

Disparities among COVID-19 Mortality: Individuals with Pre-Existing Diabetes

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Background

- Around 28.7 million people in the US are diagnosed with diabetes, with another 8.5 million people left undiagnosed. In total this accounts for 11.3% of the US population, a statistic that is expected to grow significantly due to rising percentages of pre-diabetics in our nation.²
- Diabetics have a higher risk of being immunocompromised than the general population, thus it is crucial to investigate these populations in relation to COVID-19.
- In prior research, comorbidities were present in almost half of inpatients with COVID-19, with hypertension being the most common, then diabetes and coronary heart diseases.⁶
- Possible reasons for why diabetics have high mortality rates when contracting diseases are comorbidities, impaired tissue perfusion, and impaired immune function.¹

Objectives

- To identify disparities in COVID-19 mortality among individuals with diabetes.
- To measure how disparities among COVID-19 mortality are related to certain age groups of diabetics in the US Population.

Methods

- This is an ongoing cross-sectional study conducted by the CDC. Data collection began in January 2020. The study team from UCSD reviewed the data set between April and May 2022. The dataset contained 3,374,016 deaths from COVID-19.
- The design of the original study providing the data is ongoing with current death metrics updated weekly. The data begins on January 1st, 2020 and is taking place in the US where data is broken down by state, age and pre-existing conditions. This project will focus on the US as a whole so we will be using the numbers for that category.

Results

Figure 1: Age Distribution for COVID-19 Mortality amongst Diabetics

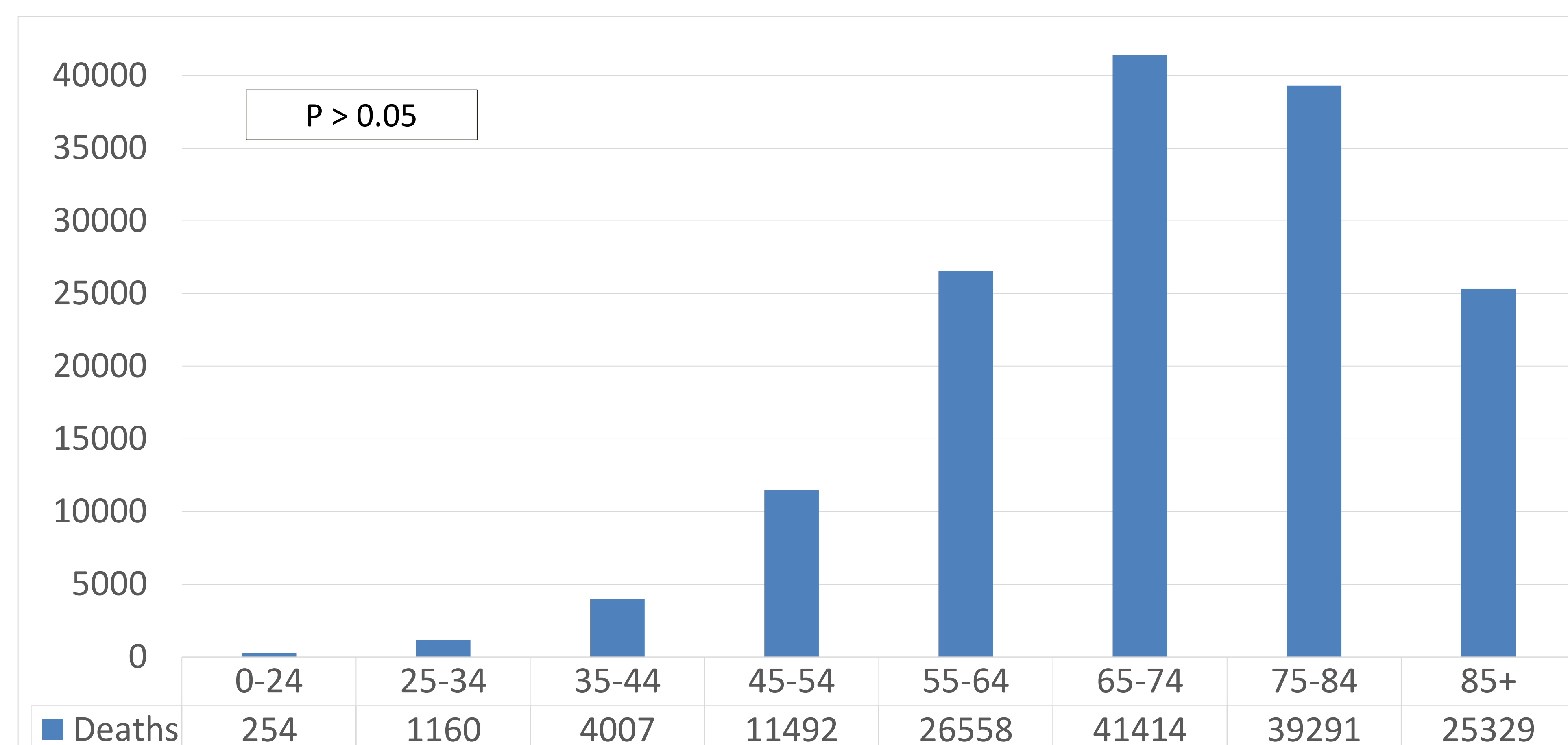
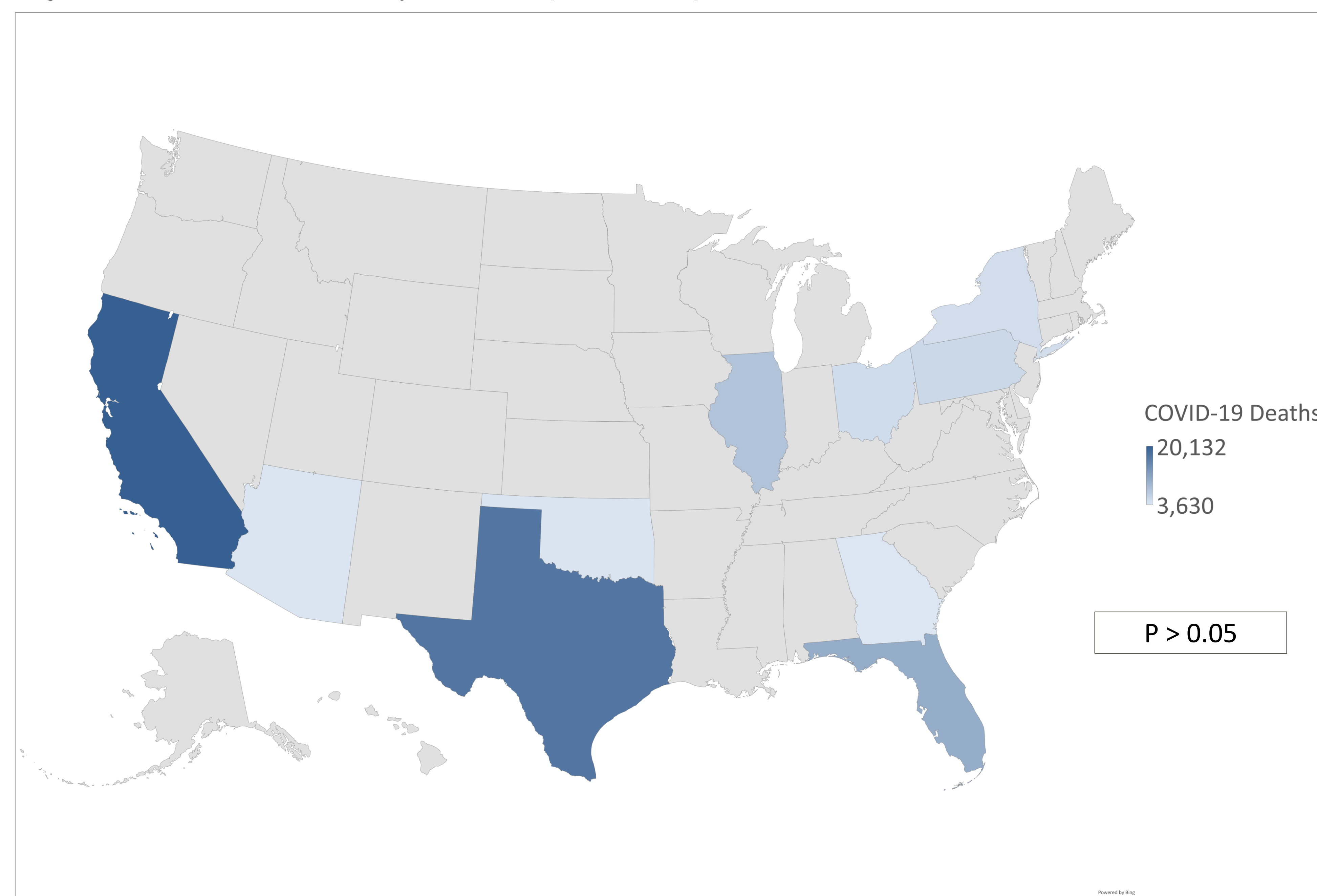


Figure 2: COVID-19 Deaths Top 10 States (2020-2022)



Conclusions

- Based on the findings, there is a positive association between diabetes and COVID-19.
- With the data and results, it can be concluded that there is a disparity within mortality rates of patients with diabetes.

Policy Implications

- Comprehensive strategies that target the ways in which individuals with pre-existing health conditions manage high risk of infections and diseases differently from the healthy population and relieve the extra attention with health policies to limit risk.

Acknowledgements

- Acknowledgements goes to the CDC for the availability of these records. As well as to the hospitals that are recording the numbers in their respective locations.

References

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