

**Introduction:**

Glycosylated haemoglobin has been known for some time as a critical marker in monitoring compliance to treatment by diabetic patients. With a single measurement, glycosylated haemoglobin can quantify average glycaemia over weeks and months, thereby complementing day to day testing. Glycosylated haemoglobin reflects a mean glycaemia over the preceding 2 to 3 months, measurement approximately every 3 months is required to determine whether a patient's metabolic control has reached and maintained within the target range. Glycosylated haemoglobin is not routinely used to monitor patients on treatment in MRH.

**Objectives:**

The main objective of the study was to determine the glycosylated haemoglobin levels in diabetic patients taking different drugs.

**Methodology:**

A cross-sectional study to measure glycosylated haemoglobin levels in diabetic patients who attended Diabetic clinic at Mengo Referral Hospital in Namirembe Rubaga division was carried out between August-October 2015 and 135 patients participated in the study. The method used to determine their HbA1c levels was using the Cobas Integra ® 400 Plus. In the Ethical consideration, the study was submitted to the; faculty, ethics, IHSU and MRH research committees for approval.

**Results:**

Out of the 135 participants, 57 (42.2%) were males and 78 (57.8%) were females. Only 26 (19.3%) of the participants had good glycaemic control (HbA1c <7.0%) and the rest had poor glycaemic control. Using multiple regression model, our study found out that, diabetic drugs had similar efficacy in achieving glycaemic control. Metformin was a better drug in achieving glycaemic control compared to insulin and glibenclamide.

**Conclusion:**

Most diabetic patients in Mengo hospital have poor glycaemic control.

Metformin is a better drug in controlling hyperglycaemia and FBS is related to HbA1c

**Recommendation:**

HbA1c level should be adopted in monitoring diabetic patients on treatment as to detect and control their hyperglycaemia. A study with a bigger sample size from different diabetic clinics should be done to assess for the best drug to use in diabetic patients.