

Determinants influencing medication refill non-adherence among patients with type 2 diabetes mellitus in Pasir Mas district, Kelantan

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ABSTRACT

Introduction: The World Health Organization (WHO) emphasizes that medication adherence can have a more significant impact on patient outcomes, quality of life, life expectancy, and healthcare costs than the actual treatment itself. Medication refill non-adherence is typically caused by multifaceted issues related to the health care system and providers, patients, and treatment. This study aims to determine the proportion of medication refill non-adherence and its determinants among patients with Type-2 Diabetic Mellitus (T2DM) in Pasir Mas, Kelantan, Malaysia in 2022. **Materials and Methods:** A cross-sectional study was conducted involving adult patients with T2DM in four government health clinics with specialists in Pasir Mas and registered under Pharmacy Information System (PhIS) and National Diabetic Registry (NDR) databases from January 2022 to December 2022. The Medication Possession Ratio (MPR) was retrieved from PhIS and categorized as non-adherence if less than 80%. Simple random sampling was applied. Those aged at least 18 years old and who have active prescriptions were the inclusion criteria. Multiple logistic regression was performed to demonstrate its determinants with medication non-adherence using IBM SPSS version 27. **Results:** A total of 440 respondents were included. The mean age of T2DM patients was 63.2 years old (SD ± 10.19) with mean diabetic age of 10.5 years (SD ± 5.62). The mean MPR was 38.6 (SD ± 43.64), whereas 6.1 (SD ± 1.82) and 1.9 (SD ± 1.07) were the mean medications number and comorbidities respectively. The majority of respondents were female (65.2%), Malay ethnic group (97.9%), presence of comorbidities during the T2DM diagnosis made (53.2%), and presence of comorbidities in the current year, 2022 (91.8%). In addition, hypertension (79.3%) and dyslipidaemia (71.6%) were the most comorbidities reported. During multivariable analysis, the multiple logistic regression indicated that the number of visits (AOR: 0.64; 95% CI: 0.54, 0.75; p < 0.001) and the number of comorbidities (AOR: 1.37; 95% CI: 1.02, 1.83; p=0.037) were statistically significant and fitted in as the best model. **Conclusion:** This study revealed that medication refill non-adherence was significantly determined by the number of visits and the number of comorbidities. Thus, it is crucial to develop strategic and targeted approaches for implementation in practice in order to decrease the rate of non-adherence. This entails proactive and focused interventions in health promotion, raising awareness among all stakeholders, and encouraging regular attendance of T2DM patients at healthcare clinics.