# Paediatrics Best Poster Presentation

## BP_P001

### FACTORS AFFECTING GLYCEMIC CONTROL AMONG PAEDIATRIC AND ADOLESCENT PATIENTS WITH TYPE 1 DIABETES: EXPERIENCE FROM A TERTIARY HOSPITAL IN SARAWAK

https://doi.org/10.15605/jafes.040.S1.227

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**INTRODUCTION/BACKGOUND**
HbA1c is one of the primary tools to assess glycemic control in diabetes. This study aims to determine factors affecting glycemic control among children and adolescents with type 1 diabetes (T1DM) in Sarawak General Hospital (SGH).

**METHODOLOGY**
We conducted a retrospective cross-sectional study among patients with T1DM aged 18 years and below who attended the Paediatric Endocrine Clinic, SGH for the year 2024. Data analysis was performed with SPSS version 25. The effects of different factors on glycemic control were analysed using t-test and Multi-factorial Repeated Measures ANOVA test.

**RESULT**
A total of 21 T1DM youths were recruited, with a mean age of 12.14 ± 4.37 years and mean disease duration of 4.55 ± 4.02 years. The patients were predominantly female and secondary school adolescents. More than 60% of the patients who were initially using fixed-dose basal -bolus insulin were switched to carbohydrate-based basal-bolus insulin regimen for the past year. The mean HbA1c had improved from 10.0 ± 2.5% on the former regimen to 9.6 ± 2.2% on the latter regimen ($p$ <0.05). Patients with lower maternal education (10.3 ± 1.9% vs 7.7 ± 1.8%), moderate and poor adherence to insulin (9.9 ± 0.5% vs 9.4 ± 0.6%) and those on fixed-dose basal-bolus insulin regimen (9.9 ± 1.2% vs 9.0 ± 1.2%) had higher recent HbA1c as compared to the initial HbA1c reading in year 2024; although the results were not statistically significant likely due to the small sample size.

**CONCLUSION**
Glycemic control among children and adolescents with T1DM is still suboptimal. Improving diabetes education is essential with special attention to parents with limited education and patients with medication adherence issues.