

COST ANALYSIS OF TWO ALTERNATIVE SCHEMES
FOR MALARIA CASE DETECTION IN CHINA

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The objectives of this research are to investigate the magnitude and components of direct operating cost incurred by institutions, analyze the outcomes in terms of the number of blood slides examined and the number of positive cases detected, additional direct costs needed for additional cases detected, changes of unit costs with changes of slide positive rates and number of fever of unknown origin (FUO) patients in two schemes A (malaria, suspected malaria, FUO) and B (malaria, suspected malaria) for malaria case detection in China. The data from two counties were used for a micro-level study, the performance data from 23 counties of 12 provinces in a nationwide survey were used in a macro-level study.

The personnel costs were the largest components in the two counties and two schemes. In County A, personnel cost took up 75.8% of the total direct costs (Scheme A), 98.5% in Scheme B; 96.2% in Country B (Scheme B); in Country A, the costs of resources used by the FUO were 99.2% of the total direct costs. In the two counties, the slide positive rates (SPR) for typical malaria were both 100%; for suspected malaria, 10.0% in Country A, 26.2% in Country B; for FUO in County A, 0%. The cost per slide examined (CPSE) was 10.4 Yuan in Country A (Scheme A), 134.4 Yuan in Country B; the cost per positive case detected (CPPCD) was 5,816.5 Yuan in Country A, 304.6 Yuan in Country B. In Country A, the institution spent 48233.7 Yuan as additional direct costs but no additional positive case was detected from FUO in 1993. Assuming the two schemes were carried out in the same county, when SPR is less or greater than a particular value, according to whether Scheme B or A has a lower CPPCD, Scheme B or A should be used if we consider the total operating cost for missed cases in FUO and vice versa. With the increasing changes in number of FUO, under the assumptions made, if Scheme A was implemented, the CPSE showed a increasing trend; the CPPCD showed a decreasing trend. The study showed that it would save 48,183.67 Yuan if County A implemented Scheme B rather than Scheme A. If Scheme B was implemented in all counties in basically eliminated malaria areas, the cost saving will be very considerable, but it may miss some positive cases in FUO.

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