the institutional review boards. **Results:** Two hundred and six diabetic patients were seen: 72 (35%) in person, 49 (24%) phone visit, and 85 (41%) VDO visit. Mean age for patients adopted in person visit was 57 (SD 15) years, phone visit was 68 (SD 13) years and VDO visit was 54 (SD 18) years, *p <0.001*. Male percentage for in person, phone and VDO visit was 44%, 59% and 61% respectively, *p 0.09*. New consult visit percentage for in person, phone and VDO visit was 7%, 2% and 5% respectively, *p 0.46*. Percentage of patients using insulin pump or continuous glucose monitoring for in person, phone and VDO visit was 33%, 43% and 54%, respectively, *p 0.03*. Baseline HbA1c was done in 89% (64/72) in person, 45% (22/49) phone and 52% (44/85) VDO visit. Among patients who had baseline HbA1c, average HbA1c was 8.6% (SD 1.8) for in person visit, 8.0% (SD 1.1) for phone visit and 8.1% (SD 1.8) for VDO visit, *p 0.25*. At 3 months, HbA1c was done in 38% of patients who had in person visit, 36% phone visit, and 43% VDO visit. Among patients who had 3 month follow up HbA1c, HbA1c ≤ 8% was achieved in 50%, 61% and 69% for in person, phone and VDO respectively, *p 0.56*. Mean 3 month follow up HbA1c was 8.1% (SD 1.3), 7.7% (SD 0.9) and 7.8% (SD 1.6) for in-person, phone and VDO visit respectively, *p 0.47*. Comparing mean HbA1c in patients who had both baseline and 3 month follow up HbA1c, changes were significant for in person visit 9.1% to 8.1% (p 0.01) and VDO visit 8.7% to 7.6% (p 0.01). No significant change in 3 month follow up HbA1c was observed in phone visit, 7.7% to 7.6% (p 0.88). **Conclusions:** This retrospective study showed that during the COVID-19 pandemic, no differences in short term HbA1c outcome (3 month follow up mean HbA1c and percentage of patients who achieved HbA1c ≤ 8%) were observed among patients who adopted in-person and telehealth visit. Patients who adopted phone visit appeared to be older; and there was more diabetic technology usage (insulin pump or continuous glucose monitoring) among patients who adopted telehealth (phone and VDO) compared to in person visit.

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Proportion of Patients With HbA1c Corresponding to Prediabetes and Diabetes Ranges Without Previous Diagnosis in a Covid-19 Unit in Mexico City

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Mexico has been one of the most affected countries by COVID-19, with case rate of 1195.32 per 100,000 patients and one of the highest mortality rates worldwide. Diabetes has been found a major risk factor for severe COVID-19. Mexico has a high prevalence of diabetes, estimated around 10.3%. On top of this, recent estimates suggest that 4.1% of the population has diabetes but does not have a proper diagnosis. We conducted a retrospective study in patients hospitalized for COVID-19 in tertiary private hospital in Mexico City from March 15th to July 10th, 2020. We classified patients as having diabetes or prediabetes if it was registered in the electronic medical record. Patients were classified as newly diagnosed diabetes if they had an HbA1c on admission greater or equal than 6.5%. A total of 144 measurements of HbA1c were done on non-diabetic patients. Eighteen patients (12.5%) had a level of HbA1c equal or higher than 6.5%, while 70 (48.6%) patients had a level between 5.7% and 6.5%. Of the patients with HbA1c levels suggesting prior diabetes, 9 (50%) of them did not have hyperglycemia (>140 mg/dl) on admission. Our findings suggest that Mexican patients with COVID-19 might need HbA1c measurements regardless of glucose levels on admission since unknown diabetes is frequent and might modify in-hospital glucose management and discharge follow up and treatment.

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Study of Patients' Characteristics and Mutual Impact Between Covid-19 and Hyperglycemia at a Community Hospital in Central Brooklyn

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Background: Studies have shown that poorly-controlled hyperglycemia worsens the outcomes in patients with COVID-19 (C-19) and C-19 may damage pancreatic islets via ACE2 receptors causing acute hyperglycemia. The major population we serve at Kingsbrook Jewish Medical Center (KJMC) are underprivileged with many of them having multiple comorbidities. **Methods:** This is a retrospective study wherein patients, admitted from February 2020 to April 2020 with hyperglycemia, were selected and divided into 2 groups based on presence or absence of C-19. Data include demographics, comorbidities, blood glucose level, serum osmolality, serum bicarbonate, anion gap, acute kidney injury (AKI), serum creatinine, ICU admission, length of stay (LOS) and mortality. Data were analyzed using descriptive study and T-test. **Results:** 100 patients were included in the C-19 group (CG) and 88 patients were included in the Non C-19 group (NCG). Major comorbidities were similar in both groups including HTN, DM, CKD followed by ESRD. Mean age of patients (years) was 65.68 in CG and 61.17 in NCG. 61% were male in CG and 53.41% were male in NCG. 16% and 9% developed DKA and HHS in CG, and 13.64% and 6.82% developed DKA and HHS in NCG respectively. 15% in CG had combined DKA & HHS and 3.41% had same in NCG. Mean blood glucose level (mg/dl) was 541.6 in CG and 460.0 in NCG (p=0.03). Mean serum osmolality (mOsm/kg) was 335.7 (SD±41.01) in CG and 317.1 (SD±30.54) in NCG (p=0.01). Mean serum bicarbonate (mEq/L) was 17.73 (SD±6.31) in CG and 21.46 (SD±5.94) in NCG (p<0.0001). Mean anion gap was 17.93 (SD±7.6) in CG and 13.10 (SD±7.2) in NCG (p<0.0001). 56% in CG and 37% in NCG developed AKI respectively (p=0.01). Mean serum creatinine (mg/dl) was 4.22 in CG and 1.65 in NCG (p=0.004). 55% of CG were admitted to

ICU and 34% of NCG were admitted to ICU (p=0.003). Median LOS (days) in discharged patients was 8 in CG and 5 in NCG (p=0.02). Mortality was 40% in CG and 3.41% in NCG (p<0.0001). 12 patients in CG and 2 patients in NCG developed new-onset diabetes. In the subset of DKA, interestingly, mean age (years) was 61.63 (SD±17.73) in CG and 39.67 in NCG (SD±13.39) (p=0.001). **Conclusion:** In our study, patients in the CG carry worse laboratory parameters, unfavorable clinical outcomes and strikingly higher mortality. We discovered increased incidence of new-onset diabetes and elderly DKA in CG. In an inner city population like ours, the burden of DM with significant social and health care disparities is quite severe. Diabetic patients with concurrent C-19 infection can have particularly negative outcomes and C-19 possibly damages the pancreatic islets resulting in acute hyperglycemic crisis. Further research on larger population is required. **References:** (1)https://dx.doi.org/10.1016%2Fj.diabres.2020.108142(2) https://doi.org/10.2337/dc20-0723(3)https://www.nejm.org/doi/full/10.1056/NEJMc2018688

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Sugar Is Not Always Sweet: Exploring the Relationship Between Hyperglycemia and COVID-19 in a Predominantly African American Population

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Introduction: A relationship between hyperglycemia and outcomes in patients with COVID-19 has been proposed, however there is a paucity of literature on this. In this study, we examined the effect of admission glucose in diabetics and non-diabetics on outcomes in patients hospitalized with COVID-19. Our study uniquely examines this association in a largely African American cohort, a population disproportionately affected by COVID-19.
Methods: In this retrospective cohort study, we analyzed all adults admitted with COVID-19 to a designated COVID hospital in Brooklyn, NY from March 1 to May 15, 2020. Diabetics were compared to non-diabetics, and were further stratified based on admission glucoses of 140 and 180 mg/dL. Diagnosis of diabetes was based on history and/or Hba1c > 6.5%. Univariate, multiple and logistic regressions were used for analyses, examining outcomes of mortality, intubation, ICU admission, acute kidney injury (AKI), and length of stay based on admission glucose levels, while controlling for age, gender, lab values (serum creatinine and WBC), and comorbidities including *hypertension, cardiovascular disease,* and *obesity.* Outcomes are presented as an adjusted odds ratio (OR) with 95% confidence interval (95% CI).
Results: 708 patients were analyzed; 54% diabetics, 83.5% non-Hispanic Blacks, 51% male with a mean age of 68, BMI of 29 kg/m^2 and crude mortality rate of 40%. The length of hospital stay was greater in diabetics than non-diabetics, (13±26 days vs 9.5±18.5 days, p<0.05). *Diabetics* with an admission glucose > 140 mg/dL (vs<140 g/dL) had a 2.4-fold increased odds of both intubation and ICU admission (95% CI: 1.2, 4.5; 1.3, 4.6). *Diabetics* with admission glucoses > 180 mg/dL (vs <180 g/dL) had a 1.8-fold increased mortality (95% CI: 1.2, 2.9). *Non-diabetics* with admission glucoses >140 mg/dL (vs<140 g/dL) had a two-fold increased mortality (95% CI: 1.2, 3.5), 3.5-fold increased odds of ICU admission (95% CI: 1.8,6.6) and a 2.3-fold increased odds of both intubation and AKI (95% CI: 1.3, 4.2; 1.3,4.2). *Non-diabetics* with a glucose >180 mg/dL (vs <180 g/dL) had a four-fold increased mortality (95% CI: 1.8, 8.8), 2.7-fold increased odds of intubation (95% CI: 1.3, 5.6) and 2.9-fold increased odds of ICU admission (95% CI: 1.3, 6.2).
Conclusion: Our results show hyperglycemia portends worse outcomes in diabetics and non-diabetics with COVID-19. Elevated admitting glucoses >180 mg/dL increased odds of mortality four-fold in non-diabetics and 1.8- fold in diabetics. In COVID-19, diabetic patients had a 37% greater length of hospital stay than non-diabetics. Whether hyperglycemia is a marker or a cause of more severe COVID-19 is unknown. These findings suggest that patients presenting with hyperglycemia require closer observation and more aggressive therapies. This raises the testable hypothesis that intensive glucose control may improve outcomes in patients with COVID-19.

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The Impact of Diabetes and African American Race in COVID-19 Severity

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Introduction: COVID-19, an illness caused by the novel coronavirus usually presents as a mild to moderate flu like illness, but can lead to pneumonia, acute respiratory distress syndrome and death in some patients. Since the onset of the COVID-19 pandemic there has been special attention towards patients with diabetes. Not only is diabetes highly prevalent in patients with COVID-19, but diabetes has been reported as a significant predictor of morbidity and mortality. Furthermore, race seems to be a predictor of severity with black people dying at 2.3 times the rate of white people. **Methods:** Here we performed a retrospective study of 524 cases of COVID-19 at an academic center in Chicago between March 2020 until August 2020. Data were obtained from patients that consented to the study to examine the relationship between diabetes, BMI, age, and race with degree of COVID-19 severity. Not all patients had all clinical and demographic data available. COVID-19 severity was determined using a severity index obtained from the measured SpO2 divided by the FiO2/fraction of inspired oxygen times 100. Numbers ≥ 315 mmHg were defined as low severity with patients generally requiring outpatient care, while 235–314 mm Hg were classified as moderate severity generally requiring inpatient care and≤ 234 mm Hg