

ABSTRACT
**COST-EFFECTIVENESS ANALYSIS OF THE COMBINATION METFORMIN-
SULFONYLUREA WITH METFORMIN-DPP-4 INHIBITOR IN TYPE 2
DIABETES MELLITUS PATIENTS AT HOSPITAL X**

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The use of oral antidiabetic combination therapy (OADs) is one alternative in the treatment of type 2 diabetes mellitus that is expected to produce optimal effectiveness at a more affordable cost. This condition poses a significant challenge, particularly in areas with low economic development. This study aims to analyze the cost-effectiveness of combinations in patients with type 2 diabetes mellitus who were hospitalized at PKU Muhammadiyah Bantul Hospital in 2024. This study employs an observational, retrospective approach and pharmacoeconomic analysis, utilizing the cost-effectiveness analysis (CEA) method. The sample was taken using the Slovin formula from 55 patients and then divided proportionally according to the inclusion criteria, which were patients hospitalized and receiving a combination therapy of metformin-sulfonylurea and metformin-DPP-4 inhibitor at PKU Muhammadiyah Bantul Hospital in 2024. The results showed that the metformin-DPP-4 inhibitor combination had a higher average cost (IDR 5,317,617) with 76% of patients achieving the Random Blood Glucose (RBG) target, compared to the metformin-sulfonylurea combination (IDR 5,268,879), where only 55% of patients achieved the RBG target. ACER analysis indicates that the use of metformin-DPP-4 inhibitor is more cost-effective than metformin-sulfonylurea, with an ICER value of IDR 232,086. This study concludes that the combination of metformin and DPP-4 inhibitor is more efficient and effective in treating type 2 diabetes mellitus inpatients at PKU Muhammadiyah Bantul Hospital.

Keywords: Type 2 diabetes mellitus, CEA, metformin, sulfonylurea, DPP-4 inhibitor.