

Increased Rates of Hospitalized Children with Type 1 and Type 2 Diabetes Mellitus in SUNY Downstate Health Sciences University and NYC+HHC/Kings County Hospital Center During COVID19 Pandemic.

Objectives: There have been reports of increased new onset diabetes and severity of DKA for children with diabetes following COVID19 infection and during the pandemic worldwide. Our objective is to study changes in admission rates and severity of presentation for type 1 (T1DM) and type 2 diabetes mellitus (T2DM) in our center.

Methods: This is an IRB-approved retrospective chart review of children hospitalized 1/1/18-12/31/20 using diagnostic codes for diabetic ketoacidosis (DKA), hyperglycemic hyperosmolar syndrome (HHS) and hyperglycemia. SAS 9.4 used for means, T-test, Poisson regression.

Results: We included 132 patients with 214 hospitalizations: 158 T1DM, 40 T2DM and 16 other (14 steroid induced, 2 MODY). Taking into account changes in pediatric volume, overall diabetic admissions increased from 3.4% in 2018, to 4.6% in 2019, and 6.4% in 2020 ($p = 0.05$). T1DM admissions were similar across all 3 years, however T2DM admission rates increased from 0.4% to 0.8% to 2% ($p=0.0064$). Newly diagnosed T1DM rates increased from 0.4% to 0.3% to 1.7% ($p=0.002$); new-onset T2DM rates also increased from 0.2% to 0.7% to 1.1% ($p=0.0026$). DKA increased from 2.5% to 3.5% to 4% ($p=0.028$). HHS increased from 0.1% to 0.2% to 0.6% ($p=0.047$). There was no difference in A1c. Severity of DKA in newly diagnosed diabetes was unaffected ($p=0.833$). Only 3 patients tested positive for COVID19.

Conclusions: This is the first study investigating pediatric diabetes cases hospitalized in central Brooklyn during the height of the pandemic. Hospitalization rates of T2DM and new onset T1DM and T2DM increased, despite overall pediatric admissions declining in 2020. Active COVID19 infection did not appear to affect patients who had been admitted for diabetes.