COST RECOVERY AND UTILIZATION OF AUTOMATED CLINICAL ANALYZER IN PUBLIC HOSPITAL AND CLINICAL LABORATORY IN EAST JAVA, INDONESIA

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The objectives of this study were to assess the cost recovery of Automated Clinical Analyzer (ACA) and to determine factors influencing the utilization of ACA in public hospital and clinical laboratory in East Java, Indonesia.

In calculating the cost recovery, this study applied the direct distribution for cost allocation. The cost was classified into capital cost and recurrent cost. The revenue was derived by multiplying the total number of tests with the charge. The cost recovery ratio was defined as the ratio of total revenue over total cost. For factors affecting the ACA utilization, the sample of 392 patients from public hospital, 69 patients from private clinical laboratory and 50 physicians were interviewed and analyzed by descriptive statistic to determined factor influencing utilization of ACA.

The findings indicated that, from physician point of view, factors influencing the utilization of ACA were: (1) the result of laboratory tests supporting the diagnosis; (2) easy accessibility; (3) fast result; (4) financial incentive; and (5) patient's choice. Physicians with 4 - 10 years of experience utilize the ACA more than other physicians. For the patient factors, it was found that the characteristics of patients, i.e. age, sex, education, occupation and geographical area, are the factors affecting the utilization of ACA. The utilization rate in public hospital and clinical laboratory were 17.5% and 10.7% respectively. From the economic and financial analysis, the capital cost was the largest component of total costs, followed by material cost and labor cost. The investment expenditure of ACA was the highest portion of total costs. The average total cost (ATC) in public hospital and clinical laboratory were Rp. 7,330 and Rp. 13,983 respectively. Which were lower than the average charge. The cost recovery in public hospital and clinical laboratory were 1.22 and 1.45 respectively. This implied that it was possible to reduce the charge or to increase the utilization of ACA.

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Tri Juni Angkasawati

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ABBREVIATIONS

ACA : Automated Clinical Analyzer
AFC : Average Fixed Cost
ATC : Average Total Cost
AVC : Average Variable Cost
BEP : Break event point
BOR : Bed Occupancy Ratio
CT scan : Computerized Tomography Scanning
ECCLS : Evaluation Control of Clinical Laboratory System
GDP : Gross Domestic Product
GNP : Gross National Product
IMR : Infant Mortality Rate
IPD : In-patient
Km : Kilometer
MC : Marginal Cost
MOH : Ministry of Health
MRI : Magnetic Resonance Imaging
OPD : Out-patient
PHC : Public Health Center
PPEKI : Perhimpunan Peminat Ekonomi Kesehatan Indonesia (Association of Indonesia Health Economists)
Rp : Rupiah
SFBC : French Society for Clinical Biology
SPSS : Statistic Program for Social Science
USG : Ultrasonography