



Annual AMI-RAVREDA Meeting
Panama City, Panama ◆ March 22-24, 2011

# **Guyana and Suriname Medicine Quality Case Studies: Preliminary Results**

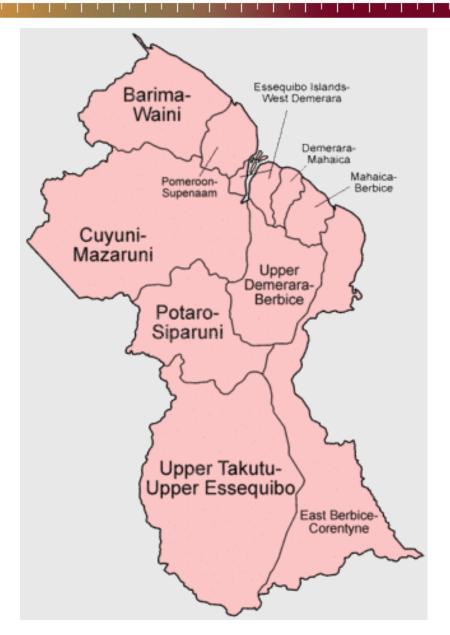
Lawrence Evans III, Ph.D., M.P.H.

Global Services and Standards Manager Promoting the Quality of Medicines Program  Determine the quality of antimalarials in the Private and Informal sectors of Guyana and Suriname.



- Highest Incidence of Malaria:
  - Guyana Hinterland
  - Suriname Marowijne (Maroni) River and areas close to Brokopondo Lake
- Logging and gold-mining activities along with constant border crossings





Region 1. Barima-Waini

Region 2. Pomeroon-Supenaam

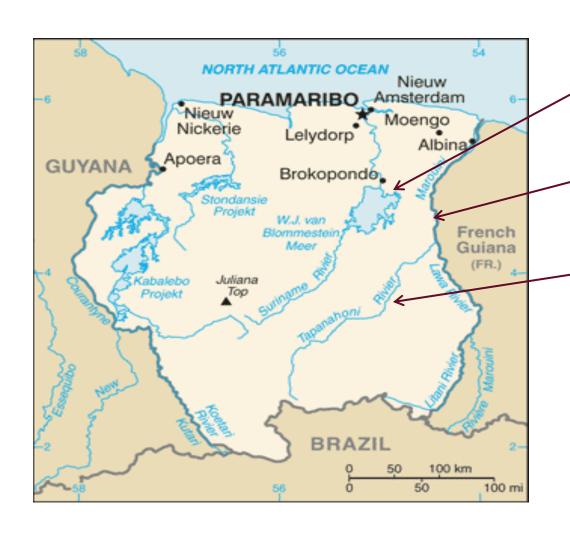
Region 4. Demerara-Mahaica

Region 7. Cuyuni-Mazaruni

Region 8. Potara-Siparuni

Region 10. Upper Demerara-Berbice





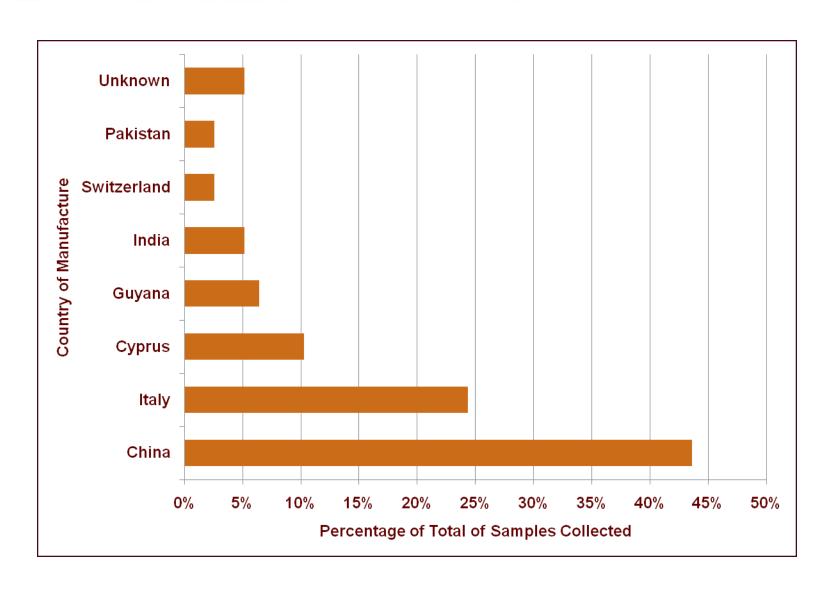
Brokopondo Lake

Marowijine (Maroni) River

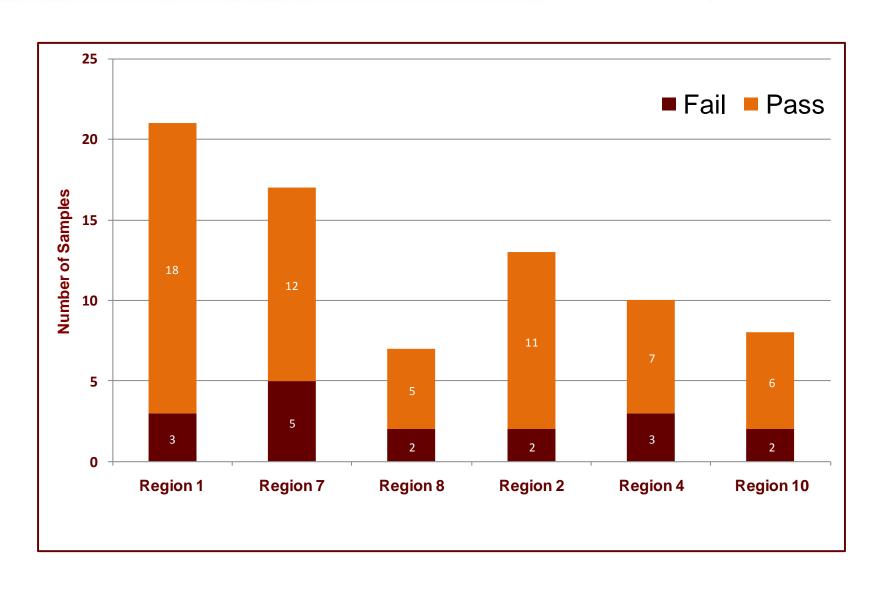
Tapanahoni River

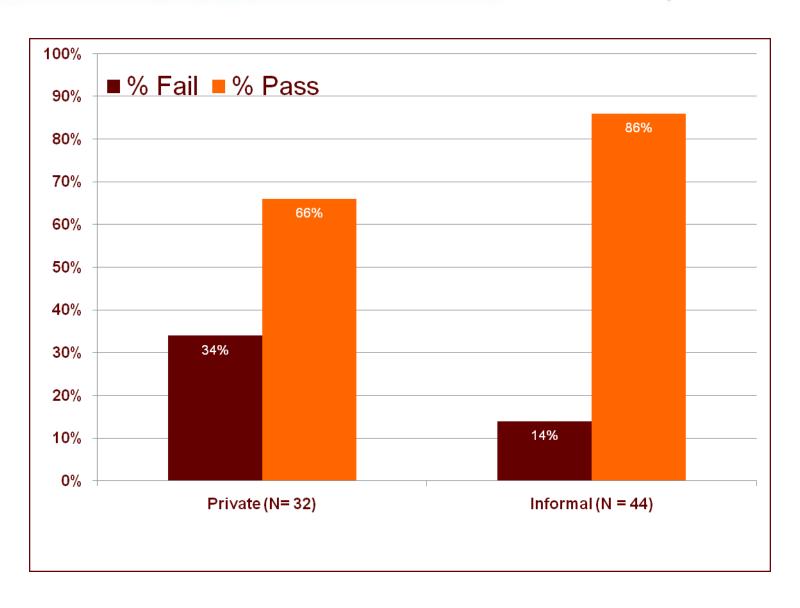


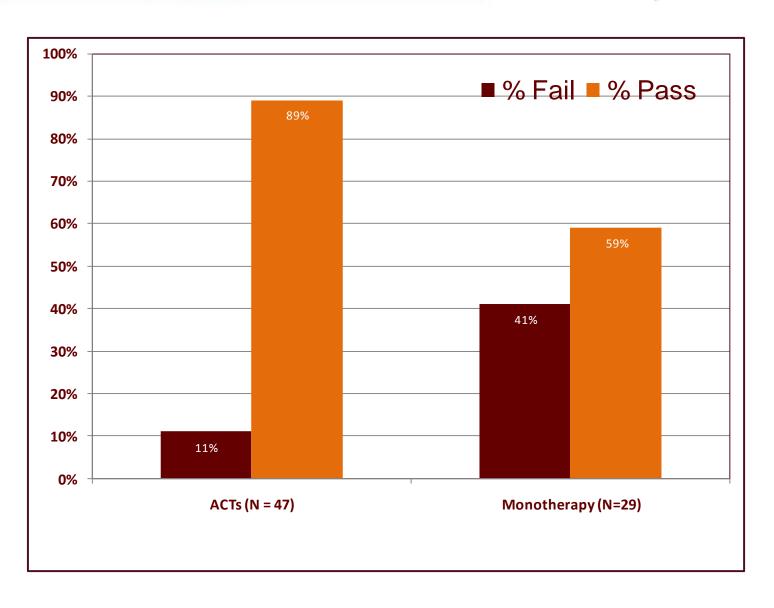
## Guyana - % of Samples Collected by Country of Manufacture



## Guyana - Quality of Antimalarials Sampled from 6 Regions







#### Guyana - Quality of Antimalarials by API

PROMOTING THE QUALITY OF MEDICINES

PROMOTING THE QUALITY OF MEDICINES

	API(s)										
	AL	ASP	DPT	<b>DPTP</b> r	Ar	Pr	Q	Am	Н	M	C
Analyzed	1	19	1	26	3	3	5	5	2	7	4
Failed	1	0	1	3	2	1	2	0	0	5	2
Failure Rate (%)	100	0	100	12	66	25	40	0	0	71	50

Artemether and Lumefantrine (AL) Artesunate, Sulfamethoxypyrazine and Pyrimethamine (ASP); Dihydroartemisinin, Piperaquine Phosphate and Trimethoprim (DPT); Dihydroartemesinin, Piperaquine Phosphate and Trimethoprim plus Primaquine Phosphate (DPTPr); Artesunate (Ar); Primaquine (Pr); Quinine (Q); Amodiaquine (Am); Halafan (H); Mefloquine (M); Chloroquine (C)

# Suriname - Quality of Antimalarials

		Disinte-				
Loc	ation	D (%)	P (%)	T (%)	Pr (mg)	gration (min)
Village	Capixaba	107.6	102.0	93.4	22.4	3.1
Village	Rivarola	106.9	100.5	93.3	21.8	2.6
Mining Site	Pakira	100.8	102.0	92.1	22.4	2.2
Mining Site	Benzdorp	102.7	100.8	93.0	21.7	2.6
Mining Site	Cabana Tabiki	91.7	99.6	98.2	21.9	2.3
Mining Site	Cabana	96.8	102.3	92.9	21.2	2.3
Mining Site	Pikin Saramacca	94.3	100.1	97.3	21.6	2.4
Mining Site	Vila Brasil	98.7	96.0	96.2	23.3	2.1
Mining Site	Vila Brasil	100.0	99.4	95.6	25.7	2.1
Mining Site	Aqua Azul	99.4	97.5	96.8	22.6	3.0



# Guyana

- Region 7 had the highest number of medicines failing QC testing
- Monotherapies failing QC testing found in all 6 regions
- Number of medicines failing QC testing greater in private sector
- More monotherapies failed QC testing

#### ◆ Suriname:

- Piperaquine, DHA and Trimethoprim
- Primaquine content issue



# Questions





le@usp.org 1+ 301-816-8389

