COST-EFFECTIVENESS ANALYSIS OF MICROSCOPY AND DIPSTICK FOR DIAGNOSIS OF MALARIA IN SRI LANKA

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This study develops a methodology to analyse the cost-effectiveness of microscopy and dipstick in diagnosis of malaria in Sri Lanka, in both public and private provider, and patient perspectives.

The study covers all the public and private health facilities and the patients attending these services in Sri Lanka. The cost of microscopy and dipstick is determined for the provider and to the patient with the help of malaria control cost models developed by Kaewsonthi and others (1996). For the determination of effectiveness of microscopy and dipstick four indicators, i.e.accuracy, percentage of on-site diagnosis, percentage of accurate on-site diagnosis, and coverage were used. The primary and secondary data are used to determine costs and effectiveness of microscopy and dipstick and these data are obtained from surveys, existing records, previous research findings, questionnaires and interviews.

The methodology has been simulated by using actual and estimated data. The results of the study does not give the exact value for the cost-effectiveness, but it shows the general trend of cost-effectiveness of microscopy and dipstick. The results show that when the accuracy of microscopy and dipstick is the same, microscopy is more cost-effective both in public and private provider perspective, except for percentage of on-site diagnosis and percentage of accurate on-site diagnosis in private sector. The cost-effectiveness of microscopy decreases with the decreasing accuracy of microscopy. Furthermore, dipstick will be more cost-effective at the low unit cost of dipstick (Rs.17 or lower) and at lower level of blood slides (22 or lower), and also there is a little difference of the unit cost of providing microscopic diagnosis at the point of service or not at the point of service.

The analysis of treatment seeking pattern of malaria cases shows that 26% of malaria cases visit private health services mainly because of perceived quality of private health services. The patients incur Rs. 267 per patient per visit at private health facilities prior to attending a public health facility.

Therefore, it is recommended to consider extension of on-site diagnostic facilities for malaria to the field by introducing dipstick at the institutions where there are lower than 22 blood slides are collected, and to retain microscopy at the other institutions. The consideration of private sector as an integral part of the National malaria Control Programme, and the provision of dipstick to the private sector at a subsidized price are also recommended.

In addition, the use of dipstick can improve the efficient use of scarce resources, good quality of care and equity. It also involves private sector in using diagnostic facilities for malaria that improves private provision and private financing. Therefore, use of dipstick will help to achieve the objectives of helath care financing reform too.

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