

Title : Systematic Review of Economic Evaluation Studies of  
Malaria in Greater Mekong Sub-region

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### Abstract

The purposes of this study are 1) to identify all full economic evaluation studies of malaria in the Greater Mekong Sub-region (GMS) and systematically assess their quality, 2) to describe the nature and results of economic evaluation studies for malaria in the GMS, and 3) to rank the economic evaluation values for malaria in the GMS.

Methods: We searched studies through electronic databases including Thai Index Medicus (1918-2002), Thai Thesis Online (1966-2003), Index Medicus Myanmar (1986-2002), Dissertation Abstract Online (1997-2004), Southeast Asia Index Medicus (1980-1995), Malaria Journal (2002-2004), Pubmed (1966-2002), HealthStar (1975-2003), EBM Reviews (1991-2003), CINAHL (1982-2003), EconLit (1969-2004), HEED (2002-2004), IPA (1970-2003), and ScienceDirect (1980-2004). In addition to electronic database search, we also performed historical search and contacted experts in the field. Only full economic evaluation studies for Greater Mekong Sub-region were included. This study used a single reviewer and standardized abstraction form for abstraction process.

Results: A total of 260 articles was identified from the search, only 15 articles met our inclusion criteria. Nearly half of the articles was a master thesis of Chulalongkorn University (46.6%, 7/15). More than half of the articles was from Thailand (60.0%, 9/15). The majority of the articles was cost-effectiveness analysis (73.3%, 11/15). A few articles determined costs alongside randomized controlled trials (20.0%, 3/15), while only five articles (33.3%) evaluated outcomes from randomized controlled trials. The common weaknesses of the studies included absence of stating the study question clearly

(53.3%, 8/15), lack of stating study perspective consistently to the estimation of cost and outcome (53.3%, 8/15), lack of measuring costs clearly (60.0%, 9/15), and lack of performing incremental analyses (86.6%, 13/15). Only eleven articles (73.3%) performed sensitivity analyses, whereas thirteen articles (86.6%) discussed generalizability of the program to other settings. We found that the treated nets were more cost-effective than the untreated nets for malaria prevention, that the rapid diagnostic tests were more cost-effective than the microscope tests for malaria detection, and that the combination of artemisinin and doxycycline therapy was more cost-effective than the combination of quinine and doxycycline therapy for treatment of malaria. Our study cannot rank the malaria-related economic evaluation values because there are considerable differences in methodology among the studies.

Conclusion/Suggestions: This study found that almost all of our included studies have the methodological flaws. Researchers or those involved in economic evaluation should pay more attention to the current standard of the economic evaluations. In addition, policy makers should be cautious to decide the allocation of resources based on the findings of economic evaluations.