The prevalence of underlying medical conditions associated with severe COVID-19 symptoms among a multi-ethnic group of uninsured patients in South Florida: A Pre-Pandemic Analysis

Roshan Bransden, Innah Lachica, Kevin Gates, Tarah Anasseri,
Zafar Qureshi, MD, Sarah Stumbar, MD, MPH, Sahar Ajabshir, PhD

Background

- Florida continues to be a national hotspot for COVID-19
- Over 40 percent of the state's confirmed cases have been in South Florida.
- Due to multiple factors including high rates of underlying medical conditions and limited access to health care, minority and socioeconomically disadvantaged groups are among the hardest hit by the pandemic.
- In order to address the health disparities experienced by South Florida's racially and ethnically diverse communities, there is an urgent need to understand the prevalence of factors predisposing these patients to severe COVID-19 symptoms.

Objective

- The aim of this study was to assess the prevalence of underlying medical conditions associated with severe COVID-19 symptoms among a multi-ethnic group of uninsured patients in South Florida.

Methods

- This retrospective study analyzed data from 272 adult patients, seen at a single clinic during a 4-week period.
- The conditions that lead to severe COVID-19 illness as reported by the CDC were identified.
- These conditions are: Heart failure, cancer, chronic kidney disease, COPD, obesity, solid organ transplant, type 2 diabetes mellitus, asthma, cerebrovascular disease, hypertension, pregnancy, smoking, and use of corticosteroids or immunosuppressants.
- Excel was used to create a list of conditions for each patient, alongside the patient's age, demographics, anthropometrics, vital signs and laboratory results. All categorical variables, such as gender, ethnicity, and race, were coded into numerical values.
- SPSS software was used to analyze the dataset. Descriptive statistical analysis was used for sample characteristics.

Results

Table 1. Baseline characteristics

Characteristics	Value
Age (n=272)	49 years
Gender	
Female (n=177)	65%
Male (n=95)	35%
Race	
Whites	26.5%
Blacks	33.8%
Asian/Asian-Indians	35.6%
Other	4.1%
Ethnicity	
Hispanic/Latino	24.0%
BMI (n=250)[1]	29 kg/m²

[1]Body Mass Index

Table 2. Prevalence of 1≤ underlying medical condition within subgroups

Characteristic	Rate
Age	
Below 65	63%
65 and older	79.4%
Gender	
Female	61%
Male	73%
Race	
Black	68.9%
Asian/Asian-Indian	68%
White	56.9%
Ethnicity	
Non-Hispanic	69%
Hispanic	53.8%

- The mean age was 49 years. The mean BMI was 29 kg/m².
- The highest rates of underlying medical conditions were found among Blacks (68.5%), followed by Asians/Asian-Indians (68%), and Whites (56.9%).
- Non-Hispanic Blacks and Asians/Asian-Indians had the highest rate of underlying medical conditions among all ethnic/racial groups (69% and 68.9%, respectively).

- Overall 65.1% of patients had at least one underlying medical condition associated with severe COVID-19 symptoms.
- Males had higher prevalence of underlying medical conditions compared to females (73% vs. 61%).
- Hypertension (39%) was the most observed underlying condition, followed by obesity (36%), and type 2 diabetes (24%).

Table 3. Most prevalent underlying conditions present in the sample

Condition	Rate
Hypertension	39%
Obesity	26%
Type 2 Diabetes	24%

Conclusions

- The results of this study revealed a high burden of underlying medical conditions associated with severe COVID-19 symptoms among minority and socioeconomically disadvantaged patients in South Florida.
- Larger studies are required to confirm these results. Appropriate public health interventions are needed to target the burden of underlying medical conditions among vulnerable communities in South Florida.
- Improved access to health care among this patient population enables clinicians both to treat and to educate patients with these underlying conditions about their risk, may help prevent severity of their disease course.

Acknowledgements

- This research was supported in part by FIU Research Center in Minority Institutions (RCMI) and the Center for Research on US Latino HIV/AIDS and Drug Abuse (CRUSADA).

CLaRO
Center for Latino Health Research Opportunities
University of Miami | Florida International University

CRUSADA
Florida International University

FIU Research Center in Minority Institutions
Florida International University