CHAPTER 1

INTRODUCTION

1.1 Background and Rationale

Malaria remains to be one of the most important infectious diseases of humankind with over 100 million cases every year and resulting about a million deaths. Young children with no immunity are the mostly affected age class (Alonso and others 1994). It has been estimated that about 2673 million people (over 40% of the world population) living in more than 100 countries are exposed to the risk of malaria and 270 million of them suffer due to the infection with malarial parasites, annually. Approximately one million of malaria patients die every year (WHO 1990).

Moreover malaria is an adverse factor for the social and economic advancement of third world. The government can not afford to sustain the malaria control strategies without community participation and contributions. Disease prevention and control cannot be adequately achieved without the cooperation and involvement of the community. To be effective and sustainable, a vector control programme must be part of the general health programme and should be based on the availability of skilled staff and on genuine community participation (WHO, 1993).

In attempting to reconcile the need for vastly expanded social services with the limited availability of public funds, African governments and aid donors are closely examining new sources of finance (Ainsworth and others 1987). Level of finance for existing public services are woefully inadequate. Given the poor economic climate, the resulting slow growth in conventional sources of finance -- mainly through taxation -- and the reluctance of aid donors to finance the recurrent costs of social services, the rate of expansion of limited systems of health and schooling will rely increasingly on the ability to mobilize additional resources from untapped sources.

Malaria continues to be a public health problem of high priority among the majority of malaria endemic countries of WHO South East Asia region such as Bangladesh, Bhutan, India, Indonesia, Myanmar, Nepal, Sri-Lanka, and Thailand. More than 85% of total population of these countries reside either in areas with active malaria transmission or great potential for malaria outbreaks or epidemics (Kondrashin and Rooney, 1992).

The activities of the malaria control Programme in Thailand have reduced the mortality rate of 351 per 100,000 population in 1947 to 3.9 per 100,000 population in 1986.Over the same period the morbidity rate showed a reduction from 286 per 1,000 population to 5.0

per 1,000 population. The steady decrease in mortality and morbidity in the last few years is attributed to the expansion of primary health care delivery and the establishment and strengthening of 480 malaria clinics providing prompt diagnosis and treatment. Difficulties are being experienced in maintaining and improving the malaria situation. These include multi-drug resistance of Plasmodium falciparum, exophilic tendencies of primary anopheline vectors and continual population migration (Malikul, 1988). According to 1992 data, malaria morbidity was 3.74 per 1,000 population and mortality was 2.1 per 100,000 population (Malaria Division Country Report on Malaria Control, 1993).

Willingness to pay (WTP) is a concept which is being used increasingly to inform policy decision in the health sector. Decision-makers at the government and community levels are faced with the difficulty but important policy question of how to price health services. One way is to measure the cost of supplying the service and to charge a price that will cover all or a proportion of that cost. The main problem with this procedure is that a price based only on costs takes no account of demand, or people's willingness and ability to pay that price. If user fees system has been introduced, people WTP is important because consumer responses to prices will influence service utilization levels and patterns, and revenues collected (Russell, unpublished report). And then utilization of malaria diagnosis and treatment is seemed to be determined by the ability and willingness to pay for those malaria services and other factors such as cost incurred by patients, severity of illness, incidence of a particular disease,distance between home and service point, convenience of travel awareness of existing health service, and availability of other health facilities etc.

Willingness to pay concept is very important when user fee system has been introduced in a country. User fees have been the focus of most efforts to increase financial resources for public facilities in developing countries. Although the most obvious objective for user fees was to raise revenue, many of the proponents of user fees thought that the ultimate objective was to use the revenue to improve the quality of health care. An increase in user fees in the absence of an improvement in quality will decrease utilization of health care (Waddington and Enyimayew, 1989; Yoder, 1989; Frankish, 1986). In contrast, when user fees are introduced in combination with an improvement of the quality of care, utilization of health care can increase. The practical issue for policy makers is what combination of prices and quality improvements will lead to an increase in utilization of public facilities (Weaver and others 1993).

At present costs of malaria diagnosis and treatment are incurred by malaria control programme_ no charge is made from patients. But from previous studies show that patients incurred costs, i.e., travel cost, time cost etc. (Kaewsonthi and Harding 1986; Kaewsonthi and others 1988). These costs and other factors such as income, distance between home and service points, convenience of travel, severity of illness, perceived quality of service and some demographic characteristics are affecting the number of patients utilizing the

formal diagnosis and treatment services of malaria control programme.

This study is to estimate the costs incurred by patients, examine the level and patterns of malaria service utilization, ability and willingness to pay for malaria diagnosis and treatment services by the study population, and factors influencing the utilization and WTP. The information gain from this study may help to improve the distribution of malaria services and assess feasibility of introducing the user fee system on those services.

1.2 Research Questions

1. How malaria diagnosis and treatment services of malaria control programme are utilized by the community of study area?

2. Which are the important factors affecting utilization of malaria diagnosis and treatment services?

3. What are the costs incurred by the patients, although there is no charge for those malaria services at present?

4. How much is this community willing to pay for those malaria services in relation to ability to pay?

1.3 Objectives

1. General Objective

To assess the level and pattern of utilization of malaria diagnosis and treatment services , and willingness and ability to pay for those services in the selected area of Ratchaburi Province in Thailand.

2. Specific Objectives

1. To determine the level and pattern of utilization of malaria diagnosis and treatment services of malaria control programme.

2. To estimate the costs to the patients in seeking those malaria services.

3. To identify the determinants of utilization of malaria diagnosis and treatment services.

4. To determine the magnitude and priority of the determinants of utilization of those services.

5. To assess the ability and willingness to pay for malaria diagnosis and treatment services.

1.4 Description of Study Area

This study was conducted at the defined area of Suan Phung District in Ratchaburi Province, Thailand. About one thousand population living in round about 200 households located in 8 hamlets. This area is about 200 Kilometers west to Bangkok and 3 Kilometers away from Thai-Myanmar border.

A station of research team from the Department of Tropical Hygiene, Faculty of Tropical Medicine, Mahidol University is situated at Tombol Tanowsri which is 22 Kilometers away from Suan Phan District. A health center is also located in that Tambol. The malaria clinic was withdrawn from that Tambol since establishment of this research station (June, 1994). A malaria sector is situated in a sub-district, 20 Kilometers away from this station.

The study area is surrounded by a numbers of hills and forested areas. Queen Sirikit forest park is nearby and these forest areas are well protected by forest control personnel. The study population is very unusual and 50% of them are Thai and the others are Karen people. They are partial Thai citizens and they are not allowed to spend more than one day out side Ratchaburi province. Each and every household is provided by 10 to 15 rai of land for farming and they have to pay about 10 Bahts per rai per year for those lands. They are also seemed to be poor and their education level is quite low in relation with other areas of Thailand.

The existing research team is conducting the research mainly concerned with malaria epidemiology, parasitology, entomology and malariometric survey. Now we collaborated to carry out the economic aspects of malaria research in that area.

1.5 Operational Definition

Level of utilization: The frequencies of seeking the services by the patients offered in the diagnosis and treatment service points.

Pattern of utilization: The percentage of utilization of different services offered for diagnosis and treatment of malaria

Ability to pay : Affordability of a person or a household or a community for malaria diagnosis and treatment service when they are in felt need which is determined by total family income per annum and the wealth and debts.

Willingness to pay : An amount of money which is prepared to pay for malaria diagnosis and treatment service by a persons or household or community when

he/she/they have an attack of fever (considered as malaria).

Malaria diagnosis and : It is a malaria clinic or village malaria
treatment service   volunteer or health center at which the
                         patients are diagnosed by laboratory method
                         and treated radically by anti-malaria drugs.

Income :   Total income of a household per annum. It may
                         be cash income (eg.,salary or wage),
                         agricultural income, and income from livestock
                         sales. It is a part of ability to pay.