Dietary adherence was better with participants exhibiting increased consumption of vegetables (80.9%), fruits (42.7%), and decreased unhealthy snacking (63%). 90% of them had access to medications during lockdown. There was significant change noted in the mean HbA1c (0.9- 1.45%) and body weight (1–3.5kgs) before and after lockdown. There was a great increase in Screen time attributing to Work from home and restrictions to move out. 63.6% of them spent time with their family members. Those with prior mental stress,poor sleep and unhealthy dietary habits had worsening glycemic control as seen in those with less physical activity and an unhealthy diet. An increasing trend of utilisation of health related mobile internet technology apps were noted.

Conclusion: Lockdown did cause a major change in the overall glycemic control. Measures to promote healthy lifestyle practices along with ways to reduce psychosocial stress must be implemented for better T2D management during such restricted times. Telemedicine paved a greater way and scope of continuum of Diabetes care.

Diabetes Mellitus and Glucose Metabolism
COVID-19 AND DIABETES

Characterization of Patients With Type 2 Diabetes Mellitus and COVID-19

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The coronavirus is a pathogen that mainly attacks the human respiratory system Previous coronavirus outbreaks (CoV) include severe acute respiratory syndrome (SARS), the clinical spectrum of COVID19 is very broad ranging from mild symptoms to ARDS to multiple organ failure and death. A history of DM2, advanced age and other comorbidities are considered predictors of higher morbidity and mortality, it is also known that blood glucose and DM levels are independent predictors of morbidity and mortality in patients with SARS. It should be remembered that patients with DM2 suffer from a chronic low grade inflammation that could facilitate the cytokine storm which in turn would be the cause of severe cases of COVID 19 pneumonia and the eventual death of many patients. Glucocorticoids have a stimulating and inhibitory effect on the immune response according to the moment in which it is administered and its circulating levels insulin therapy has been shown to decrease inflammation. For the control of glycemia the objectives must be individualized. Glycemic and individualized targets for non critical hospitalized patients have been established by different scientific societies such as ADA and AACE and Endocrine Society. In Honduras the protocol for the clinical management of adult patients with COVID 19 was developed to establish and standardize timely treatment in patients with suspected or confirmed COVID 19 which consists of the MAIZ scheme and the MAIZ scheme AAA. A retrospective longitudinal descriptive study was carried out with a review of the data obtained from 32 patients diagnosed with DM2 and

COVID19 during the months of June through September 2020 at the CAMI Comprehensive Medical Care Clinic located in the city of Tegucigalpa Honduras collecting epidemiological and clinical data. The results of the research show that of the 32 patients with DM2 and COVID 19, 59% (19) belong to the male gender and 41% (13) to the female gender, with an average age of 60 years. In the COVID19 severity classification the evaluated patients presented in the following condition mild 25% (8), moderate 69% (22) and severe 6% (2). The diagnostic method used was detection of anti SARS CoV2 antibodies 56% (17) and TR-PCR 43% (14). 75% (24) received steroids, 8.69% (2) of the patients who used steroids in their management had hyperglycemia and required management with regular insulin. 100% (32) of the patients who were treated recovered without registering any death. **Conclusions:** are that the pathophysiological factors of DM2 in relation to the immune system of patients can be a determining factor to present a degree of severity greater than that presented by the general population that falls ill with COVID19. Adequate glycemic control can determine a better prognosis in the evolution of the disease despite its degree of severity.

Diabetes Mellitus and Glucose Metabolism
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Clinical Characteristics and Outcomes Among COVID 19 Hospitalized Patients in a Community Hospital in New York City

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Background: COVID-19 has disproportionally affected communities of color in the US. These communities exhibit higher prevalence of chronic preventable disease including type 2 diabetes mellitus (DM2) and obesity. DM2 and obesity have been linked to higher morbidity and mortality in the setting of COVID-19 infection (1).

Methods: We query data collected from 521 patients with laboratory-confirmed Covid-19 infection admitted to an inner-city community hospital in Brooklyn, New York between March 20 2020 and May 15 2020. Demographics, pre-infection medical comorbidities, laboratory data at admission and clinical outcomes including in-hospital mortality were analyzed.

Results: Patients were 61 years on average (+/-17.2), 42.8% were female, 53.9% were Hispanic and 33% were

African-American. Most common comorbidities included: hypertension (62%), chronic kidney disease (20.8%), diabetes (45 %). Mean BMI was 29.9 (+/- 8.2). Among patients with no prior diagnosis of diabetes mean A1c was 5.8% (+/-1.2) and 8.7 (+/-2.5) amongst those with a previous diagnosis of diabetes. Patients hospitalized with moderate to severe COVID-19 infection and a previous diagnosis of DM2 had significantly higher prevalence of CKD and HTN. Amongst those with T2DM, 19.1% presented with DKA. After adjustment for age, gender, race, BMI and creatinine obese patients, compared with normal-weight patients had significantly higher mortality rate (BMI > 30 kg/m^2 [OR: 2.29, CI: 95%, P-value: <0.002]) however this association was not observed for DM2 ([OR: 1.25, CI: 95%, P-value: <0.002]).

Conclusion: Our cohort represents a particular population affected by the first wave of Covid-19 infection in an urban inner-city community in NYC. The population studied had a larger proportion of African-American, Hispanic and younger patients compared to national averages; these differences are related to the demographics of the communities served by our hospital. Obesity is a negative prognostic factor in the course of Covid-19 infection in comparison to normal-weight patients. Obesity is a proinflammatory condition, associated with high levels of prothrombotic factors including angiotensin-II, also elevated in COVID-19. Understanding that link may yield valuable knowledge on the role obesity plays in numerous disease states beyond COVID-19. **References:**(1). Sabin ML, et al. *Lancet.* 2020;395(10232): 1243–44.(2). Hussain A, et al. *Obes Res Clin Pract.* 2020; 14(4): 295–300.

Diabetes Mellitus and Glucose Metabolism
COVID-19 AND DIABETES

Clinical Effectiveness of a Protocol to Manage Deamthasone-Induced Hyperglycemia Among Hospitalized Patients With COVID-19

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Importance: Well-controlled glucose levels during hospitalization (*i.e. 70–180 mg/dl*) have been associated with lower mortality in patients with COVID-19. The recent addition of dexamethasone to COVID-19 treatment protocols has raised concerns about the negative metabolic consequences of dexamethasone including hyperglycemia. We developed a simplified, yet comprehensive, protocol to guide the management of dexamethasone-induced hyperglycemia in hospitalized patients with COVID-19.
Objectives: To present our protocol for the management of dexamethasone-induced hyperglycemia and examine its clinical effectiveness in the real world.
Methods: An algorithm-based protocol that outlines all aspects of the inpatient management of dexamethasone-induced hyperglycemia in COVID-19 patients, from time of admission to discharge including guidance on insulin titration, was disseminated to the COVID-19 teams in our

hospital. Medical records of 163 patients admitted between June and September, 2020 who tested positive for COVID-19 and developed dexamethasone-induced hyperglycemia were reviewed. Fasting, pre-lunch, pre-dinner and bedtime glucose levels during the first five days of admission and day of discharge were compared between the 47 patients who were managed "*Pre-Protocol*" implementation and the 116 patients who were managed "*Post-Protocol*" implementation.
Results: On admission, there were no significant differences in age, proportion of women, BMI, prevalence of diabetes, and Charlson score between the "*Pre-Protocol*" and "*Post-Protocol*" groups (56 *vs* 56 years old, 30 *vs* 32% women, 28 *vs* 29 kg/m^2, 45 *vs* 35% with diabetes, and 2 *vs* 2 median Charlson scores; respectively, *all p>0.05*). The "*Post-Protocol*" group had higher proportions of patients with well-controlled glucose (i.e. 70–180 mg/dL) compared to the "*Pre-Protocol*" group, across all pre-meals and bedtime glucose readings throughout the hospital stay. The differences between the "*Post-Protocol*" and "*Pre-Protocol*" groups were statistically significant (*p<0.05*) for fasting glucose on day 4, 5, and discharge day; pre-lunch glucose on discharge day; pre-dinner glucose on day 3, 5, and discharge day; and bedtime glucose on day 1. In regression analyses adjusted for age, sex, nationality, BMI, Charlson score, and diabetes status, the odds ratios of having well-controlled glucose were significantly higher in the "*Post-Protocol*" group versus the "*Pre-Protocol*" group for fasting glucose on day 4, 5, and on discharge; pre-lunch glucose on day 5 and on discharge day; pre-dinner glucose on day 3 and 5; and bedtime glucose on day 1.
Conclusion: The implementation of a simplified protocol for the management of dexamethasone-induced hyperglycemia in hospitalized patients with COVID-19 results in more patients achieving well-controlled glucose levels that have been previously associated with lower mortality of COVID-19.

Diabetes Mellitus and Glucose Metabolism
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Complications and Outcomes in Patients With Diabetic Ketoacidosis and COVID19

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Introduction: COVID-19 infection caused by the novel coronavirus SARS-CoV-2 has been associated with new-onset diabetes and diabetic ketoacidosis. There are currently limited reports observing the effect of COVID-19 infection on outcomes in patients hospitalized with diabetic ketoacidosis (DKA). **Methods:** This retrospective study used electronic medical records, between March 1, 2020 to September 14, 2020, and included patients aged ≥ 18 years with DKA. Clinical characteristics, hospital course, and complications (ICD-10 codes) were compared between patients admitted with DKA and confirmed COVID-19 infection (COVID+) to those with DKA without COVID-19