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CAP-MALARIA
CONTROL AND PREVENTION OF MALARIA

President's Malaria Initiative

Control and Prevention of Malaria (URC/CAP-Malaria)

National Conference on Malaria Program 2012

Phnom Penh, 21-22 March 2013



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Outline

- **Project Profile**
- **Project Objectives**
- **Project Key Activities**
- **Highlight Results and Success Stories**
- **New Activities in 2013**



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- **USAID 5-year project:** Oct 2011 - Sep 2016
- **Coverage:** Cambodia, Thailand, and Myanmar
 - Particularly communities along the border areas
 - For **Cambodia**, 10 ODs in 7 provinces (6 West & 1 East)
- **Target Groups:**
 - Local resident, forest inhabitants and new settlers
 - Organized labor: plantation, construction workers
 - Temporary migrants and cross-border populations
- **Goal:**
 - Reduced malaria burden (Morbidity and Mortality)
 - Delayed and contained spread of ARM parasites



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Project Objectives

- 1- To develop and scale-up cost effective vector control interventions to prevent the transmission of malaria
- 2- To improve the quality and effectiveness of diagnosis and treatment of malaria at the community and health facility levels
- 3- To reduce management bottlenecks of the NCMPs and local institutions to implement and monitor malaria control activities; and
- 4- To support the establishment and maintenance of strategic information for malaria control



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Target areas of CAP-Malaria

CAMBODIA





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7 Provinces	10 ODs	Population**	Malaria Zone	CAP-Malaria started in
1. Pailin	1-Pailin*	68,748	1	2011
2. Pursat	8-Sampov Meas*	279,927	1	2011
3. Battambang	2-Battambang*	354,403	1	2011
	3-Sampov Loun*	120,525	1	2011
	4-Maung Russey	197,992	2	2011
4. Banteay Meachey	5-Poipet*	197,361	2	2011
	6-Thmar Puok*	124,581	2	2011
5. Oddar Meanchey	7-Samrong*	219,028	2	2011
6. Siem Reap	9-Sotnikum	268,114	2	2011
7. Mondulkiri	10-Sen Monorum*	64,527	3	2012

* Areas for cross-border collaboration

** Only permanent resident and yet included the mobile and migrant population (Estimated 15%)



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Project key activities (1)

I- **Malaria Prevention:**

- LLIN /LLIHN distribution, LLIN lending scheme and Net re-impregnation
- Behavioral Change Communication (BCC):
 - Mass media (Billboard, Radio/TV)
 - Small Media (Flipchart, Poster, Leaflet, Flyer, Bilingual materials ...)
 - IPC: school health program, Taxi/bus drivers, Health providers
 - Capacity building (Training of health educators)
 - Advocacy and community mobilization (World Malaria Day-Twin city, Malaria Weeks, Mobile Malaria Posts, ...)



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Project key activities (2)

II- **Malaria Early Diagnosis and Treatment (EDAT):**

- Quality Diagnosis and Case Management :
 - RDT and Microscopy (VMW/MMWs, public HFs & PPM)
 - Supply of RDT, labo reagent, materials & consumables
 - Microscopy QA
 - NTGs (VMW/MMWs and public HFs & PPM)
 - Capacity building (Training, Supervision, ...)

- Mobile malaria posts in selected villages along the border and in tourism areas (VMW/MMW)



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Project key activities (3)

III- **Operational research and supporting activities:**

- D3 positive surveillance and Mapping of multidrug resistant parasites
- Entomology study: Pailin & Sotnikum/SiemReap
- Multi-sectoral collaboration:
 - PPM: Pailin and Sampovmeas OD
 - Provincial special working group for malaria elimination
 - Engage private companies (Agriculture, Construction, Bus, Phone, ..)
 - Advocate cross border collaboration



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Project key activities (4)

IV- Program Management:

- AOP: Develop and periodically review the implementation
- Technical supervision and monitoring
- Trainings, workshops, meetings
- Mobilization of existing and local resources for effective interventions
- Emergency preparedness and responses
- Align project M&E system with the national program (data collection, data tracking/auditing). Strengthen the existing database/system (MIS, HIS, ...)
- Assessment and evaluation of specific project activities



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Highlight results and success stories

- LLIN Distribution: over 886,000 LLINs distributed in target areas. Of this, about 180,000 distributed to MMP through mainly lending approach
- Access to 16 private companies for LLIN distribution, IEC/BCC materials, setup MMW for malaria EDAT and Health education
- 100 taxi drivers and 13 bus companies promote malaria messages to travelers, mainly MMP
- Expansion of community-health facility surveillance (10 sites = 119 villages)
- Microscopy Quality Assurance (QA)
- Cross border collaboration



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Summary of GF LLIN/LLIHN distribution in 10 ODs of URC CAP-Malaria (2011-2012)

No	OD	All Malaria endemic villages	LLIN/LLIHN freely distributed			LLIN distributed via lending		Total LLINs distributed to MMP	Total LLIN distributed to Resident & MMP
			LLIN for Resident	LLIHN for Resident	LLIN for MMP	Lending villages	LLIN for MMP		
1	Battambang	113	73,208	9,183	8,745	100	24,753	33,498	106,706
2	Sampov Loun	143	129,793	11,439	43,284	22	12,428	55,712	185,505
3	Sampov Meas	123	86,835	91,400	6,751	41	12,231	18,982	105,817
4	Maung Russey	52	29,282	2,227	1,476	45	6,714	8,190	37,472
5	Sotnikum	100	64,779	6,330	3,217	35	2,463	5,680	70,459
6	Pailin	113	41,300	1,974	8,662	35	14,686	23,348	64,648
7	Poipet	78	68,920	10,195	4,720	31	18,053	22,773	91,693
8	Samrong	318	116,380	16,760	1,818	2	2,617	4,435	120,815
9	Thmar Puok	31	22,800	2,600	3,050	-	-	3,050	25,850
10	Sen Monorum	147	73,356	8,245	647	7	3,035	3,682	77,038
TOTAL		1,218	706,653	160,353	82,370	318	96,980	179,350	886,003
							LLIN+LLIHN distributed	1,046,356	



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Deploy of USAID LLIN/LLIHN in the lending villages

No.	Target OD	Total Bales		Bales at Villages		Bales at HCs		Bales at OD		Poster on proper net use
		LLHIN	LLIN	LLHIN	LLIN	LLHIN	LLIN	LLHIN	LLIN	
1	Pursat	11	24	0	24	5	0	6	0	700
2	M. Russey	6	39	0	38	5	0	1	0	500
3	Battambang	37	99	0	89	8	8	29	2	2,900
4	Pailin	17	65	0	65	12	0	5	0	2,200
5	Sampovloun	10	34	0	34	10	0	0	1	2,300
6	Malai	9	31	0	31	4	0	5	0	1,450
7	SNK	4	5	0	5	4	0	0	0	200
8	SMR	2	1	0	1	2	0	0	0	100
9	SR	2	0	0	0	2	0	0	0	200
TOTAL		98 (9,800 LLIHNS)	298 (14,900 LLINS)	0	287	52	8	46	3	10,550



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- ❖ មុងជ្រលក់ថ្នាំត្រីបានយូរ មានប្រសិទ្ធភាពតិច
- ❖ ត្រូវសំរាងក្នុងមុងជ្រលក់ថ្នាំត្រីរាល់យប់គ្រប់ទីកន្លែង ដើម្បីបង្ការជំងឺគ្រុនចាញ់
- ❖ សួររកទិញមុងនៅតាមទីផ្សារដែលមានទឹកថ្នាំម៉ាឡាទែប ដោយឥតគិតថ្លៃ
- ❖ មុងជ្រលក់ថ្នាំរបស់អ្នក អាចចោកកកជាមធ្យម បាន ៧ ដងក្នុង ១ឆ្នាំ



ត្រូវរៀបចំជើងមុងឱ្យបានត្រឹមត្រូវ មុនចូលសំរាន្ត



កុំប្រើមុងទាំងរហែក និង ចងទុកចោល



ត្រូវសំរាងក្នុងមុងជ្រលក់ថ្នាំបង្ការជំងឺគ្រុនចាញ់



កុំស្បែកចោកកកមុងនឹងសាប៊ូញឹកញាប់



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Access to private companies

No.	Company	Location (HC & District)	LLINs distributed	MMW deployed	BCC Materials
1	Pheapimex	ChheuTom, Krakor	3,605	19	Billboards, Posters, Flipcharts,
2	MDS Co., Ltd	Promoy, Vealveng	671	5	
3	Pepper company (Anlong Reap)	Promoy, Vealveng	30	0	
5	Unknown agricultural company (Tang Yor)	Promoy, Vealveng	30	0	
6	Chinese Hydro-electricity Company (Osom)	Promoy, Vealveng	830	2	
7	Chinese rubber plantation (Samlot)	ChamlongKouy, BB	300	0	
8	Rath Sambath rubber plantation	Tasanh, BB	50	1	
9	Samrong Rubber Plantation	Romcheik (ALV)	500	2	
10	Samnang Rubber Plantation	Okroch (TPS)	450	2	
11	Charcoal Mining Company	Pha Av (TPS)	50	1	
12	TaiNinh Rubber Plantation	Okroch (TPS)	250	2	
13	Dalak Plantation Company	Bousra (SMROD)	250	0	
14	Sokfin Company	Bousra (SMROD)	218	0	
15	DTC company (Okgnalak)	Bousra (SMROD)	180	0	
16	Kouv Chhovly Company	Bousra (SMROD)	235	0	
Total			7,649	34	



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PPM

Pailin

Year	Number of PPs	Referral from PPs	Arrival at HFs/VWMs				
			Total (%)	Pf	Mix	Pv	Neg
2010 (Only Phnom Spong HC)	36	45	30 (67%)	3	4	7	16
2011 (Registered & None)	141	133	94 (71%)	10	11	41	32
2012 (Only registered)	59	88	70 (79%)	3	6	41	20
Total		266	194 (72%)	16	21	89	68

Pursat & Battambang: 12 PPs in Veal Veng District (Zone1) had joined in PPM scheme in late 2012. In early 2013, URC CAP-Malaria will work with PPs in other areas of OD Sampovmeas (110) and OD Maung Russey (32).



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100 Taxi drivers in Battambang and Pursat



ចង់បានចំណេះដឹងពីជំងឺគ្រុនចាញ់
សូមនិរទ្វានជាមួយខ្ញុំ !



វិធីការការពារជំងឺគ្រុនចាញ់ គឺសំអាត
ក្នុងមុងជ្រលក់ថ្នាំ !

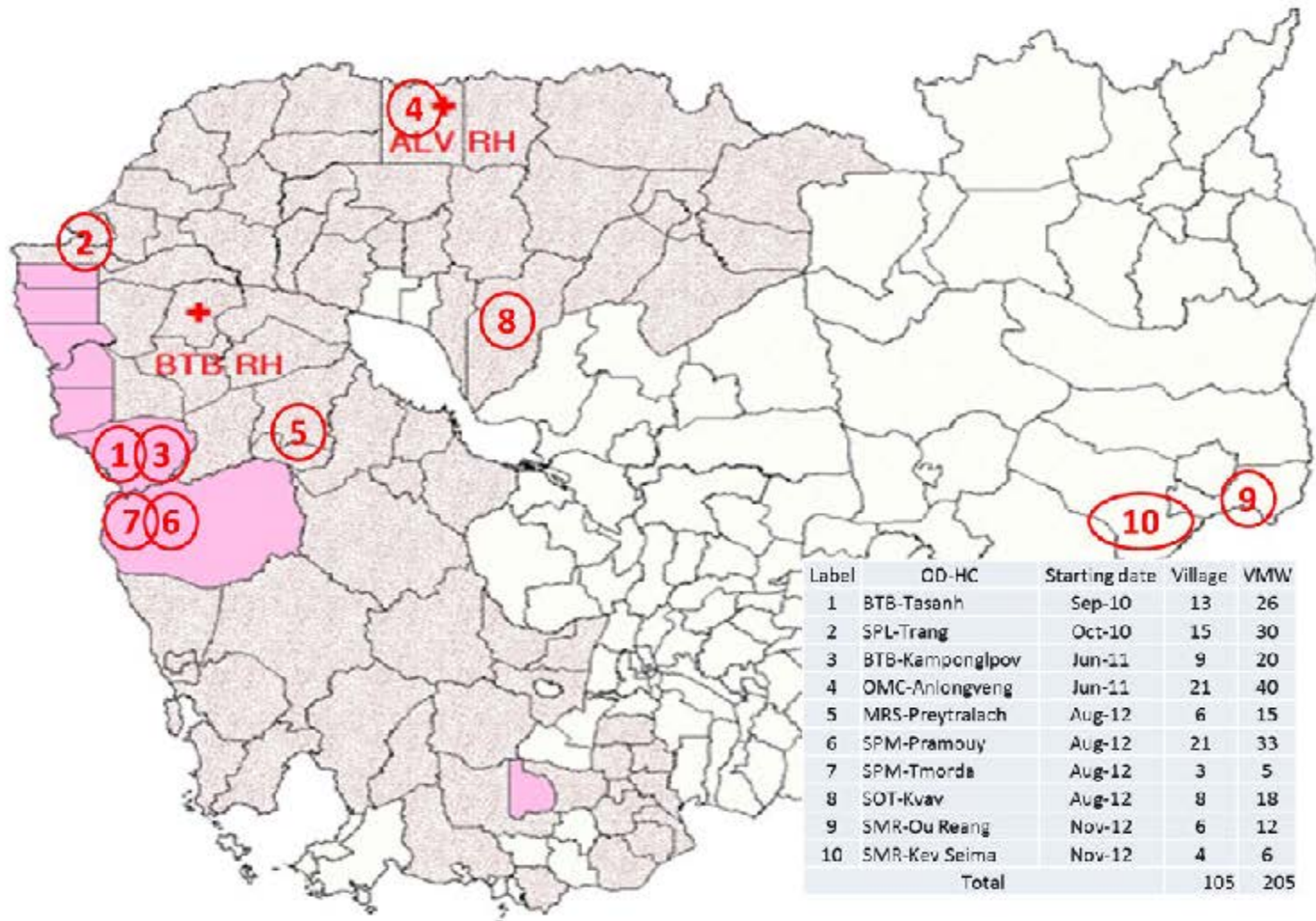
ប្រជាជនចល័តអាយុរងគ្រោះថ្នាក់
ដោយសារជំងឺគ្រុនចាញ់ !



MALARIA CONTROL IN CAMBODIA

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D3(+) Surveillance





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D3(+) Surveillance (2)

6 Surveillance Sites in 2012

HC-OD	# Villages	# VMWs	RDT Result (D0)			Day-0 Microscopic			Day-3 Microscopic			%D3(+)
			Pf	Mix	Total	Pf	Mix	Total	Pf	Mix	Total	
ALV-Sam Rong	20	40	2	5	7	7	0	7	0	0	0	0%
Kg Lpov- Battambang	9	20	5	17	22	12	9	21	0	0	0	0%
Tasanh- Battambang	13	31	146	395	541	469	41	510	21	0	21	4%
Trang- Sampovlun, BB	15	30	2	10	12	5	2	7	0	0	0	0%
Pramoy- Sampovmeas	21	38	17	96	113	90	2	92	2	0	2	2%
Ou Reang- Senmonorom	6	12	7	3	10	9	1	10	1	0	1	10%



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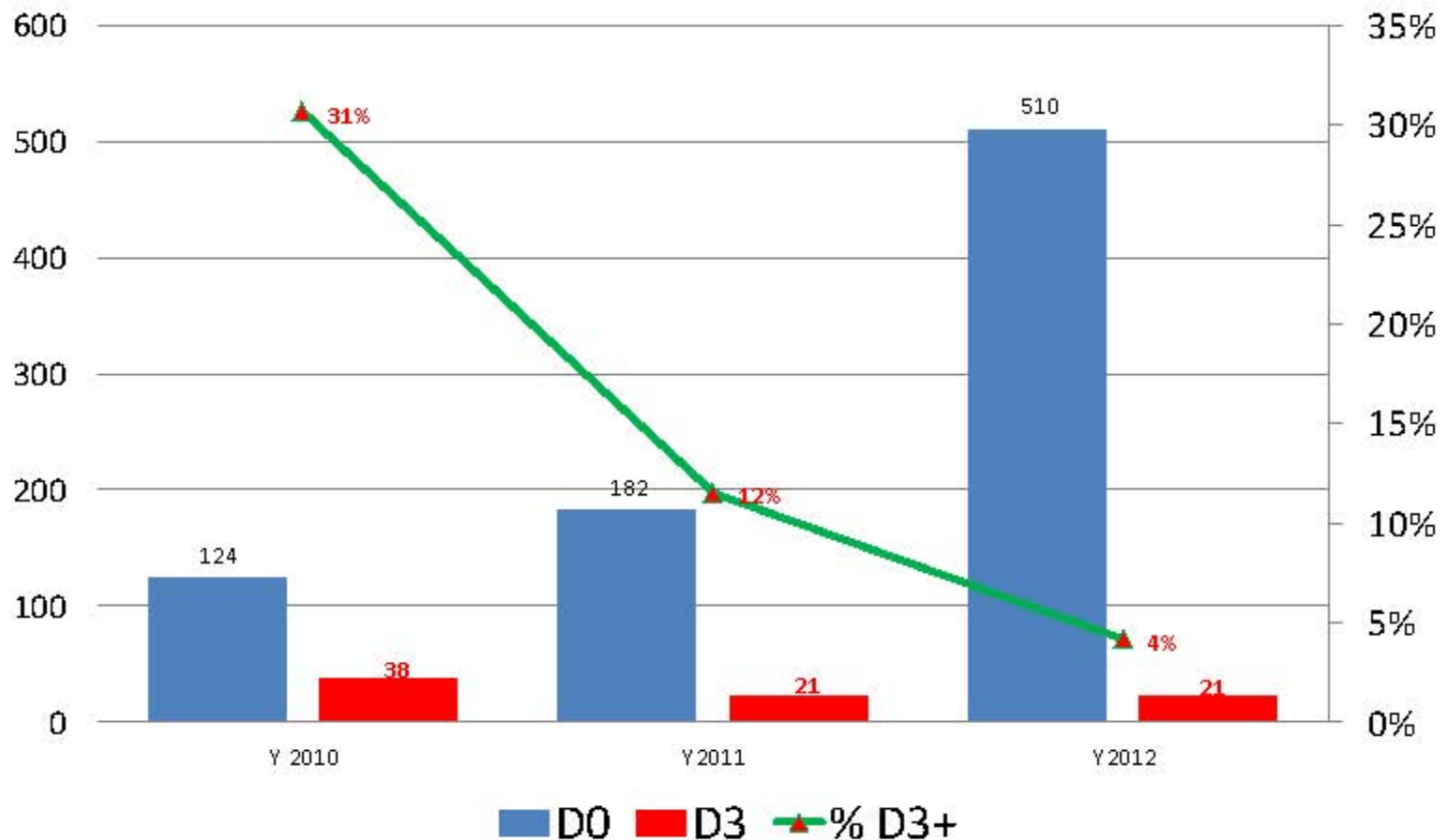


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D3(+) Surveillance (3)

D3(+) Surveillance in Tasanh HC (September 2010 to December 2012)





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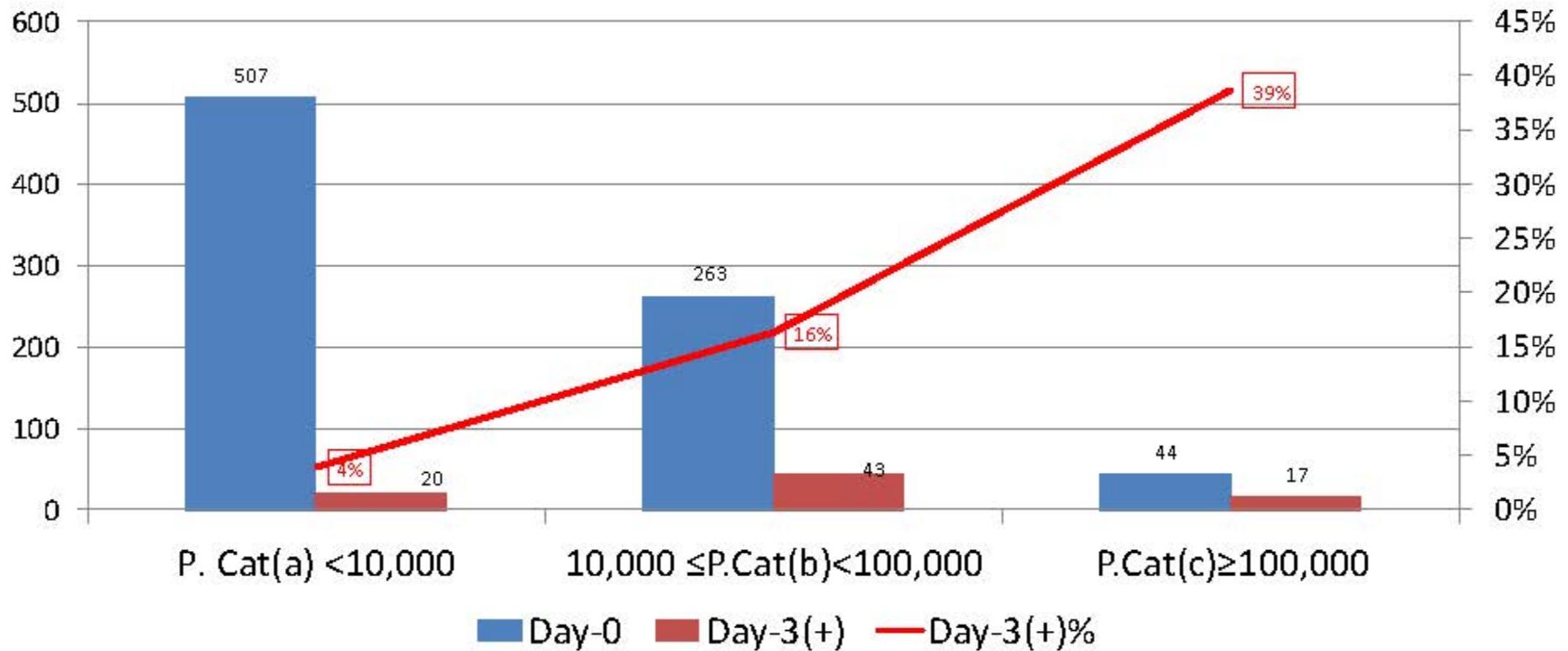


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D3(+) Surveillance (4)

Parasite Density and % D3 (+)





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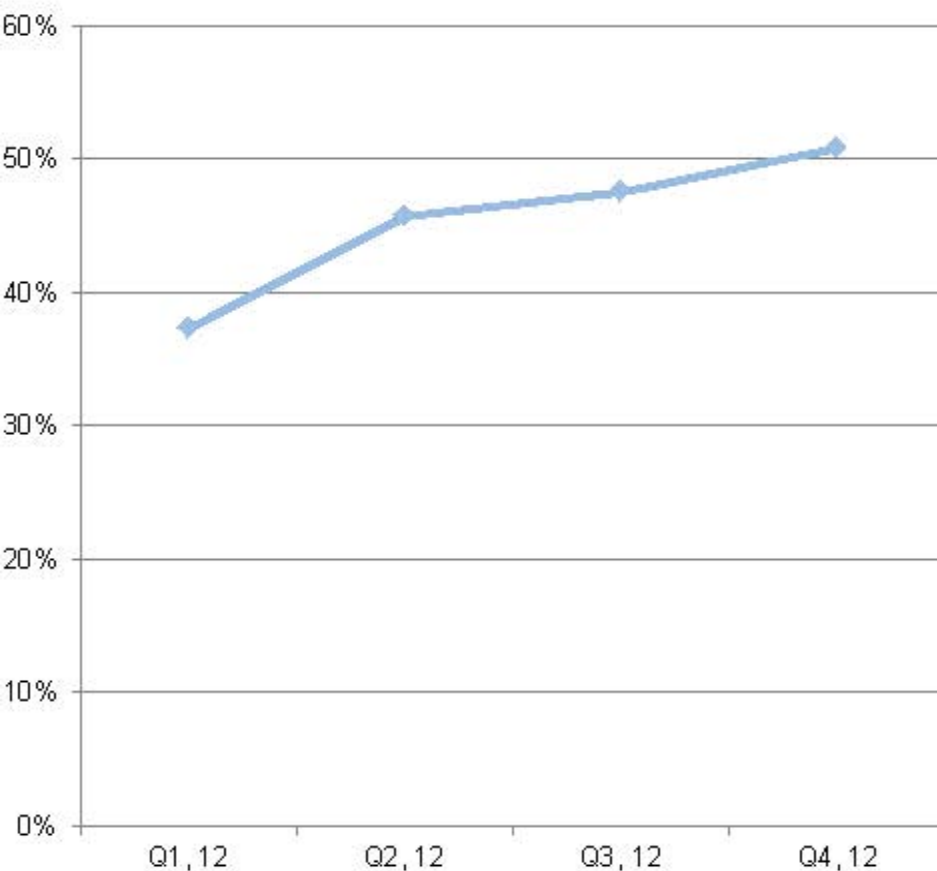


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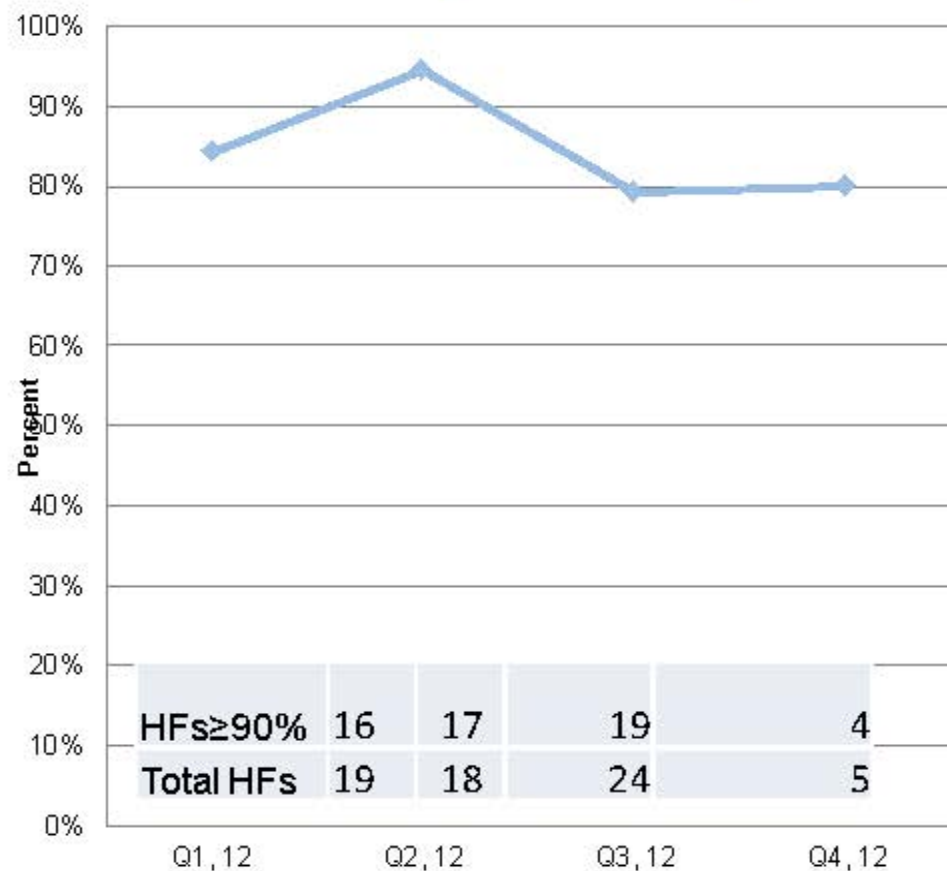
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MALARIA MICROSCOPY QA IN 2012

% of HFs used Microscope >50% (60 HFs)



% of HFs with Diagnosis Accuracy \geq 90%





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SLIDES CROSS-CHECKING RESULT BY PROVINCE 2012

Provinces	Slides checked	Sensitivity	Specificity	Accuracy	PPV	NPV
Pailin	275	100%	95%	97%	92%	100%
Battambang	670	97%	97%	97%	95%	98%
Oddar Meanchey	232	96%	92%	93%	91%	97%
Banteay Meanchey	53	100%	100%	100%	100%	100%
Total	1230	98%	96%	97%	95%	99%



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Cross Border Collaboration

The purpose is to strengthen collaboration on malaria prevention and control among cities/provinces located along the Thai-Cambodia border.

- Identify partners and focal persons
- Regular meeting
 - Twice a year for national level,
 - Quarterly basis at provincial/district level: Pailin <-> Chanthaburi
- Routine data sharing: website, email, phone/Fax
- Screening cross border population and treatment follow up
- Bi-lingual BCC materials and Bi-lingual malaria patient card
- Joint World Malaria Day at border area
- Surveillance and other research of drug resistance, entomology, etc.



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Working Group Meeting on Cambodia-Thailand-Myanmar Cross-Border Collaborations
Angkor Paradise Hotel, Siem Reap, Cambodia
23-24 August 2012





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Working Group Meeting on Cambodia-Thailand-Myanmar Cross-Border Collaborations

Angkor Paradise Hotel, Siem Reap, Cambodia
23-24 August 2012

សំនុំធុនមុងគ្រល់កំប្លោកសំយប់ ធៀបសត្វតពីធុនគ្រុនពាញ

អ្នកគាំទ្របច្ចេកទេស និង ការបរិច្ចាគប្រយោជន៍ របស់ ប្រទេសថៃ ជួយបង្កើន ការប្រយោជន៍ របស់ប្រទេសកម្ពុជា





គ្រូបង្រៀនបច្ចេកទេស
និងការបរិច្ចាគប្រយោជន៍

អ្នកប្រគល់កម្រិតប្រយោជន៍
ប្រយោជន៍ប្រយោជន៍

វិធីបង្ការជំងឺគ្រុនពាញ
ការប្រយោជន៍ប្រយោជន៍






អ្នកប្រគល់កម្រិតប្រយោជន៍
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ប្រយោជន៍ប្រយោជន៍





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PATIENT CARD & REPORTING FORM



Malaria Patient ID



Lastname: Firstname: Sex: Age:

Nationality: Civil ID (if any):

Current address #: Village: Commune:

District: Province:

Contact telephone:

Service deliver point: Date of malaria diagnosis:

Take complete course of medicine. Keep your appointment with health care provider.

Help eliminate malaria to protect your health and your wealth.

Appointment Schedule

No	D/M/Y	Test Result	Medicine	Deliver point	Remarks
D0		Pf PR Pu PMiv	Malaria DHA-FIP		
D1			Malaria DHA-FIP		
D2			Malaria DHA-FIP PR		
D3					
D4					
D5					
D6					

Help get rid of malaria in the community by keeping every appointment.



Chanthaburi Provincial Health Office, Thailand

Cross-Border Disease Report between Twin-Cities

Date: 20 / January, 2015 - 25 / February, 2015 **THAI**

ID	Disease	Cases for 7-2015		Weeks for 7-2015		ARNDT AND VILKES	RISK FACTORS / PROMOTIVE CAUSES	Remarks
		Male	Female	1 week	2 weeks			
1	Diphtheria							
2	ARI							
3	SARS							
4	Cholera / Shigellosis							
5	Leishmaniasis							
6	Typhoid							
7	Meningitis							
8	Diphtheria							
9	PTSD							
10	Leptospirosis							
11	Chikungunya							
12	Lassa fever							
13	Typhoid fever							
14	Malaria							
15	Malaria (P. falciparum)	21		17				Garden worker
	P. falciparum	6		9				
	P. vivax	42		17				
	P. Ovale							
16	Parasitosis							
17	HELVOLLS							
18	Tuberculosis							

Remark: Bold letters are border district:



Reported by: Mr. Pajon Wattanasuep

Date Sent: March 5, 2015

Contact person:

Twin City Coordinator Mr. Pajon Wattanasuep, Communicable Disease, Chanthaburi PHO
Contact e-mail and phone number: p.wattanasuep@chbpho.com and +66(87)722224



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Promoted Activities in 2013

In addition to the current activities CAP-Malaria reinforces:

- Timely investigation and intervention surrounding detected D3(+) cases (Index case) in the areas where HF-Community D3(+) surveillance
 - Screen all members of 10 HHs (40 villagers) and enroll detected Pf for surveillance
 - Conduct health education
 - Assess LLIN in the HHs
 - IRS
- Screening for malaria among pregnant women coming to ANC visits in public health facilities
- Pilot of malaria treatment and follow up with None ACT (Malarone)
- ...



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THANK YOU

[Mosquito.mpg](#) [Seeking Malaria Treatment.mpg](#)



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