

Detrimental Impact of Social Determinants of Health on Hospitalized Patients with COVID-19



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Introduction

- Sars-COV-2, the virus responsible for COVID-19, has a diverse clinical presentation and course
- Studies on different populations suggest that COVID-19 has underscored health outcome disparities among minorities
- However, data on the particular social determinants which contribute to such health outcomes in hospitalized patients with COVID-19 is scarce

Objective

To examine the relationship between various social determinants of health such as ethnicity, financial class, primary language, age and zip code on the course and progression of COVID-19 infections.

Methods

Study design and setting:

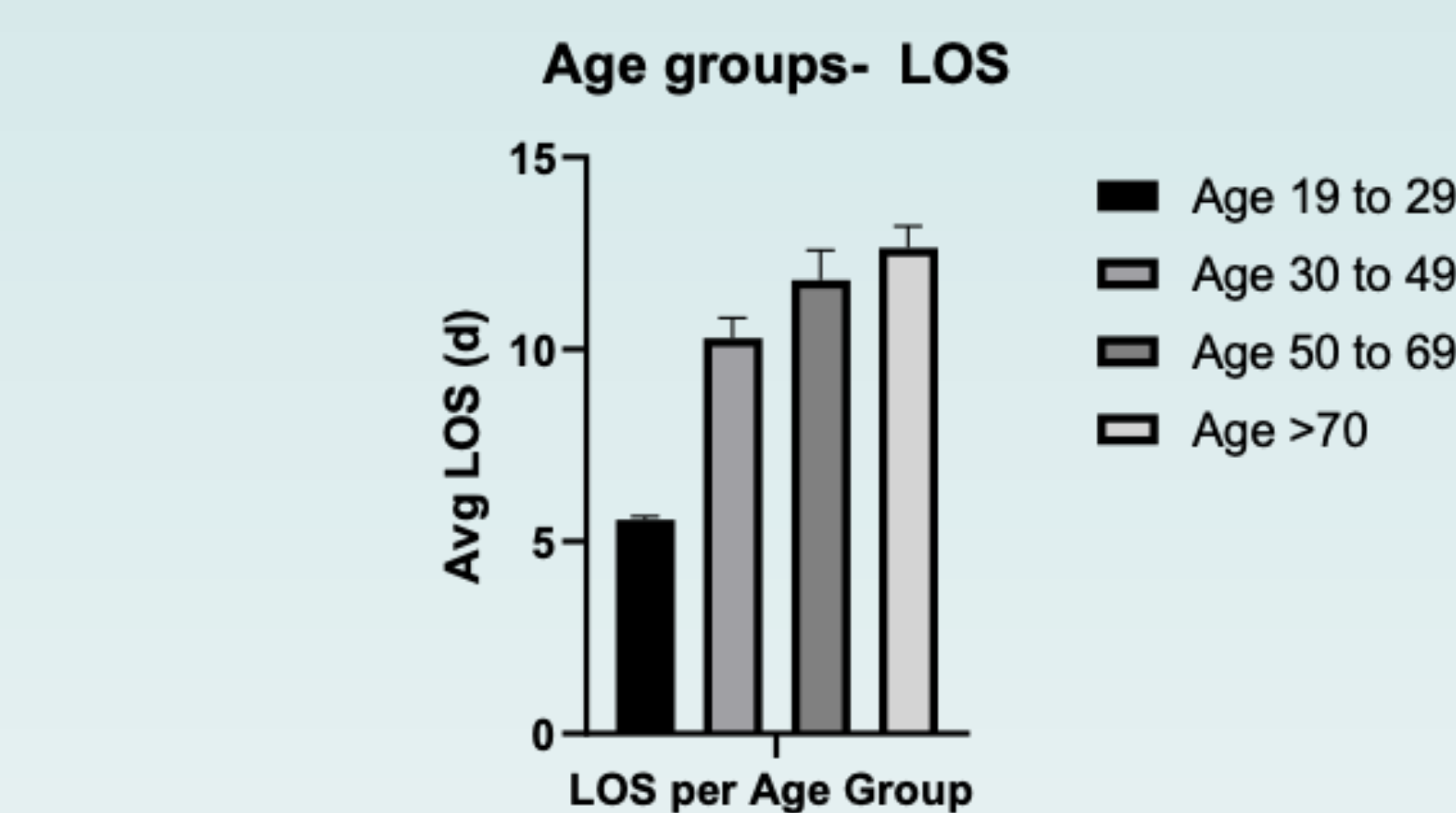
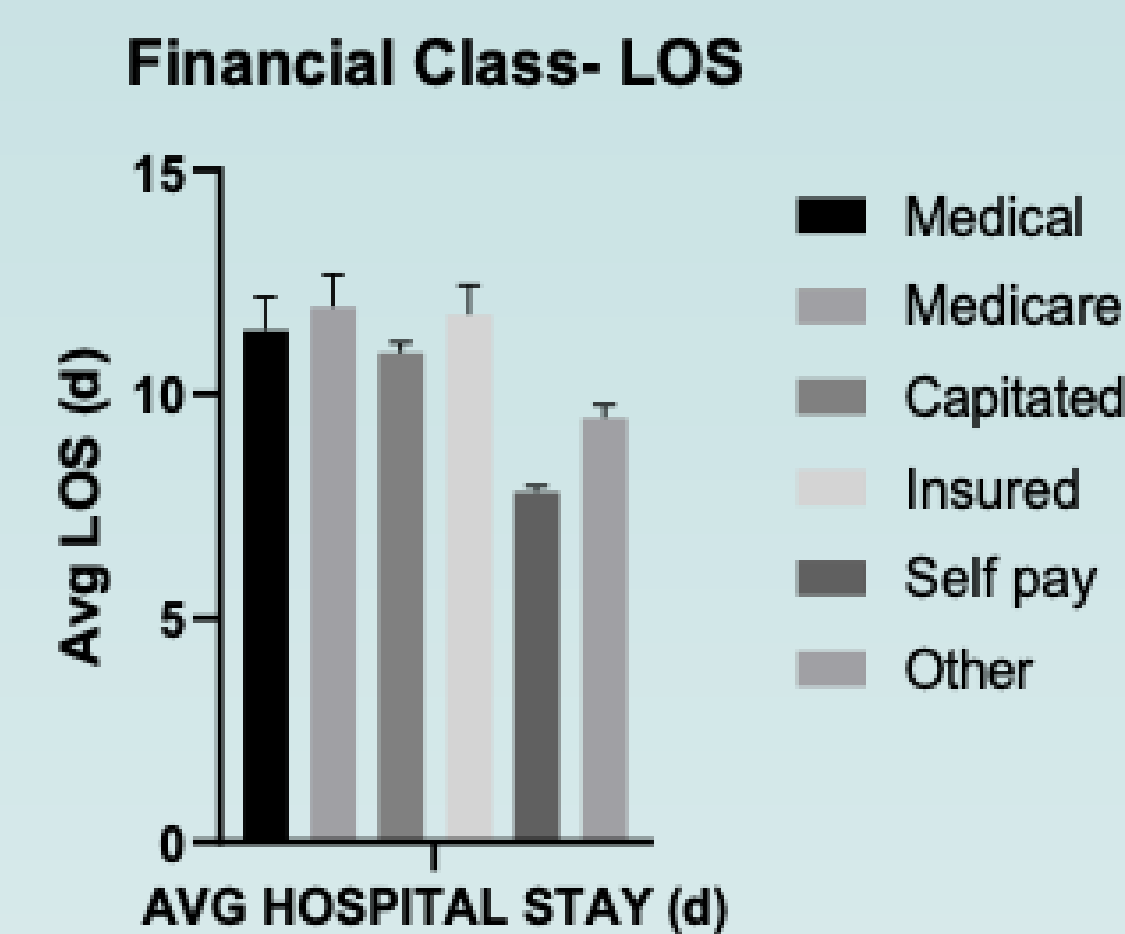
- Retrospective cohort analysis of data from patients who tested positive for the coronavirus admitted to the Emanate Health hospital system across all three campuses at Queen of the Valley Hospital, Inter-Community Hospital and Foothill Presbyterian Hospital.
- Data extracted from hospital electronic medical records (EMR) and analyzed for zip code, financial class, ethnicity, primary language and age as related to length of stay and mortality rate.

Participants:

- Patients (18 years of age or older) admitted to the Emanate Health hospital system in the San Gabriel Valley between 3/17/20-6/30/20 (n=400) who tested positive for COVID-19.

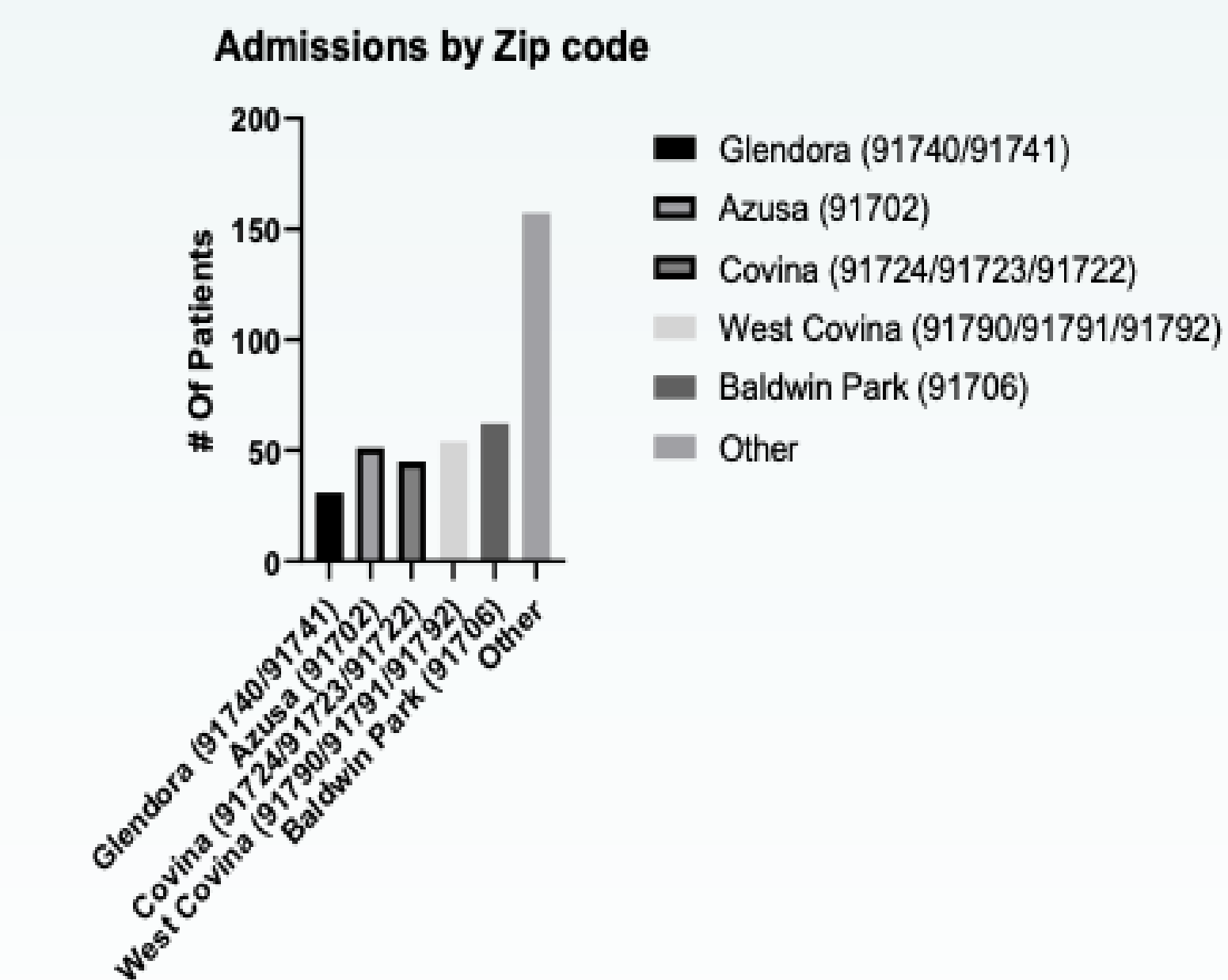
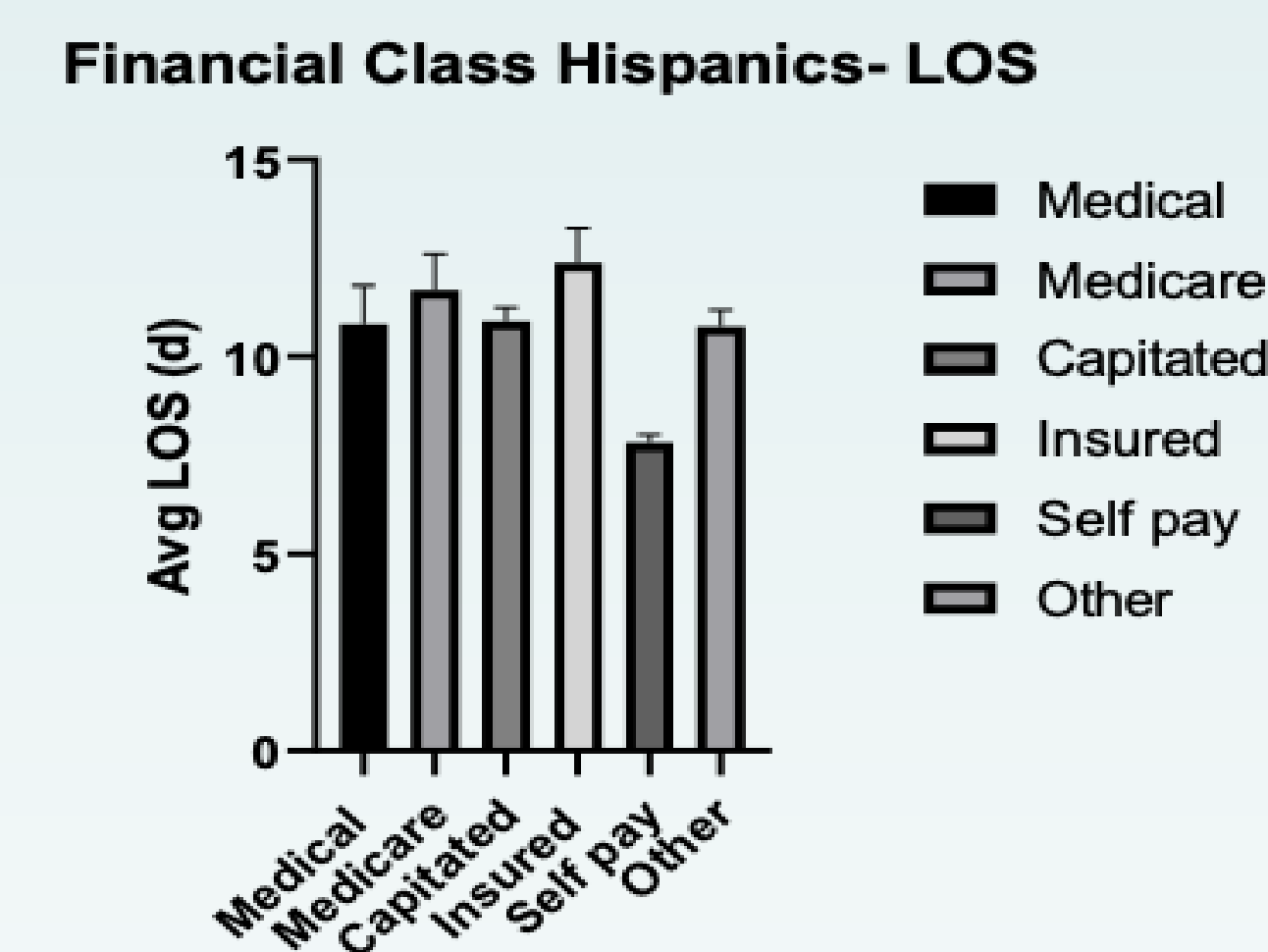
Results

The hospital length of stay and ICU admission for patients of different financial classes (MediCal, Medicare, capitated insurance, insured, self pay, other) was statistically significant.



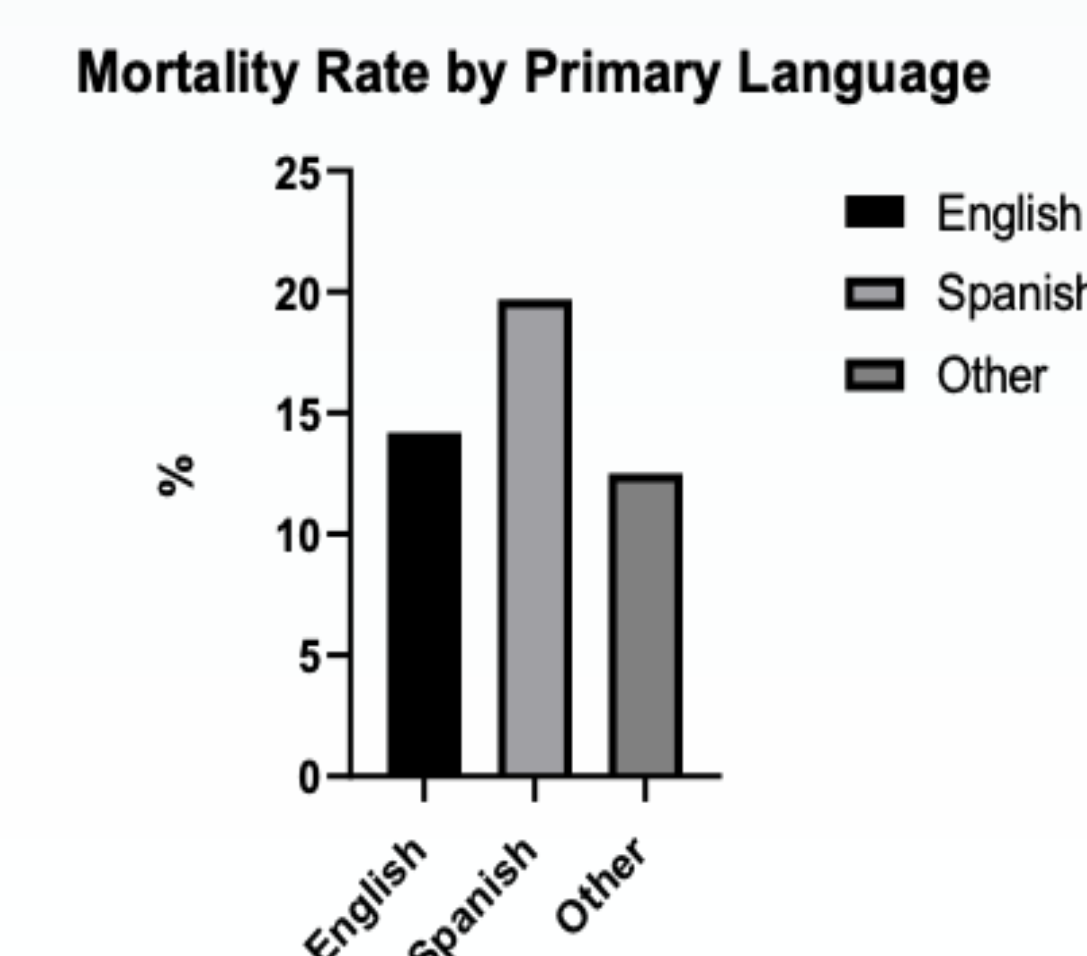
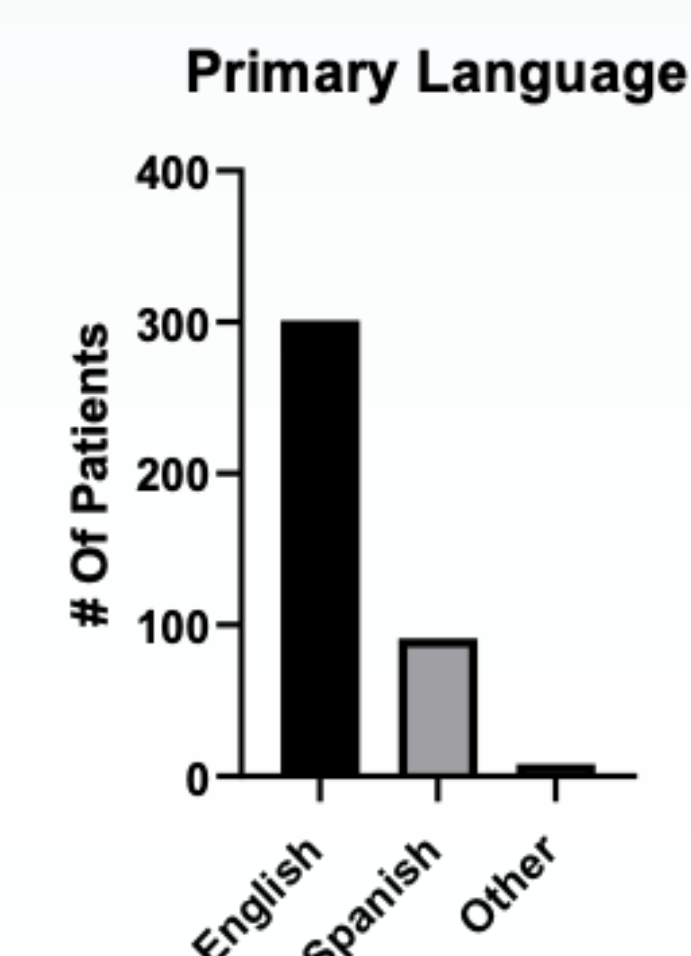
The hospital length of stay increased with age and was statistically significant when grouped by ages 19-29, ages 30-49, ages 50-69 or ages 70+.

The average length of stay for Hispanics when classified by financial class was statistically significant. The average length of stay for Non-Hispanics when classified by financial class was also statistically significant.



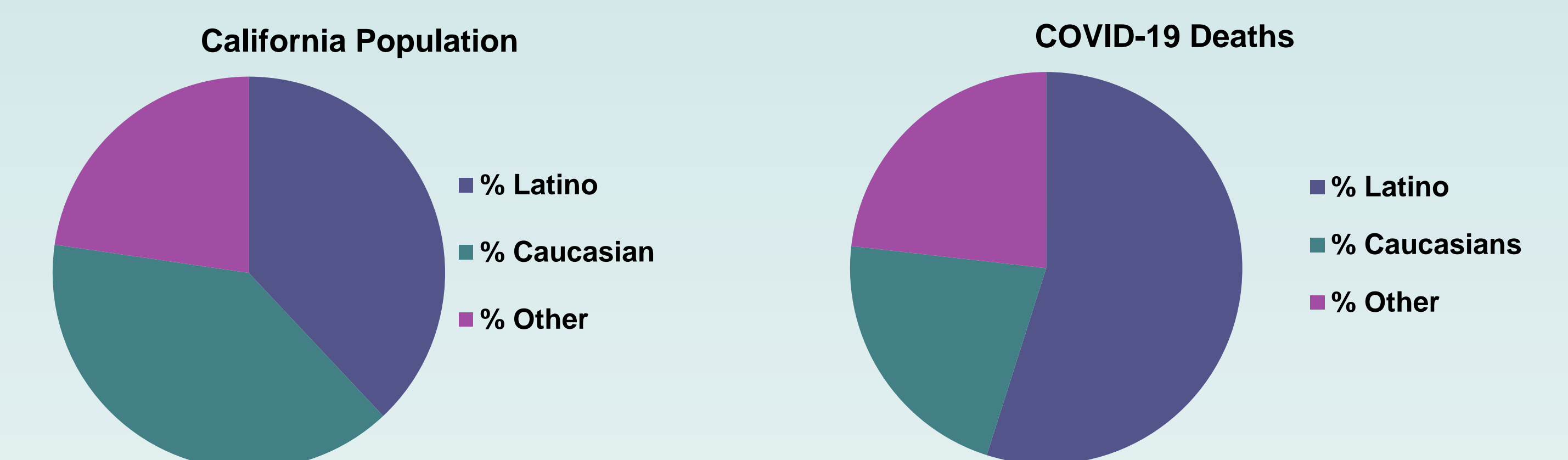
Patients admitted to the Emanate Health hospital system were grouped into five main zip codes. Baldwin Park and West Covina had the highest admissions and Glendora had the lowest hospital admissions of the group.

English was the primary language of most patients, but the mortality rate was higher for patients whose primary language was Spanish.



Discussion

- Latinos are 2.5 times more likely to die from COVID-19 infections across the country when adjusted for age in comparison to Caucasians.
- California is 39.3% Latino, but Latinos make up 54.9% of COVID-19 cases and 46.1% of deaths in the state as of January 2021. This is in comparison to Caucasians who constitute 38% of the state's population and 21.9% of deaths.



- Adequate access to healthcare has been demonstrated in the literature as a social disparity causing health inequities. 9.3% of the San Gabriel Valley population was diagnosed with type II diabetes in 2017 compared to 12.1% of the population of LA County, but more patients (3.7%) were hospitalized with uncontrolled diabetes when compared to LA County overall (3.4%).
- Uncontrolled diabetes exacerbating the pathophysiologic effects of COVID-19 infections in these patients may be a potential contributor, given the compared higher admission rate with uncontrolled diabetes and lower diagnostic rate of the chronic condition.
- COVID-19 further exposed the gaps in health equality among different socioeconomic groups and the need to address these social determinants of health that have historically prevented these groups from having the same opportunities for health.

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