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Title: *Does Sliding Scale Insulin Use Impact Agitation in Psychiatric Inpatients with Schizophrenia?*

Purpose: Patients admitted to the hospital are frequently taken off their oral diabetes medication and prescribed various insulin regimens during hospitalization, which can include the use of sliding scale insulin. The goal of this study is to determine whether there is a correlation between the use of sliding scale insulin and agitation in patients with schizophrenia.

Methods: A retrospective data analysis was performed at a large institutional hospital. Patients were included if they had a documented diagnosis of schizophrenia or schizophrenia spectrum disorder, prescribed sliding scale insulin during their stay, and were prescribed by mouth (PO) and/or intramuscular (IM) as needed (PRN) antipsychotic or benzodiazepine medications, for agitation. Average blood glucose levels during the stay and number of units of sliding scale insulin per day were tested for correlation with the number of PRN agitation medications. Statistical tests were done using regression and ANOVA analysis. A separate analysis was done to recognize patterns when sliding scale insulin and PRN medications were administered on the same day. Power was set at 80%.

Results: Thirty-seven patients were eligible for data analysis. The use of PRN antipsychotics and/or benzodiazepines was not correlated with significant changes in blood glucose levels ($p=0.062$). The amount of sliding scale insulin did not influence the amount of PRN antipsychotic and/or benzodiazepine used ($p=0.389$). Sixteen of the thirty-seven patients had both sliding scale insulin and PRN medications on the same day at least once during their hospitalization. Ten of those sixteen patients had higher average blood glucose levels on days when both medications were administered (207.4 mg/dL) compared to the days when only sliding-scale insulin was administered (174.5 mg/dL).

Conclusion: In this study there was no correlation seen with sliding scale insulin use and agitation in patients with schizophrenia. There was a higher average blood glucose seen in ten of sixteen patients with sliding scale insulin and PRN medications for agitation administered on the same day. Although the results of this study were not significant, conclusions about the effects of sliding scale insulin cannot be adequately drawn due to the small sample size and limited data available.