

COVID 19 mortality risk analysis

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What are the risk factors of dying from infections related to severe acute respiratory syndrome of coronavirus 2 (SARS-CoV-2), COVID-19?

Is it race/ethnicity?

Geographic location?

Could it be
a combination
of factors?



COVID-19 mortality by race/Hispanic Origin

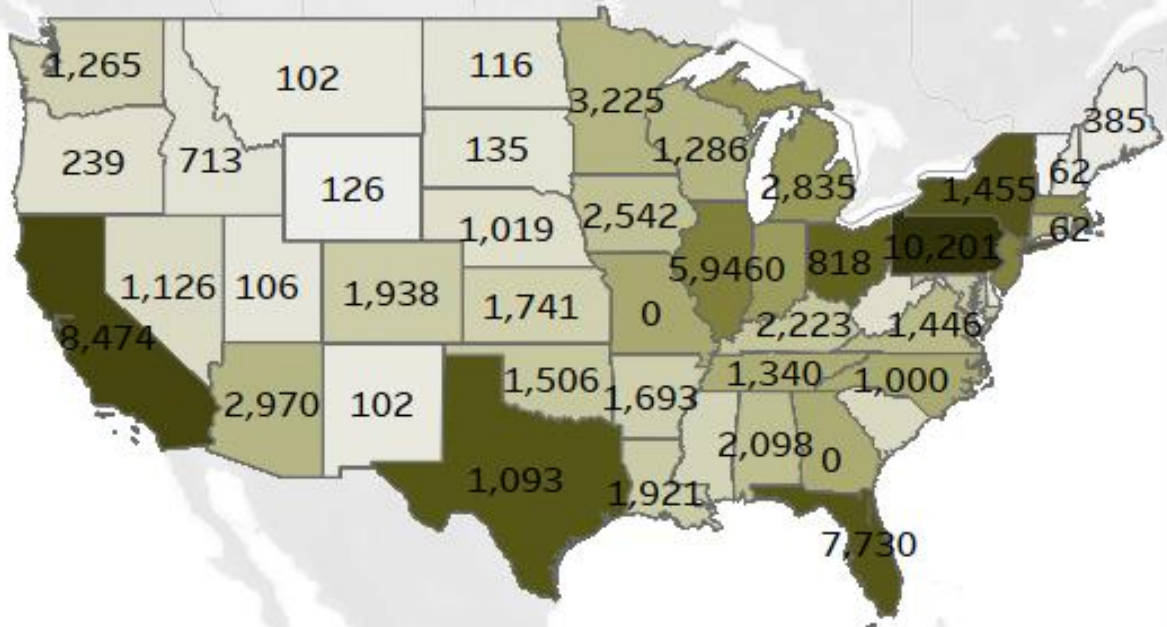
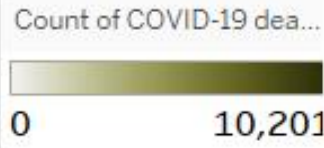


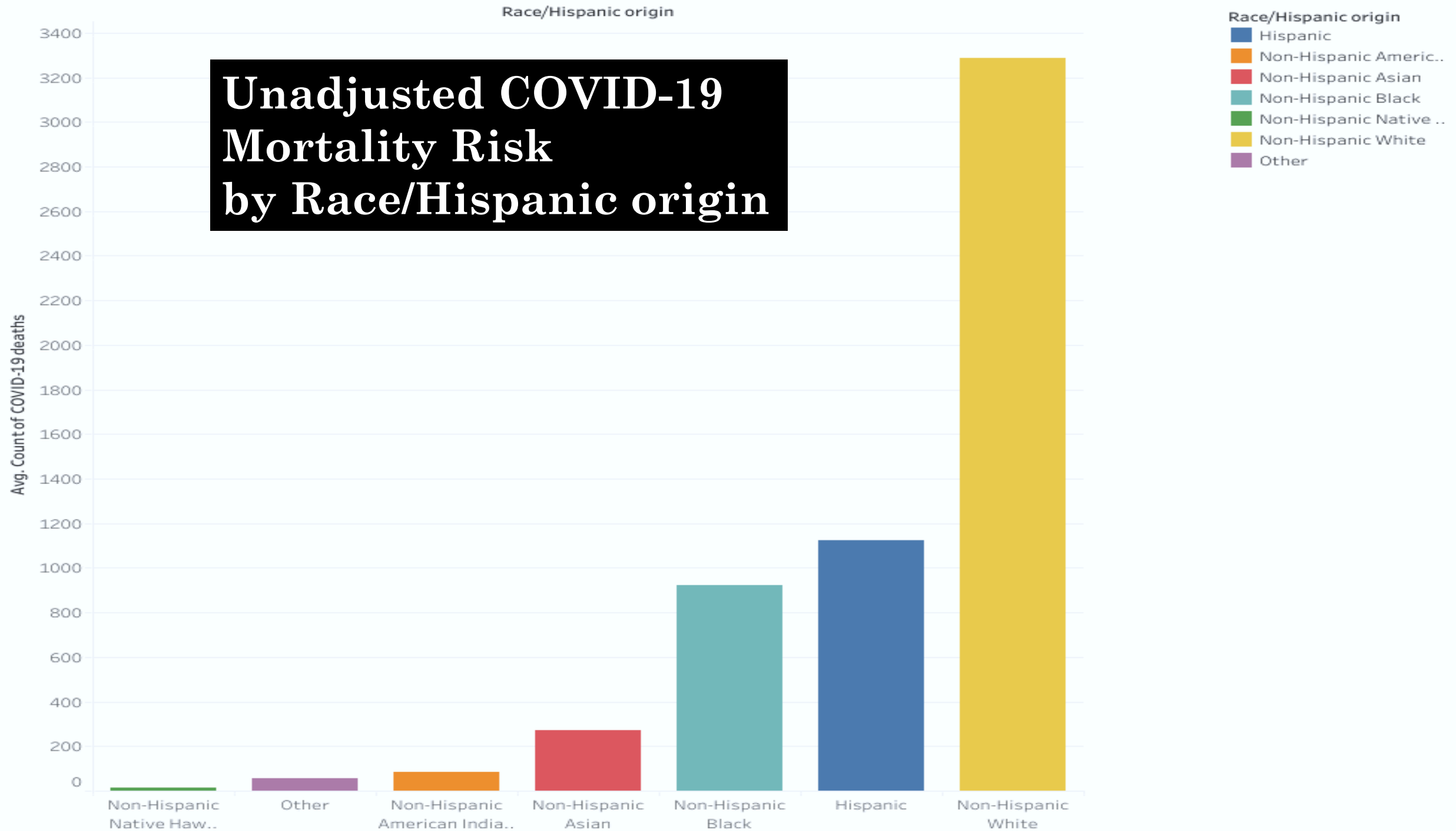
To Rank the Risk Causes
using
CDC COVID-19 Cases and Deaths by State Data

Data Source:

<https://data.cdc.gov/NCHS/Distribution-of-COVID-19-Deaths-and-Populations-by/jwta-jxbg/data>

CDC *COVID-19 Cases and Deaths by State*





Race/Hispanic origin

Race/Hispanic origin

- Non-Hispanic American Indian or ..
- Hispanic
- Non-Hispanic Black
- Non-Hispanic White
- Non-Hispanic Native Hawaiian or ..
- Non-Hispanic Asian
- Other

Adjusted COVID-19 Mortality Risk by Race/Hispanic origin

COVID-19 Mortality per Ethnic Population

800
700
600
500
400
300
200
100
0

Non-Hispanic Am..

Hispanic

Non-Hispanic Black

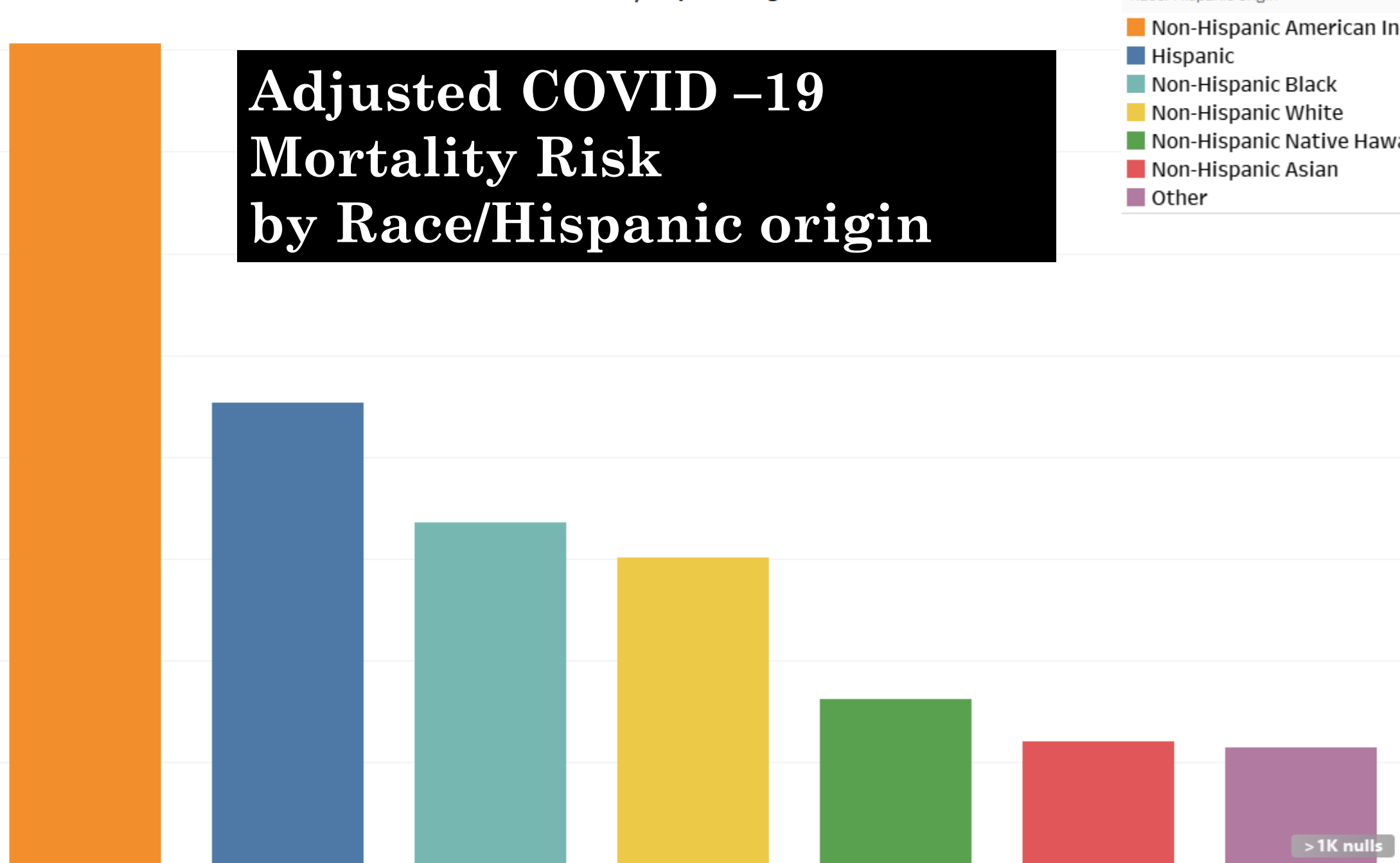
Non-Hispanic Whi..

Non-Hispanic Nati..

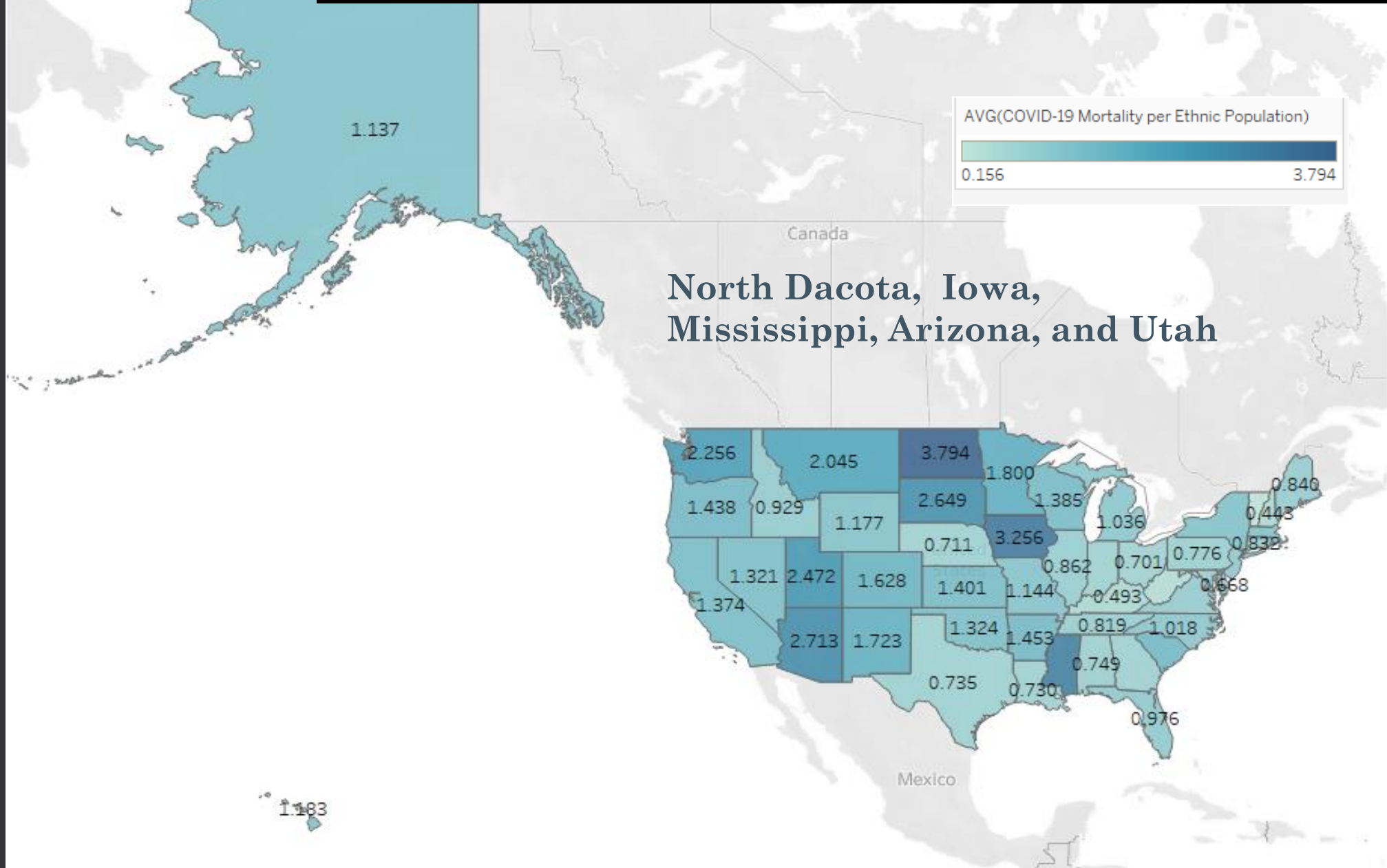
Non-Hispanic Asian

Other

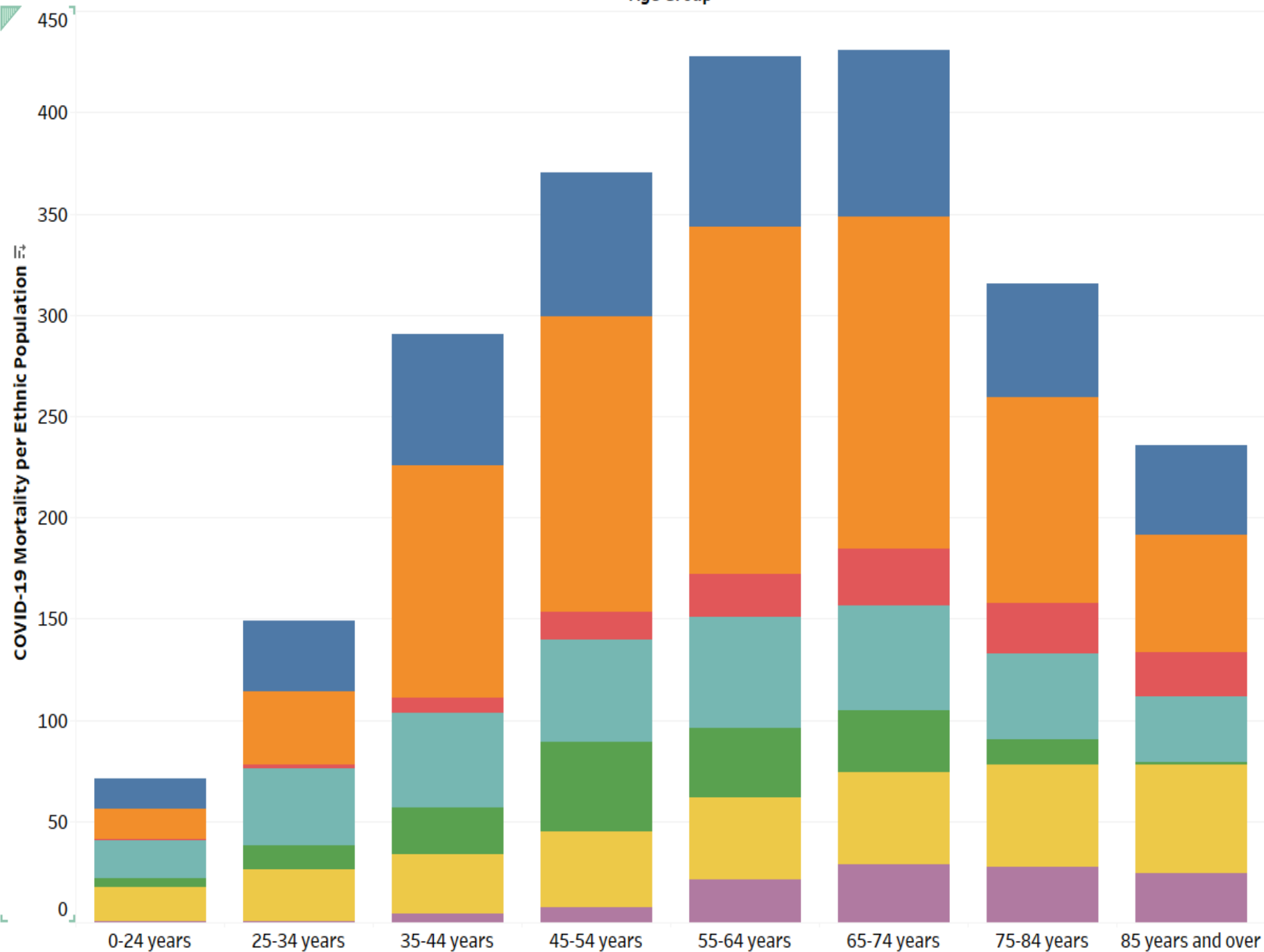
> 1K nulls



COVID -19 Adjusted Mortality



Age Group



COVID-19 Adjusted Mortality by Age and Race/Hispanic origin

Race/Hispanic origin

- Hispanic
- Non-Hispanic American Indian or ..
- Non-Hispanic Asian
- Non-Hispanic Black
- Non-Hispanic Native Hawaiian or ..
- Non-Hispanic White
- Other

Assumption

- Previous incidence reflects future risk
- COVID-19 strain is not a significant distribution factor



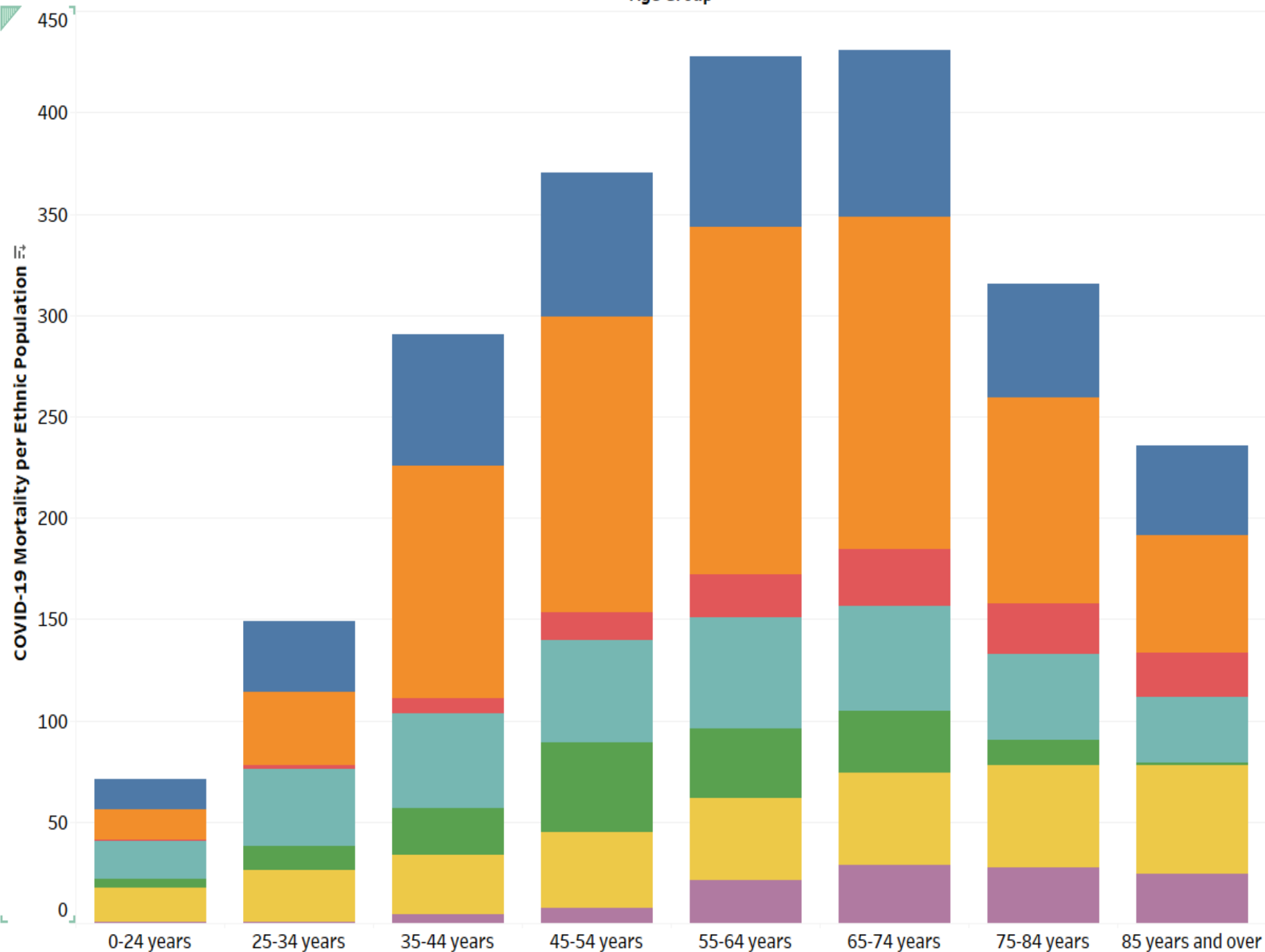
Age - Ethnicity Scatterplot



CONCLUSION

- The risk is the highest among the non-Hispanic American Indian and Alaska Native (AIAN) population
- By age, the risk increases every 10 years of age until the age of 74 y.o.
- The risk is the highest among 45-74 y.o.
 - AIAN
 - Hispanic

Age Group



Race/Hispanic Origin and Age and the risk of dying from COVID-19 associated infection

Race/Hispanic origin

- Hispanic
- Non-Hispanic American Indian or ..
- Non-Hispanic Asian
- Non-Hispanic Black
- Non-Hispanic Native Hawaiian or ..
- Non-Hispanic White
- Other

COVID-19 mortality by race/Hispanic Origin



Questions for future research

Rural areas?

Reduced access to medical centers?

A combination of factors?

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Data Source:

CDC. Distribution of COVID-19 Deaths and Populations, by Jurisdiction, Age, and Race and Hispanic Origin. Retrieved 9/1/2021

<https://data.cdc.gov/NCHS/Distribution-of-COVID-19-Deaths-and-Populations-by/jwta-jxbg>
<https://data.cdc.gov/NCHS/Provisional-COVID-19-Deaths-Distribution-of-Deaths/pj7m-y5uh>