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## Background

- During the COVID-19 pandemic, the time spent in sedentary activities increased.
- The sedentary lifestyle may exacerbate the metabolic comorbidities in youth with overweight and obesity.
- The progression of metabolic comorbidities in youth with overweight and obesity during the COVID-19 pandemic has not been well investigated.
- **Objective:** To evaluate the metabolic comorbidities of youth with overweight and obesity during the COVID-19 pandemic.

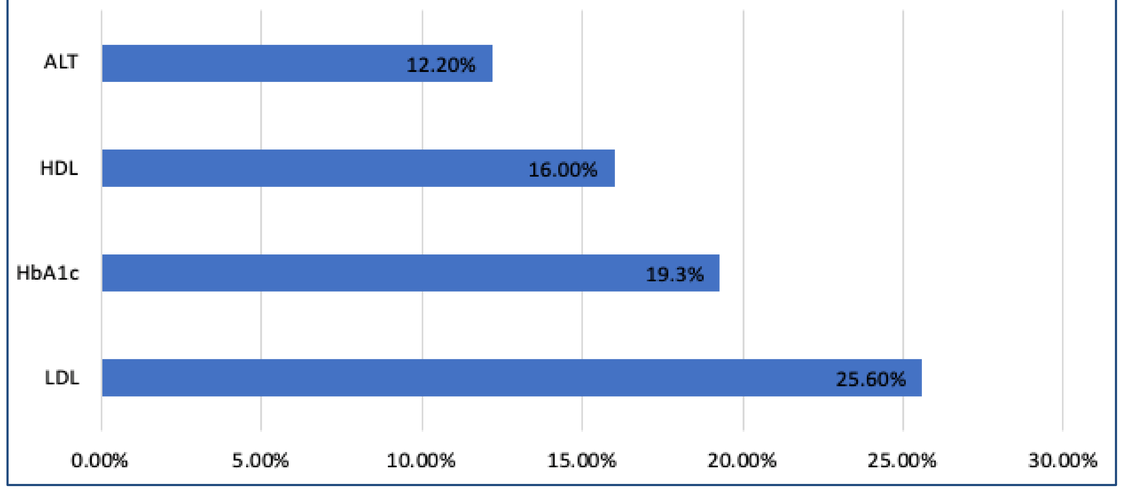
## Methodology

- A retrospective chart review was conducted of youths seen in a pediatric endocrinology clinic for type 2 diabetes prevention.
- Age, sex at birth, race, type of insurance, BMI, and laboratory results (HbA1c, LDL, HDL, ALT) were collected pre-pandemic and post-pandemic onset.
- Fisher's exact or Chi-squared test and t-test were used to evaluate metabolic comorbidities and demographics traits.

## Results

- A total of 74 patients were assessed with mean pre-pandemic age of 12.5 years and was 56.8% female, 39.2% white and 59.2% publicly insured.
- The overall mean BMI increased from 2.5 (37.1 kg/m2) pre-pandemic to 2.6 (39.8 kg/m2) post-pandemic, although the increase was not statistically different (p=0.45).

Figure 1. Frequency of Progression of Metabolic Comorbidities




- HbA1c progression was significantly seen in older youths with mean age of 14.1 years as compared to those without HbA1c progression with mean age of 12.3 years (p=0.04).
- LDL progression was more common in Hispanic race (83.3%) as compared to other races (p=0.01)
- Those with HbA1c progression were more likely to have LDL progression (p=0.03).

## Summary

- Progression of metabolic comorbidities among youth with overweight and obesity were common during the COVID-19 pandemic despite no significant increase in BMI.
- HbA1c progression was more common in older youths with overweight and obesity during the COVID-19 pandemic.
- LDL progression was more common among Hispanic youths with overweight and obesity during the COVID-19 pandemic.
- There was a strong correlation between HbA1c progression and LDL progression.

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## Author's Disclosure

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