

CHAPTER V

Presentation

On December 28, 1998, the thesis examination committee met to evaluate my work during the study. I presented to the committee the overview of my thesis, the topic of which is “Developing Information, Education and Communication (IEC) Strategies for the promotion of the use of Insecticide Treated Bed Nets (ITNs) for malaria prevention in Laos”. The presentation was divided into four parts: introduction, essay, proposal and data exercise.

In the introduction part, I presented an overview of the malaria problem in Laos and highlighted the unavailability of IEC and behavioral information. In the essay part, I discussed the use of ITNs and the malaria problem, stating the issue, reasons, evidence and conclusion and the possible tools for intervention. I also outlined which information and how it should be collected for the promotion of the use of ITNs. In the proposal part, I described my proposed study in Nathong Village, Hinheub District, Vientiane Province Laos, where the malaria incidence rate has not changed after an ITNs program. In order to improve on the existing IEC. I explained the process that I am going to apply to develop the IEC strategies and planning. Then I presented the fourth part of my study which is the data exercise. For this section, I presented the objective of the data exercise and described my field study in Pholkham Viallege, Laos including the findings from all the techniques used for the data exercise: household

survey, focus group discussion, observation checklist and review of secondary data. And lastly I presented the lessons learned, suggestions and limitations of the data exercise.

THESIS TITLE

**Developing Information, Education and Communications (IEC)
Strategies for the promotion of the use of Insecticide Treated Bed Nets
(ITNs) for malaria prevention in Laos**

ISSUE

- **THE MALARIA INCIDENCE RATE HAS NOT CHANGED IN LAOS AND IT IS STILL HIGH IN THE PLACES WHERE INSECTICIDE TREATED BED NETS WERE DISTRIBUTED WITHOUT IEC SUPPORT.**

REASONS

- **PEOPLE ASPECT: LACK OF KNOWLEDGE, ATTITUDE AND PRACTICE OF PEOPLE IN TERMS OF MALARIA AND ITNs USE :**
 - **CAUSES, SYMPTOMS, TREATMENT SEEKING BEHAVIOR AND PREVENTION**
 - **THEY THINK THAT ITNs HAVE SIDE EFFECTS, FOR EXAMPLE: FEELING HOT AND DIFFICULTY IN BREATHING.**
 - **NEVER USED IN THE PAST**
- **HEALTH SERVICES :**
 - **LACK OF AND INAPPROPRIATE IEC STRATEGIES AND MATERIALS.**
 - **NO OR INADEQUATE PRE -TESTING OF IEC BEFORE PRINTING**

- LACK OF MONITORING AND EVALUATION
 - LOW UTILIZATION OF HEALTH SERVICES
- SOCIO-CULTURAL AND ECONOMIC:
 - BELIEF IN GHOSTS AS THE CAUSE OF THE DISEASE.
 - THEY ARE NOT ALLOWED TO USE ITNs BY THEIR ELDER OR BY COMMUNITY LEADER.
 - LOW INCOME, WHICH PREVENTS PURCHASE

(CIEH, MoPH, 1995 and IMPE.MoPH, 1996)



EVIDENCE

- ◆ HIGH MALARIA INCIDENCE RATE IN PLACES WHERE ITNs WERE DISTRIBUTED WITHOUT HEALTH EDUCATION SUPPORT.
- ◆ LOW NUMBER OF MALARIA CASES IN *XIENG KUANG* PROVINCE WHERE ITNs WERE DISTRIBUTED WITH HEALTH EDUCATION BY TRAINED VOLUNTEER HEALTH WORKERS.

IMPE, 1996 AND CIEH, MoPH, 1996

IEC department, UNICEF, Laos 1996

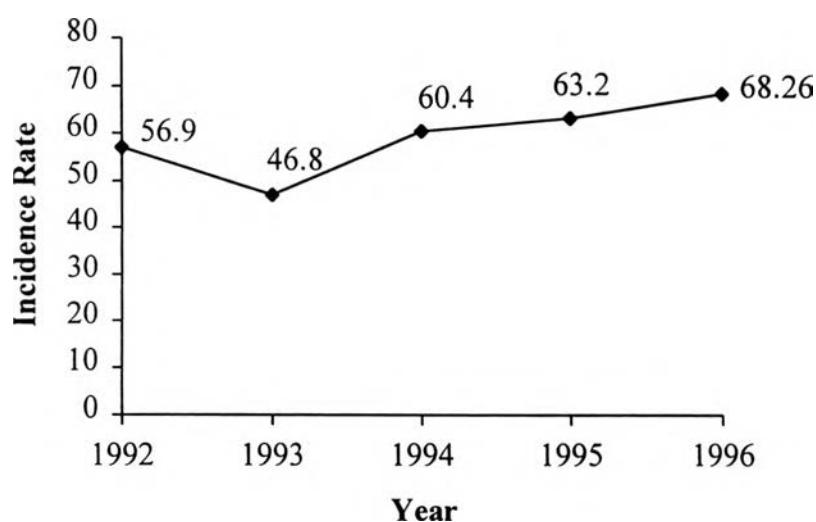
CONCLUSION

- ITNs ARE ONE OF THE BETTER CONTROL MEASURES FOR THE INTERRUPTION OF MALARIA TRANSMISSION. BUT, IF THE PEOPLE DO NOT UNDERSTAND AND ACCEPT ITNs, THEY HAVE A CHANCE TO BE EXPOSED TO MOSQUITO BITES AND AT RISK OF MALARIA.
- IEC PROGRAMS TO INCREASE PEOPLE'S KNOWLEDGE, TO DEVELOP A POSITIVE ATTITUDE AND PRACTICE RELATED THE USE OF ITNs IS VERY IMPORTANT FOR PREVENTION AND CONTROL OF MALARIA.

MALARIA SITUATION IN LAOS

- TOTAL POPULATION OF LAOS IS 5.035 MILLION IN 1996.
- ABOUT 1.2 MILLION PEOPLE (27.8% OF THE TOTAL LAO POPULATION) LIVING IN THE RURAL AREAS ARE AT RISK OF MALARIA.
- MALARIA HAS INCREASED IN 1996, IN COMPARISON TO 1992.
- WITH THE EXCEPTION OF 1993, THERE HAS BEEN AN INCREASE OF MALARIA INCIDENCES FROM 1992-1996.
- DURING 1993, THE INCIDENCE HAS BEEN DECREASED DUE TO MORE INTERGRATION AND SUPPORT FOR MALARIA CONTROL AFTER A MEETING IN AMSTERDAM.

**Malaria Incidence Rate 1992-1996 in Laos
(per 1000 population/year)**



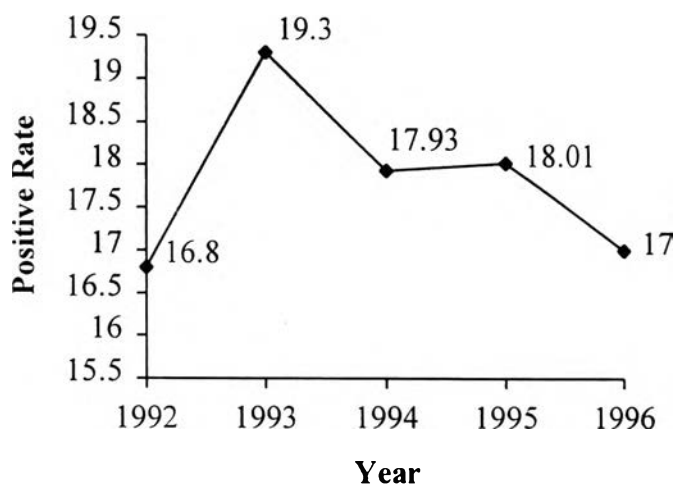
Sources: IMPE, 1996

THE RESULTS OF BLOOD EXAMINATION
OF MALARIA IN LAOS

- IN 1992 AND 1994-1996, BLOOD SMEAR EXAMINATIONS WERE DONE ON SUBJECTS WHO WERE MALARIA SUSPECTED CASES.

- IN 1993, THE STUDY INCLUDED BOTH ASYMPTOMATIC AND SYMPTOMATIC INDIVIDUALS.

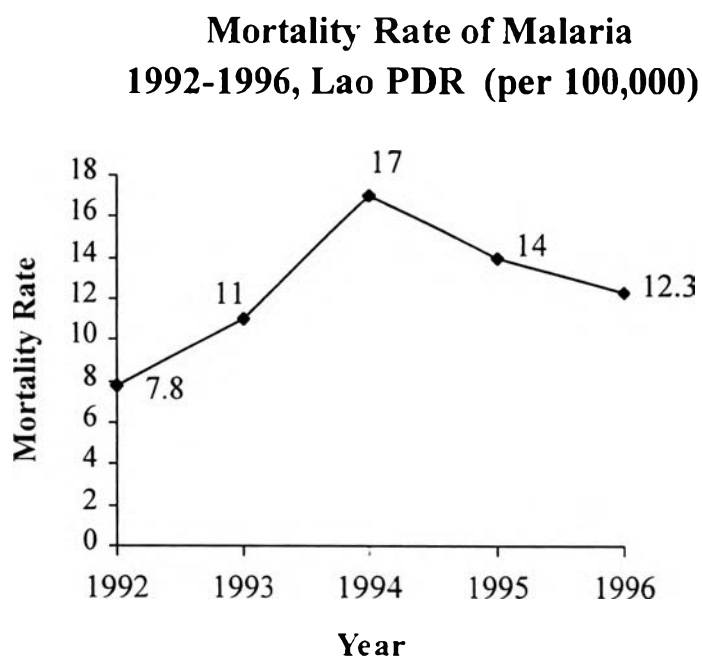
**Slide Positive Rate of Malaria 1992-1996,
Lao PDR**



Sources: IMPE, 1996

MALARIA MORTALITY IN LAOS

- AS MIGHT BE EXPECTED FROM GRAPH 2.1 WHICH SHOW AN INCREASEP INCIDENCE RATE OF MALARIA FROM 1992-1996, THE MORTALITY RATE FROM MALARIA HAS INCREASED FROM 1992-1996, WITH A PEAK IN MORTALITY IN 1994 BUT IT WAS STILL HIGHER IN 1996 WHEN COMPARED TO 1992.



Sources: IMPE, 1996

**ITNs DISTRIBUTION FOR MALARIA CONTROL DURING 1988-
1992 & 1994-1996**

Total Population	Province	During 1988-1992		During 1994-1996	
		Number of ITNs	*Population	Number of ITNs	*Population
339,000	Luang Prabang	457	1,080	4,519	6,209
321,000	Xien Kuang			6,120	9,115
145,000	Bolikhamxay	454	1,362	2,159	2,850
640,000	Savanaket	656	2,015		
312,000	Vientiane	291	944	1850	2,700
58,000	Sekong	169	556		
211,000	Saravane	4,130	17,679	314	1,884

- **Data and the distribution of ITNs and the population using these ITNs is available for 7 provinces of Laos. Three of four provinces for which data is available in 1988-1992 and 1994-1996 show an increase in the number of ITNs/person.**
- ***Population-theoretically (based upon family size) utilizing the ITNs distributed.**
- **Population growth rate is about 5%**

Sources: IMPE, 1996

IMPORTANCE OF ITNs

Studies show that:

- **Malaria incidences reduced by about 45% in a 9 months period in Africa by ITNs (Lengeler et al, 1996)**
- **Mortality in children 1-4 year(s) old was reduced by 63% by ITNs in Africa (Alonson et al, 1991)**
- **Highly effective for malaria prevention by ITNs use in China, Cambodia, Malaysia, Gambia, Kenya and Africa. (WHO, 1996)**
- **45% of people's nets (excluding the nets of program) were brought for impregnation in some villages of Thailand because the people learned that ITNs were highly effective (VBDO5, MD., MoPH).**

IMPORTANCE OF IEC FOR THE PROMOTION OF ITNs USE AND MALARIA

- **Increases knowledge and awareness of ITNs and malaria.**
- **Understanding of how to prevent malaria.**
- **Positive change behavior for both the treatment and the prevention of disease.**

FACTORS CONTRIBUTING TO MALARIA

◆ HOST FACTORS:

- **HUMAN BEHAVIOR**
- **LIVING PRACTICES**
- **AGE, GENDER**
- **OCCUPATION**
- **INCOME AND HOUSE CONDITION**
- **MIGRATION AND MOVEMENT**
- **IMMUNITY**

◆ SOCIO-CULTURAL AND ECONOMIC

- **INCOME AND HOUSE CONDITION**
- **BELIEFS**

♦ **CONTROL ACTIVITIES**

♦ **MOSQUITO, PARASITE AND ENVIRONMENT:**

- **FEEDING HABIT**
- **MOSQUITO AND PARASITES SPECIES**
- **BREEDING SITE**

♦ **ENVIRONMENT:**

- **RAINFALL, SEASONS**
- **TEMPERATURE**
- **FOREST**
- **HUMIDITY**

POSSIBLE INTERVENTION FOR THE PREVENTION
AND CONTROL OF MALARIA

- **PROTECTION FROM MOSQUITO BITES;**
 - **USE OF ITNs OR NETS**
 - **SCREENING OF HOUSE**
 - **ENVIRONMENTAL MAINTENANCE**
 - **PROTECTIVE CLOTHING**
 - **REPELLENTS**
 - **MOSQUITO COILS AND MATS**

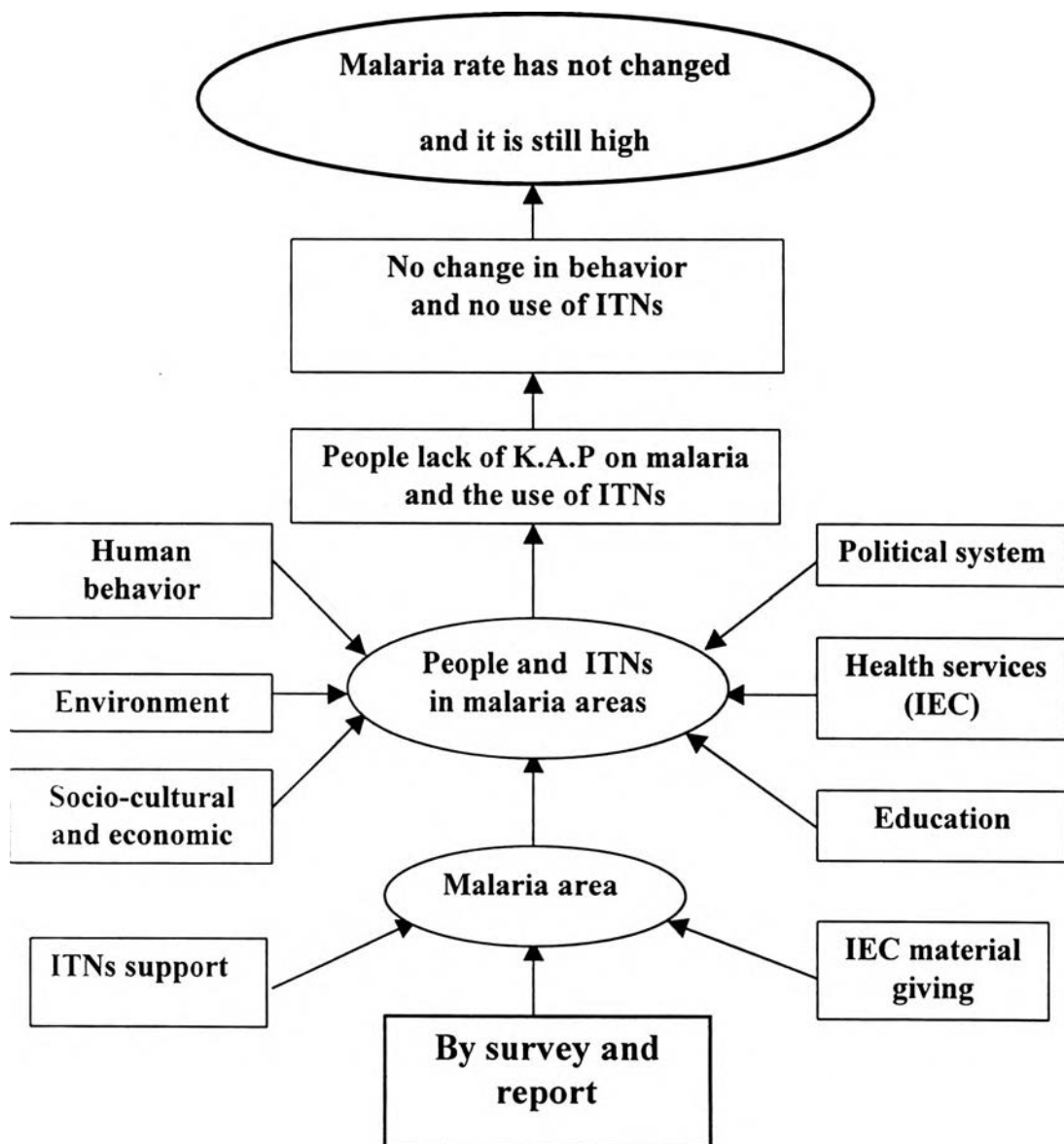
- **MOSQUITO CONTROL:**
 - **SOURCE REDUCTION**
 - **CHEMICAL METHOD;**
 - **RESIDUAL SPRAYING**
 - **SPACE SPRAYING**
 - **BIOLOGICAL**

 - **ANTI-MALARIA PARASITES MEASURES**

Analytical issue of the non-use of ITNs for malaria prevention for required information of the study.

Factors affecting of the use and no use of ITNs for malaria

prevention of the people in Laos



Sources: CIEH, 1994. Health and Villagers. Research on information education and communication for malaria control and IMPE, 1996. Malaria control program by the year 2000. The Third National Meeting on Malaria 1996

REQUIRED INFORMATION TO DEVELOP IEC STRATEGIES
FOR THE USE OF ITNs

• **INFORMATION ON HOST (HUMAN):**

POPULATION SIZE, DISTRIBUTION, OCCUPATION, MIGRATION, DWELLING, EDUCATION, INCOME LEVELS, HEALTH PROBLEM, KNOWLEDGE AND ATTITUDE, HUMAN BEHAVIOR FOR TREATMENT AND PREVENTION, ENVIRONMENTAL MAINTENANCE, SOCIO-CULTURAL AND ECONOMIC etc.

• **INFORMATION ON DISEASE;**

HEALTH PROBLEM, ENDEMICITY, MORTALITY, MORBIDITY, SEX DISTRIBUTION OF CASES, MOSQUITO, PARASITE etc.

• **INFORMATION ON CONTROL ACTIVITIES:**

IEC STRATEGIES, TYPES OF MALARIA CONTROL MEASURES, ACCESSIBILITY OF PEOPLE, PERSONAL AND FAMILY PROTECTION etc.

• **INFORMATION ON THE ENVIRONMENT**

TEMPERATURE, RAINFALL, SEASONS, TOPOGRAPHY etc.

SUMMARY

TO DEVELOP IEC STRATEGIES FOR THE USE OF ITNs FOR MALARIA PREVENTION, A STUDY TO COLLECT INFORMATION ON THE FACTORS AFFECTING THE USE AND NON-USE OF ITNs IS PROPOSED FOR ONE VILLAGE WHERE THE MALARIA INCIDENCE RATE HAS NOT CHANGED.

PROPOSAL:

● **Information, Education and Communication Strategies for the promotion of the use of Insecticide Treated Bed Nets for malaria prevention in Nathong Village, Hinheub District, Vientiane Province, Laos.**

PROPOSAL:

CONTENTS:

- **INTRODUCTION:**
 - **BACKGROUND OF STUDY AREA**
 - **MALARIA SITUATION**
 - **ITNs DISTRIBUTION**
 - **OBJECTIVES:**
 - **GENERAL OBJECTIVE**
 - **SPECIFIC OBJECTIVES**

- **METHODOLOGY:**
 - **CONCEPTUAL FRAMEWORK OF THE STUDY**
 - **RESEARCH QUESTION**
 - **STUDY DESIGN**
 - **TECHNIQUES FOR DATA COLLECTION**
 - **STUDY POPULATION AND TARGET POPULATION**
 - **SAMPLING TECHNIQUE AND SAMPLE SIZE**

- **ACTION PLAN AND TIMETABLE**
- **BUDGET AND MANPOWER REQUIREMENTS**
- **EXPECTED OUTCOMES**
- **ETHICAL ISSUES**
- **LIMITATIONS**

BACKGROUND OF STUDY AREA:

- **POPULATION** : **1,188**
- **MALE** : **552**
- **FEMALE** : **636**
- **HOUSEHOLDS** : **273**
- **FAMILIES** : **281**
- **3 ETHNIC GROUPS** : **10% Lao Theng**
15% Lao Suang
75% Lao Lum
- **OCCUPATION** : **Farmers**

MALARIA SITUATION:

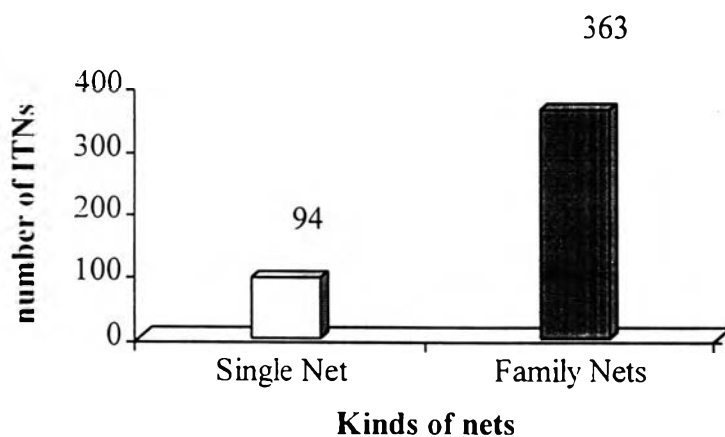
- **80% OUT OF THE TOTAL NUMBER OF PATIENTS WHO COME TO THE HOSPITAL WITH A FEVER WERE DIAGNOSED WITH MALARIA.**
- **OF ALL OF THE ABOVE, ABOUT 30-40% HAD A POSITIVE BLOOD SMEAR SHOWING MALARIA PARASITES**
- **PEOPLE'S LACK OF KNOWLEDGE, ATTITUDE AND PRACTICE ON MALARIA IS THE CAUSE OF NON USE OF ITNs AND THE FAILURE OF CHANGE THEIR BEHAVIOR.**
- **THEY HAVE TRADITIONAL BELIEFS, BELIEFS IN GHOSTS, DO NOT COME TO THE HOSPITAL AND USE SELF MEDICATION.**

Sources: Malaria Station, Vientiane Province, 1996

ITNs DISTRIBUTION IN NATHONG VILLAGE 1996:

- ◆ ITNs WERE DISTRIBUTED IN MID 1996 OF NATHONG VILLAGE FOR MALARIA CONTROL.
- ◆ ITNs WERE GIVEN TO THE TOTAL POPULATION OF THIS VILLAGE (273 FAMILIES).
- ◆ AS SHOWN IN GRAPH 3.2, 363/457 (79.43%) OF NETS WERE FOR FAMILIES.

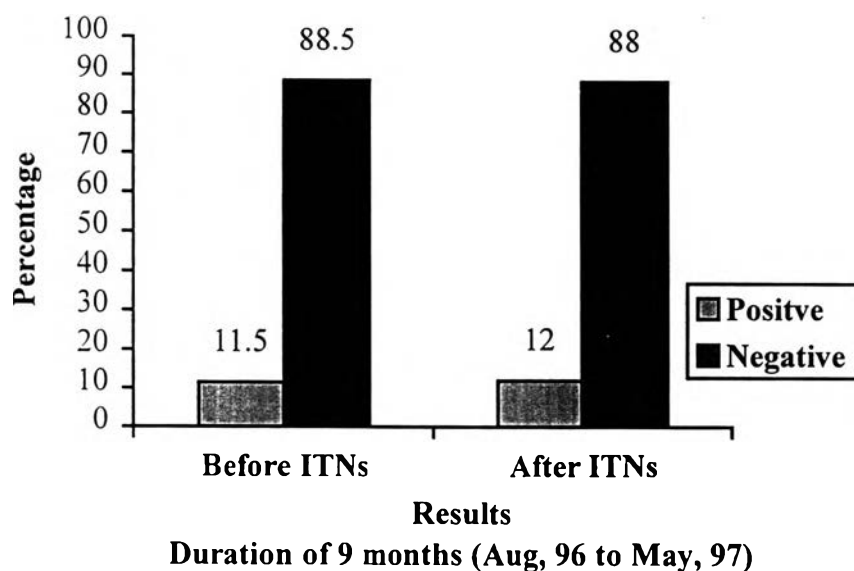
**ITNs distribution in Nathong Village
for 273 families**



Sources : IMPE, 1996

BLOOD EXAMINATION RESULTS OF MALARIA CASES
DETECTION BEFORE AND AFTER INTRODUCTION OF ITNs
PROGRAM IN NATHONG VILLGE.

**Blood examination result of malaria cases
detection before and after ITNs program,
Nathong Village**



- **MALARIA RATE HAS NOT CHANGED AFTER ITNs PROGRAM INTRODUCTION TO THIS VILLAGE.**

RESEARCH QUESTION

- ◆ **HOW COULD IEC STRATEGIES INCREASE THE USE OF ITNs FOR MALARIA PREVENTION AMONG THE PEOPLE IN NATHONG VILLAGE, HINHEUB DISTRICT, VIENTIANE PROVINCE, LAOS**

OBJECTIVES OF THE STUDY:

GENERAL OBJECTIVE

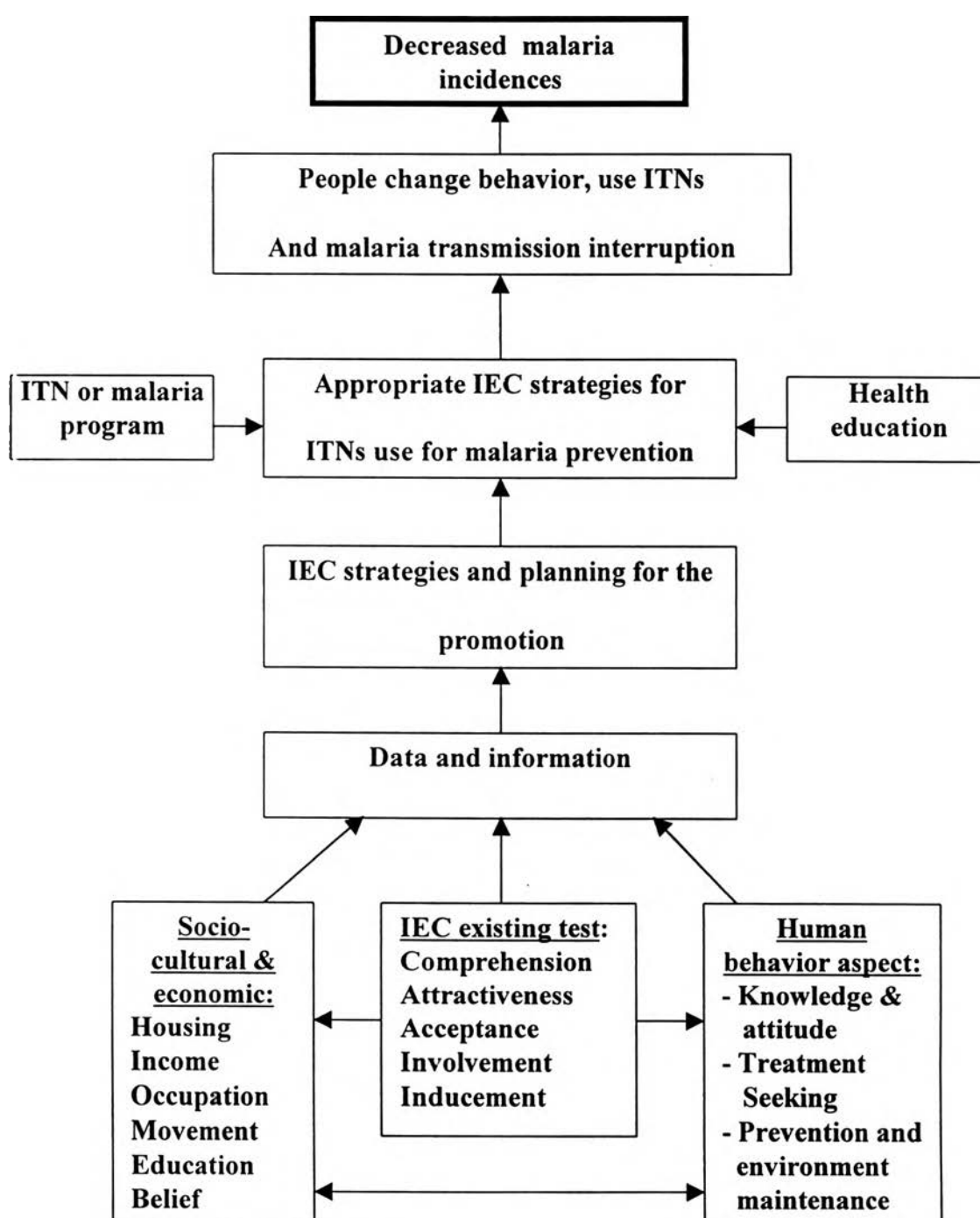
- To identify the information with particular reference to the use of ITNs and malaria prevention for developing IEC strategies to promote the use of ITNs and malaria prevention among the people in Nathong Village, Vientiane Province, Laos.

SPECIFIC OBJECTIVES

- To identify the elements of perception and human behavior with particular reference to malaria transmission and ITNs use as given:
 - (a) Knowledge and attitude of malaria and ITNs use for prevention.
 - (b) Treatment seeking behavior if suffering from fever or malaria
 - (c) Personal and family protection behavior against mosquito bite and nuisance of malaria.
- To determine the perception of the people in Nathong Village on existing IEC materials for malaria prevention in terms of comprehension, acceptance, attractiveness, involvement and inducement to action and suggestion for change.
- To determine the socio-cultural and economic factors in Nathong Village with respect to malaria transmission.

CONCEPTUAL FRAME WORK OF THE STUDY

Relationship between socio-cultural and economic, IEC existing and human behavior aspects with influences to malaria transmission and information need for developing IEC strategies for the promotion of the use of ITNs for malaria prevention.



Sources: Adapted from Dignan and Carr, 1992. Program and planning for health education and promotion and Kaplan et al, 1993. Health and human behavior

♦ **STUDY DESIGN:**

- **CROSS-SECTIONAL SURVEY**

♦ **TECHNIQUES FOR DATA COLLECTION:**

- **HOUSEHOLD SURVEY.**
- **OBSERVATION.**
- **FOCUS GROUP DISCUSSION**
- **REVIEW OF SECONDARY DATA**

♦ **TARGET GROUP:**

- **MALE, FEMALE (ADULT); MOTHER, FATHER**
- **GRANDMOTHER, GRANDFATHER**
- **VOLUNTEER HEALTH WORKERS AND HEALTH STAFFS**
- **COMMUNITY LEADER**

♦ **SAMPLE SIZE:**

- ABOUT 180 REPRESENTATIVES (HOUSEHOLDS) OF THE TOTAL HOUSEHOLDS FOR H.S BY USING ABOUT 60% YAMANE FORMULA
- 10% OF THE HOUSEHOLDS FOR OBSERVATION
- 3 GROUPS FOR FGDs: SEPARATE GROUPS OF MALE, FEMALE & VHWS. EACH GROUP INCLUDES 6-8 PARTICIPANTS.

♦ **SAMPLING TECHNIQUES:**

- SIMPLE RANDOM SAMPLING AND PURPOSIVE SAMPLING

ACTION PLAN AND TIMETABLE IN 1999

Time	Oct	Nov	Dec.	Jan
Activities				
1. Preparation	—			
2. Data collect : <ul style="list-style-type: none"> • Household survey • Observation • Focus group discussions • Review of secondary data 	—————			
3. Data management, interpretation of findings, report writing and submission to Government			—————	
4. IEC strategies, planning, design and production				—————

♦ **BUDGET REQUIREMENTS:**

ABOUT 10,615 OF THE BUDGET WILL BE SPENT ON:

- **RESEARCH**
- **IEC STRATEGIES PLANNING AND DESIGN**
- **IEC PRODUCTION**

♦ **MANPOWER REQUIREMENTS:**

- **HEALTH EDUCATION STAFF**
- **MALARIA STAFF**
- **RURAL STAFF (AT THE HEALTH POST)**

♦ **EXPECTED OUTCOMES:**

- **DATA AND INFORMATION AVAILABLE FOR MALARIA AND IEC PLANNING**
- **BETTER AND APPROPRIATE IEC STRATEGIES AND PLANNING FOR MALARIA CONTROL**
- **INCREASE IN THE FREQUENCY AND QUALITY OF HEALTH EDUCATION CAMPAIGNS**

- **UNDERSTANDING THE PEOPLE'S KNOWLEDGE, ATTITUDE AND BEHAVIOR REGARDING MALARIA**
- **DATA AND INFORMATION AVAILABLE FOR THE MONITORING AND EVALUATION FOR ITNs AND IEC PROGRAM**

♦ **ETHICAL ISSUE AND LIMITATIONS**

- **INTERVIEWS AND OBSERVATION WILL NOT BE DONE OR FORCED UNLESS PERMISSION IS GIVEN BY THE HEAD OF THE HOUSEHOLD.**
- **THE STUDY CAN NOT BE GENERALIZED FOR THE WHOLE COUNTRY, BECAUSE OF DIFFERENT SITUATIONS**
- **THIS IS THE FIRST STUDY, THEREFORE, THE INVESTIGATOR'S LACK OF SKILLS MAY BE AN OBSTACLE AND LIMITATION.**

DATA EXERCISE

♦ **OBJECTIVES:**

- TO TEST DATA COLLECTION TECHNIQUES
- TO PRE-TEST THE QUESTIONNAIRE GUIDELINES

♦ **TECHNIQUES:**

- HOUSEHOLD SURVEY
- FOCUS GROUP DISCUSSION
- OBSERVATION
- REVIEW OF SECONDARY DATA

♦ **PLACE AND DURATION:**

- PHOLKHAM VILLAGE, LAOS
- 1 MONTH INCLUDING DATA COLLECTION AND
MANAGEMENT
AND REPORTING.

♦ **POPULATION AND SAMPLING**

- **FOR HOUSEHOLD SURVEYS, 35 REPRESENTATIVES SELECTED BY RANDOM SAMPLING**
- **12 PARTICIPANTS SELECTED FOR 2.5 HOURS FOR FOCUS GROUP DISCUSSIONS**
- **10 HOUSEHOLDS SELECTED FOR OBSERVATION**

◆ **RESULTS AND LESSONS LEARNED:**

A). FOR THE TECHNIQUES USED:

- **TRIANGULATION WAS APPROPRIATE AND COULD GET MORE DATA AND INFORMATION.**
- **SHOULD HAVE INCLUDED INFORMAL DISCUSSIONS OR INTERVIEWS.**
- **NIGHT TIME OBSERVATION WAS IMPORTANT FOR LEARNING THE REAL BEHAVIOR.**

B). FOR THE QUESTIONNAIRE GUIDELINES:

- **ALL OF THE FOLLOWING WERE CHANGED AND/OR DEVELOPED : SEQUENCE, WORDING, LOCAL TERMS, EASY QUESTIONS etc.**
- **SHOULD CLARIFY CONCEPTS AND GUIDELINES FOR MEMBERS OF THE RESEARCH TEAM.**

C). OTHERS:

- **GOOD PARTICIPATION FROM EVERY AGENCY AT EVERY LEVEL WITHIN THE AGENCY.**
- **IT WOULD BE BETTER IF THERE WAS MORE PARTICIPATION FROM THE PRIVATE SECTOR.**

♦ **LIMITATIONS:**

- **TRIBAL GROUPS HAVE PROBLEMS WITH THE LANGUAGE USED BY THE RESEARCH TEAM.**
- **RAINY SEASON CAUSED TRANSPORTATION PROBLEMS.**
- **FIELD WORK OF THE VILLAGERS MADE TIME MANAGEMENT OF PROJECT DIFFICULT**
- **LESS PARTICIPATION FROM THE PRIVATE SECTOR (CLINICS, PHARMACIES AND etc.).**