

Analysis of Determinants of Type 2 Diabetes Mellitus (E11) Incidence Based on Inpatient Medical Records at Perkebunan Jember Klinik Hospital

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ABSTRACT

Cases of type 2 diabetes mellitus at Jember Klinik Plantation Hospital show that the average incidence over the past 4 years reached 363 cases per year and consistently ranked within the top 10 inpatient diseases, indicating that the incidence of type 2 diabetes mellitus remains remarkably high annually. This study aims to analyze the determinants of type 2 diabetes mellitus (E11) incidence based on inpatient medical records at Jember Klinik Plantation Hospital. This study utilized a case-control design. The ratio of case to control samples was 1:1, with 151 medical records each selected using a simple random sampling technique. Data analysis was performed using univariate (frequency distribution and percentage), bivariate (Chi-square), and multivariate (multiple logistic regression) analyses via SPSS. The results showed a significant association between age ($p=0.000$), family history ($p=0.000$), obesity ($p=0.000$), hypertension ($p=0.000$), and dyslipidemia ($p=0.023$) with the incidence of type 2 diabetes mellitus. Conversely, gender showed no significant association ($p=0.197$). Multivariate analysis indicated that obesity emerged as the most dominant risk factor ($OR=13.688$), and the model accounted for 61.5% of the variance in incidence risk. It is recommended that healthcare professionals (HCPs) in the hospital provide education to patients presenting with risk factors for type 2 DM, particularly obese patients, to adopt a healthy lifestyle and undergo regular medical check-up.

Keywords: *Type 2 diabetes mellitus, risk factors, medical records, case-control, obesity.*