d = \$3,098	nodo human resources training in data management.	Jul-03	

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A.1.4. Study findings reviewed, alternative treatments evaluated, and consensus on appropriate treatment protocols reached.	1. Evaluation of the malarial therapeutic efficacy. in 6 sentinel sites (full protocol execution in 4 sentinel sites and 2 SC starting activities)	Physician node coordinator (X 2 node) Coordination trips (4 trips by sentinel site x 6 sentinel sites) Parasitological monitoring	Protocols finished in 4 sentinel sites and started in 2 SC. A total of 750 patients evaluated	Oct. /02 - August /03	Field technician, microscopic, and physician in each sentinel site, financed by national health resources in each sentinel site
	2. Sample collection for evaluation of the sensitivity in vitro of field isolates of Plasmodium falciparum to 5 malarial drugs. (1st. and 2cd year)	Sample transportation, maintenance of tanks of liquid nitrogen	100% of the samples of the day 0 and the day of fail of 100% of the cases of P. Falciparum (520 samples) collected and stored	Oct /02 - August /03	The submit is carries out from the sentinel sites toward the respective nodo every 15 days in liquid nitrogen. Laboratory technicians financed by the research centers.
	3.To carry out tests of in vitro sensitivity	Laboratory materials, reagents, cultures maintenance	Processing samples of the day 0 from 25% of the P. Falciparum cases (100 samples) stored + quality control (15 samples)	Apr/03 - Sep/03	Laboratory technicians financed by research centers and INS
	4. Genotyping of samples to differentiate recrudescence from reinfections.	Transport of samples in filter paper. PCR multiplex nested for analysis of genes <i>msp1</i> , <i>msp2</i> and <i>glurp</i> .	Analysis of samples of the day 0 and day of failure on 100% of the patients with fails (15%): (180 samples) + quality control	Oct /02 - sep/03	Laboratory technicians financed by the research centers and INS

Activities	Tasks	Staff , Other Human	Product	Month/	Remarks
	5.Measure of drugs level in blood	Laboratory inputs	Sample analysis of the day 0 and another day (specific for each drug) on 100% of the failed cases (20%), and the same number of ACR (240 patients)	Apr/03 - Sep/03	
	6. Meeting to discuss and arrive consensus regarding vivo studies results and recommendations about drug policy.	3 professionals for each nodo, national experts, Ministry of Health, and INS.	Consensus on changes to introduce in drug policy	Sep-03	
	7. To elaborate the technical and management document to include therapeutic schemes modification in the Health System	3 professionals for each nodo, others national experts, Ministry of Health, INS.	Recommendations presented to the Ministry of Health and distributed as a technical document	Sep-03	

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Intermediate Result 2: Tools and approximates developed, adapted, tested and disseminated. Process Indicator: Percent of sentinel sites where data collection has been initiated.					
A2.1 Rapid tests for malaria diagnosis evaluated in selected sites and appraisal of their cost-effectiveness evaluated.	1. Selection of localities in order to implement the use of diagnostic rapid test	National Technical Committee, epidemiological group, INS, ETV coordinator departments.	8 pilot localities selected	Dic/02 - Mar/03	Costs included in task A.1.2.1.
	2. Protocol adaptation to evaluate the concordance in reading, acceptability, stability and cost effectiveness of rapid tests	National Technical Committee, epidemiology nodo/ INS	Protocols reviewed and adapted	Dic/02 - Mar/03	
	3. National workshop to train bacteriologists of the sentinel sites	Bacteriologists, physicians in attendance nodo and materials. Transportation and per diem for 6 people x 6d = \$3,098	Bacteriologists from (4) SC trained	Abr/03	Laboratory support to parasitological INS
	4. Training of health promoters to implement diagnostic kits (4 workshops at local level)	Promoters, bacteriologists, educational materials: Manuals \$72, Per diem 8 promoters for 5 days \$545, transportation 8 prom by = \$ 72, Per diem medical nodo \$545, transportation physicians \$900	Health promoters of 8 localities trained	May/03	
	5. Protocol implementation for rapid diagnostic tests, evaluation in selected localities	Diagnostic Kits for 8 pilot localities, (300 tests by locality)=2400 tests	Protocol implemented in 8 localities	Jun/03 - Sep/03	Promoters financed by the health services
	6. Concordance evaluation by GG bacteriologists and reading proves fast)	bacteriologists' nodo and physicians (4 people), bacteriologists INS.	100% of the promoters evaluated (8)	Jun/03 - Sep/03	Counterpart included in activity A.1.2.7
	7. Monitoring and analysis of results of the protocol implementation	A supervisory visit to every pilot locality (8 visits)	Analysis carry out (concordance, stability, sensitivity, cost-effectiveness)	Sep/03	

Activities	Tasks	Staff , Other Human	Product	Month/	Remarks
Intermediate Result 3: Partnerships to improve malaria control in the sub-region enhanced. Process Indicator: Percent of planned South to South activities that were completed					
A3.1 Facilitated a sub regional and planning dialogue for prevention and containment of anti-malaria drug resistance	1. Technical annual meeting	National coordinator, a node 's representatives, PAHO focal point (total 3 people)			
	2. Technical meetings to discuss the last WHO protocol modifications	National coordinator, a representative nodo, point focal PAHO (total 3 people)			
A3.2 Centers of excellence for regional training identified and supported.	1. To upgrade one excellence centre for collaboration support in training staff for other country (Guyana/ Suriname)	Laboratory materials and equipment	Technical staff from other country trained (genotyping In vitro studies)		
A3.3 South-to-south technical assistance and training activities executed	1. Training workshop in Good Clinical Practice		National staff trained in GCP		
	2. Strengthen of the national net with the experience of expert from the African experience.	Visit of a expert from the African experience	Expert recommendation attended		
	3. Information interchange and design of a resistance surveillance system for border areas.	Three meetings in border areas (Venezuela, Ecuador y frontier Brazil, Colombia, Peru	Information disseminated. Surveillance activities for border areas defined		
	4. Training in farmacocinetic studies		Personal trained for standardization of techniques		
	5. Sub regional workshop for training in data analysis	Assistance of three people	Trained human resources		
	6. Subregional training workshop on EPI Info and cost analysis--effectiveness	Assistance of three professionals	Training human resources		

Activities	Tasks	Staff , Other Human	Product	Month/	Remarks
	7. Sub regional training workshop in entomology	Assistance of two professionals	Training of human resources		