MALARIA SITUATION IN CAMBODIA, 2003

National Malaria Center for Parasitology, Entomology & Malaria Control
OUTLINE

- Magnitude of malaria
- Trends in disease incidence and mortality
- Factors contributing to Malaria deaths
- Cambodian malaria control strategy
- Village Malaria Workers (VMW) Project
- Summary
Malaria continues to be a major public health problem in Cambodia.

One of the main obstacles to the country’s development and also poses a heavy toll for communities.

An estimated 1.6 million people of total population are at risk of malaria and about half a million of these live in the high transmission forest areas.
More than 60% of total area is covered with forest
Trends in Disease Incidence and Mortality
Number of total Malaria cases, Severe cases and Deaths during 1997-2003 in Cambodia

- Total cases
- Severe cases
- Deaths
Malaria species confirmed by microscope in Cambodia 2003 (Total number examined: 42227)

- PV: 12%
- PM: 2%
- PF: 86%
Malaria confirmed cases (microscope & dipstick) by age group in 2003, Cambodia (Total 74449)

- 15 - 49 M: 47%
- 15 - 49 F: 21%
- 0 - 4 Y: 8%
- 5 - 14 Y: 17%
- >50 M: 5%
- >50 F: 2%
- 5 - 14 Y: 17%

Total cases: 74449
Comparison of age distribution of treated malaria cases
(Ref: HIS and Village Malaria Worker’s data 2003 from Rattanakiri province)

Rattanakiri HIS data 2003 (Total 6626)
- >50y: 17%
- 0-4 y: 20%
- 15-49y: 34%
- 5-14y: 29%

VMW project's 2003 (Total 3027)
- >50y: 3%
- 0-4 y: 40%
- 5-14y: 26%
- 15-49y: 31%
Total Treated cases and the Incidence rate of treated Cases from 1999-2003, Cambodia
Malaria severe case and death from 1999-2003, Cambodia
Malaria treated case and confirmed case from 1998-2003, Cambodia
Malaria Mortality in Cambodia 1999-2003

Number of deaths

Mortality rate per 100,000

- 1999: 891 deaths, 7.8 mortality rate
- 2000: 608 deaths, 5.2 mortality rate
- 2001: 476 deaths, 4 mortality rate
- 2002: 457 deaths, 3.5 mortality rate
- 2003: 494 deaths, 3.7 mortality rate
Factors contributing to Malaria deaths

- Predominance of the falciparum variety of malaria
- Poor health infrastructure especially in the high transmission areas
- Poor communication systems- poor road conditions, lack of suitable vehicles, lack of telephone facilities, etc.resulting in treatment delays
- Occupational hazard among the military personnel, forest workers, miners, etc.
- Remoteness & inaccessibility of affected areas
- Continuing shortages of diagnostic kits and appropriate drugs
- Large number of unqualified private practitioners and pharmacies who still do not follow national treatment guidelines
- Abundance of fake drugs available in the market
- Drug resistance in different pockets of the country
Difficult road communications
Cambodian malaria control strategy

A public/private mixed delivery system
Public sector
Private sector
VMW approach
Village Malaria Workers (VMW) Project
Background of Village Based Malaria EDAT initiative

- Although malaria affects people living in 60% of total area of Cambodia, yet because of low density of population, proportionally less health facilities have been established in these areas and thus not meeting their actual malaria care needs.

- People living in remote areas which are beyond the reach of outreach services unable to access malaria diagnosis & treatment services at public and/or private facilities.

- In local transmission areas, children are the easy victims of malaria and thus the morbidity and mortality are very high especially among this group.
Pilot Projects in RTK & K. Kong provinces
EDAT by VMWs in hyperendemic villages

A baby with falciparum malaria in Yaem village waits to see the Village malaria worker (VMW.)

VMW confirms PF by dipstick test
Treatment
Changes in treatment seeking behavior following the introduction of village malaria workers.
Comparison of the estimated annual incidence of malaria in rural Ratanakiri in 2002-2003 (by age and sex) derived from two different sources: rural public health facilities (RPHF) province wide and VMWs in 36 villages.
Scaling up the VMW project
(with GFATM support)
6540 children, aged 2-9 years, in 372 villages examined & 2282 of them found to have enlarged spleens.
Number of villages in different categories of risk in Cambodia

- Category 1: 1159
- Category 2: 549
- Category 3: 374
- Category 4: 551

Category 1: (In the forest)  
Category 2: (< 200 m from forest)  
Category 3: (200-500 m from forest)  
Category 4: (500-1000 m from forest)
Endemicity of villages by distance from forest.

- Hypoendemic
- Mesoendemic
- Hyperendemic
- Holoendemic

N=171 in forest
N=113 <200m
N=49 200m-500m
Malaria endemic villages
Correlation between spleen rate and RDT positivity.

correlation coefficient = 0.89
Summary

- Malaria is still a major public health concern in Cambodia.
- Public/private mixed EDAT delivery system is in place and functioning fairly well.
- Village based EDAT for malaria – has emerged as the emergency strategy of choice for remote and hyperendemic villages in Cambodia.
With the expectation that….

This generation and their children in the remote hyperendemic areas will no longer be easy victims for “MALARIA” and other preventable/ treatable communicable diseases.

THANK YOU!