

**COST OF ILLNESS ANALYSIS IN TOTAL KNEE REPLACEMENT
AT PUBLIC HOSPITAL JENDERAL AHMAD YANI, LAMPUNG,
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ABSTRACT

Background: One of the most economical and frequently successful orthopedic procedures is total knee replacement (TKR). In Indonesia, cost-of-illness studies of TKR are scarce.

Objective: This study aims to examine cost-of-illness of TKR from social perspective and explore the patient characteristics that affect the cost of TKR.

Methods: This is an observational cross-sectional study of all patients who underwent TKR from 1st January 2022-31st December 2023. Patient characteristic was collected from medical record. Cost-of-illness was carried out from social perspective with a bottom-up approach. Hospital cost on JKN (Jaminan Kesehatan Nasional) ECLAIM System was obtained as direct medical cost. Direct non-medical cost and indirect cost were collected through interview with patient or caregiver by phone call. Indirect cost was performed as income loss from patient and caregiver. Multiple regression analysis was used to explore patient characteristics affected the cost.

Result: Of a total 54 patient were obtained. Median of direct medical cost at 51,769,675IDR; direct non-medical cost at 850,000IDR; and indirect cost at 750,000IDR. None of the patient characteristics affected direct medical cost. Caregiver ($p=0.006$) and distance traveled ($p=0.003$) were known as patient characteristics that affected direct non-medical cost. Indirect cost was affected by age ($p=0.024$) and caregiver ($p=0.043$).

Conclusion: Caregiver was found as patient characteristic that effected both direct non-medical cost and indirect cost. This study was only to examined cost of TKR in hospital. Costs of post-surgery recovery steps including costs for revisit consultations, wound care and physiotherapy are needed to carry out in the future.

Keyword: Total Knee Replacement, Cost-of-Illness, Societal Perspective.