

## INTRODUCTION

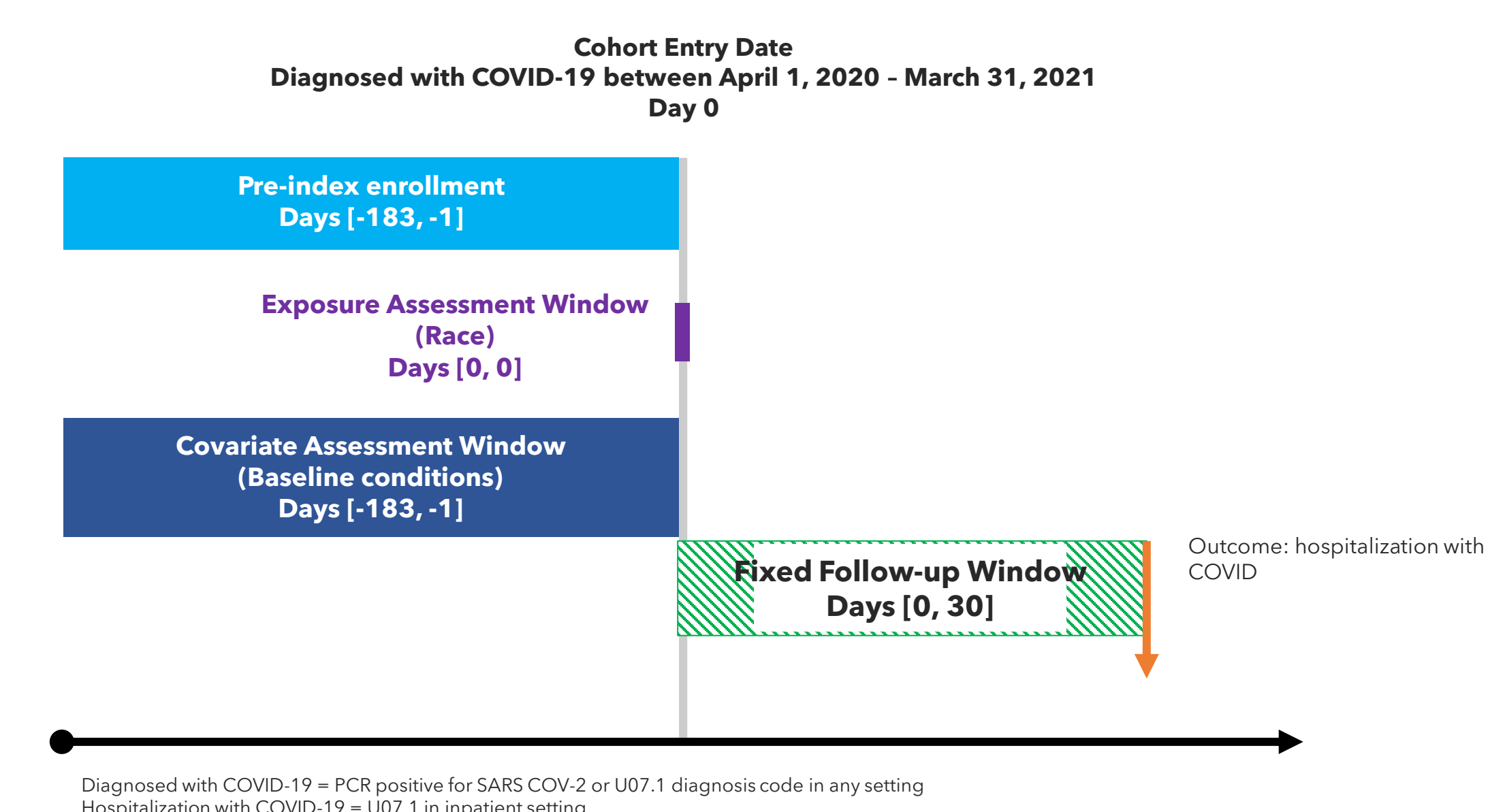
- Limited early literature showed disparities in COVID-19 outcomes, such as hospitalizations, among minoritized racial groups in the United States
- Our objective was to determine the association between self-reported race and COVID-19 outcomes after controlling for differences in demographic, clinical, and socioeconomic factors at baseline

## METHODS &amp; RESULTS

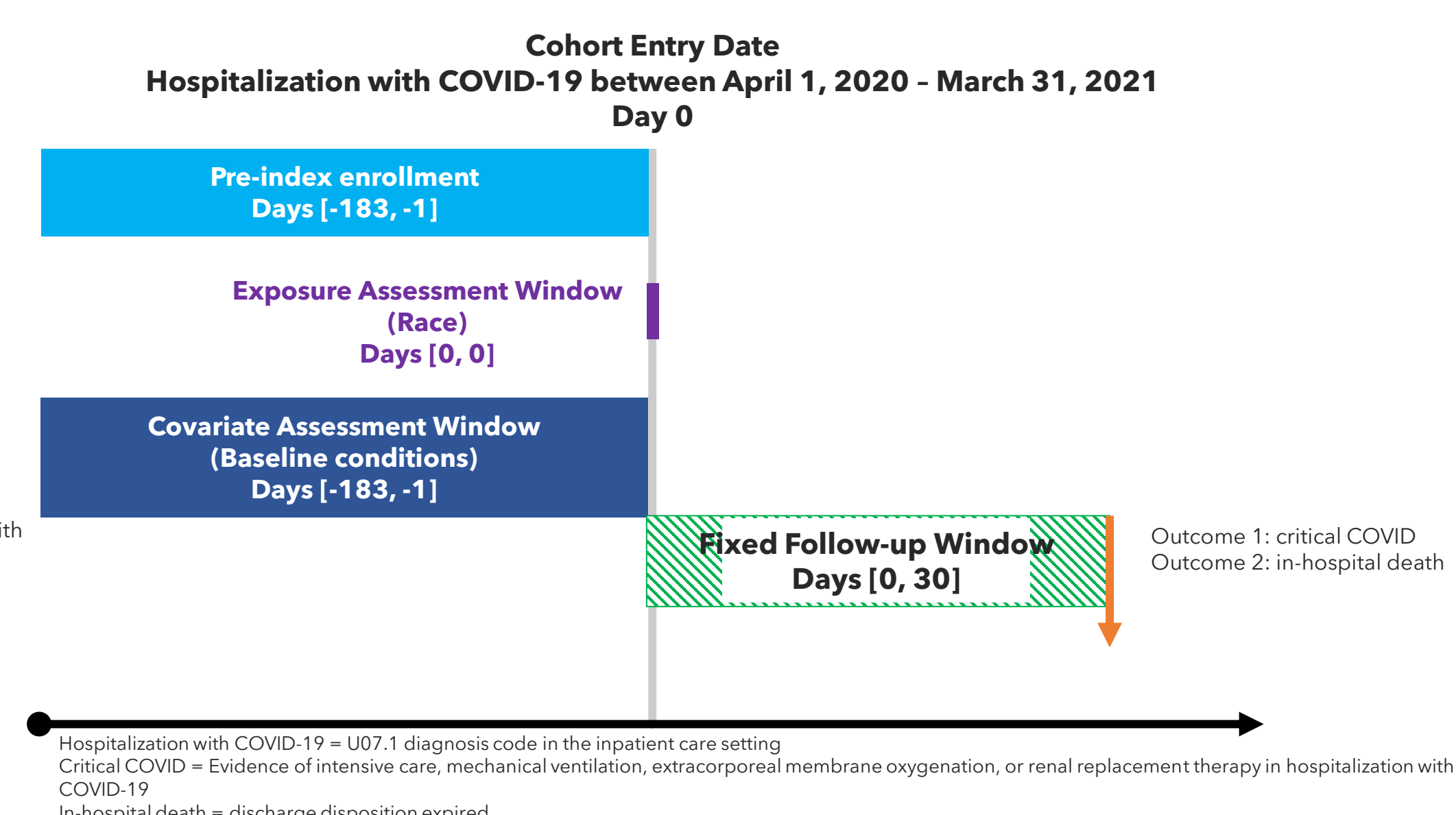
- We conducted an observational **cohort study** evaluating the occurrence of hospitalization, critical COVID, and inpatient mortality in the 30 days following COVID+ diagnosis or hospitalization with COVID using longitudinal administrative data from the **Rapid COVID-19 Sentinel Distributed Database**
- Association between race and COVID-19 outcomes was determined with White as a reference category using **multivariable logistic regression models** that controlled for demographic, clinical and socioeconomic differences at baseline
- 15.4% of COVID+ individuals were hospitalized within 30 days (highest in Black/AA\* and NHOPI<sup>†</sup>)
- 58% of individuals hospitalized with COVID developed critical COVID within 30 days of admission (highest in NHOPI<sup>†</sup> and Black/AA\*)
- 14.2% of individuals hospitalized with COVID died within 30 days of admission (highest in AIAN<sup>‡</sup> and NHOPI<sup>†</sup>)

## Study Design Diagrams

## Evaluation of outcomes following COVID+

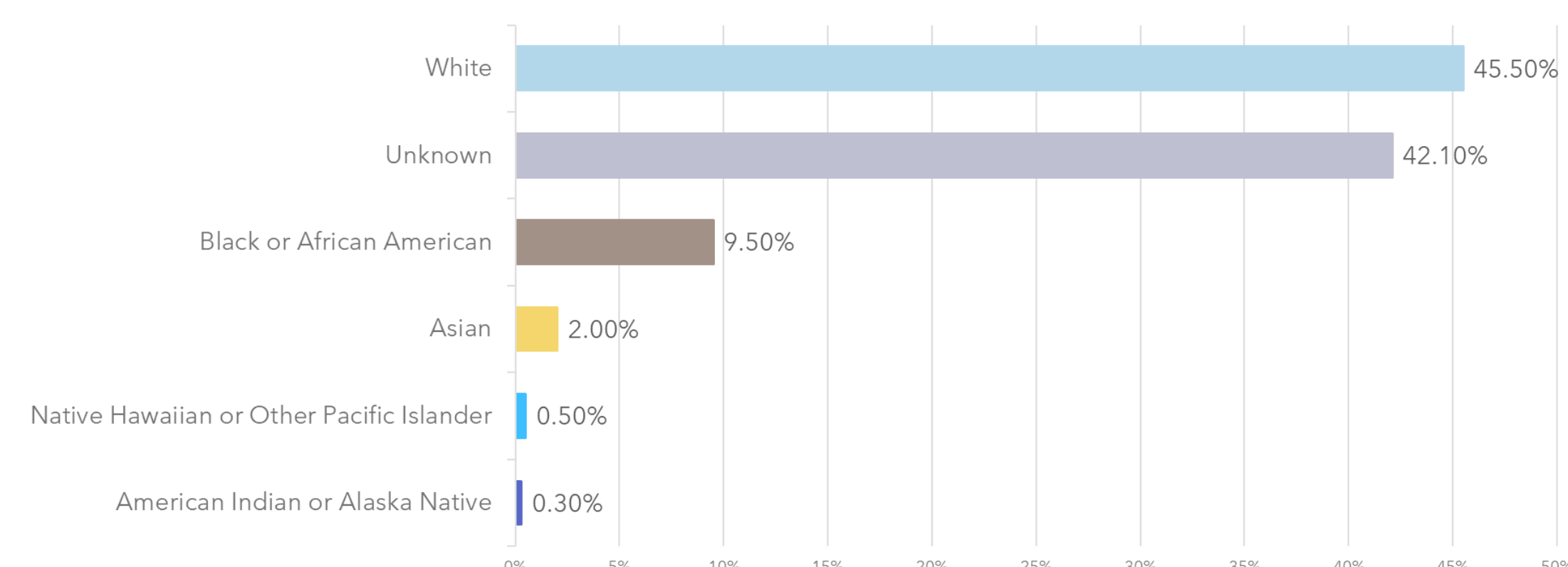


## Evaluation of outcomes following hospitalization with COVID

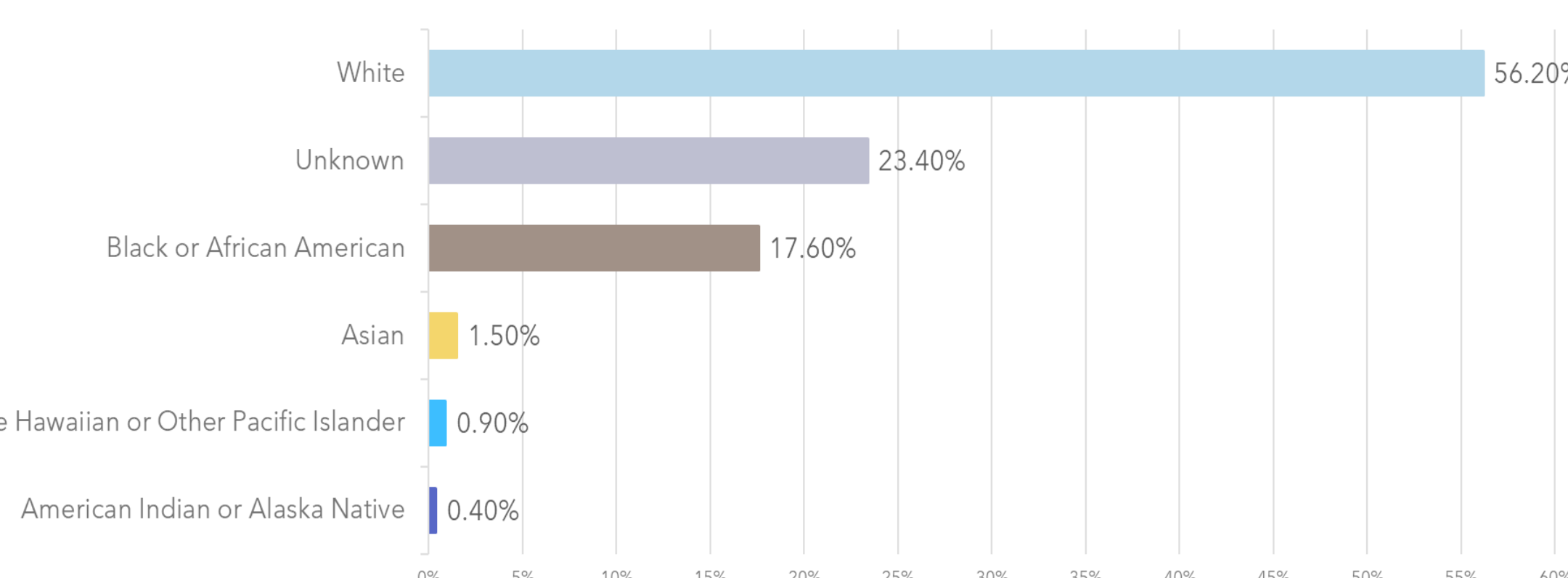


## Characteristics of Study Population

## COVID+ population (n = 841,628)



## COVID hospitalized population (n = 133,773)



- Mean age: 55.2 (oldest: NHOPI<sup>†</sup>, 66; youngest: Asian, 48.5)
- 54% female (most: Black/AA\*, 61%; least: NHOPI<sup>†</sup>, 47%)
- NHOPI<sup>†</sup> had highest prevalence of coronary artery disease, liver disease, interstitial lung disease
- AIAN<sup>‡</sup> had highest prevalence of alcohol or drug abuse
- Black/AA\* had highest prevalence of hypertension, diabetes, asthma, COPD, obesity
- Asian people lived in areas with highest household income, property value, and least unemployment

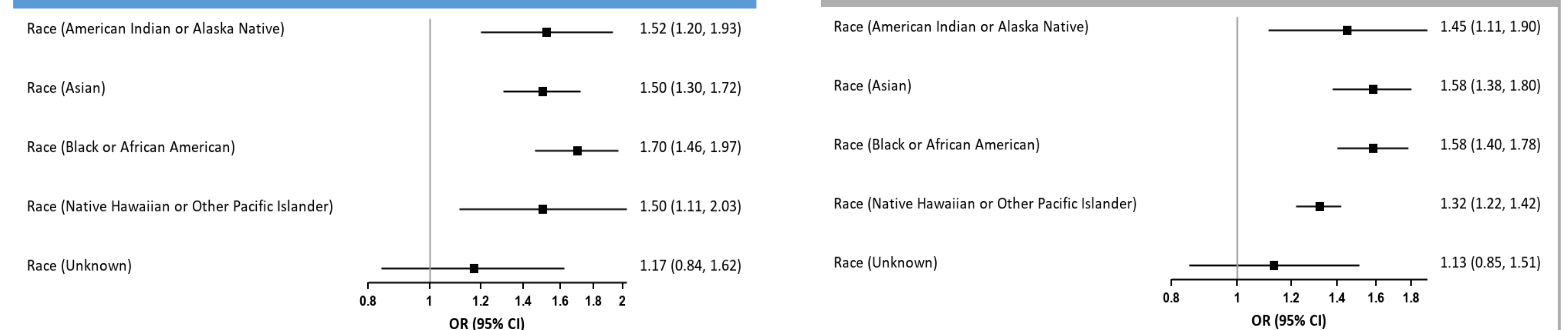
- Mean age: 71.6 (oldest: White, 75; youngest: Asian, 68)
- 49% female (most: Black/AA\*, 56%; least: NHOPI<sup>†</sup>, 37%)
- AIAN<sup>‡</sup> had highest prevalence of alcohol or drug abuse, autoimmune conditions, liver disease, pulmonary conditions
- White people had highest prevalence of coronary artery disease, COPD, smoking, neurologic conditions
- Black/AA\* had highest prevalence of hypertension, diabetes, asthma, obesity

\*AA: African American; ‡AIAN: American Indian or Alaska Native; †NHOPI: Native Hawaiian or Other Pacific Islander

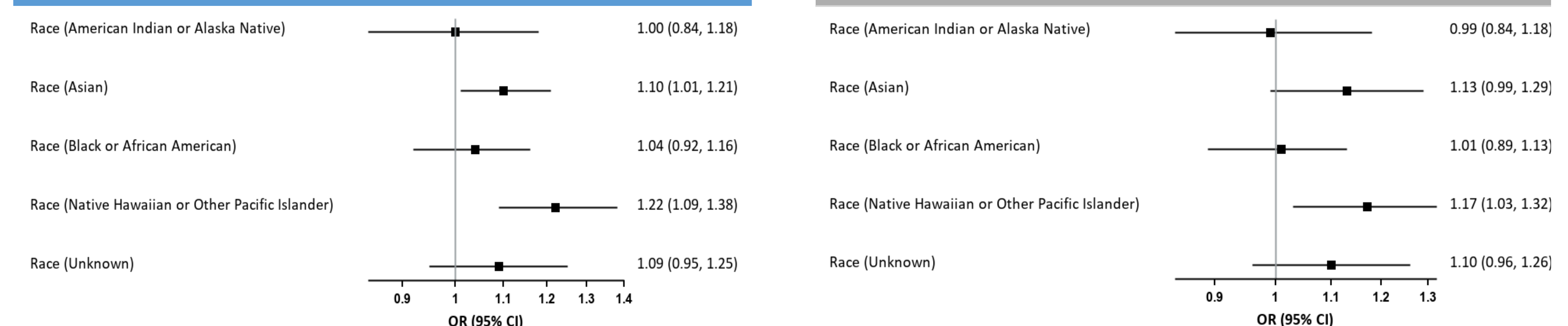
## Adjusting for demographic &amp; clinical factors

## Adjusting for demographic, clinical &amp; SES factors

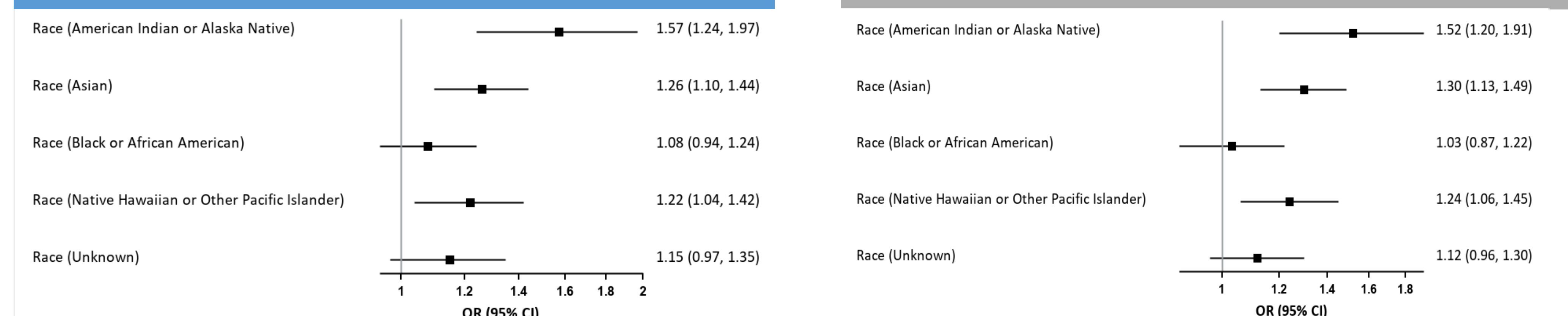
## Hospitalization with COVID-19 within 30 days of COVID-19 diagnosis or positive lab result



## Critical COVID within 30 days of COVID-19 hospitalization



## Inpatient mortality within 30 days of COVID-19 hospitalization



## ACKNOWLEDGEMENTS/DISCLOSURES

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- Efe Eworuke and Jane Baumblatt were employees of the Food and Drug Administration during the time of study conduct
- Analytic programming and full set of study results are published on the Sentinel website:



## CONCLUSION

- After controlling for demographic, clinical and socioeconomic differences at baseline, **minoritized groups** had **increased odds** for **hospitalization** and **mortality** following COVID-19 relative to their White counterparts in the United States in the first year of the pandemic

## LIMITATIONS

- Self-reported race was not known for a significant portion of the sample
- Residual confounding by socioeconomic and other clinical factors such as biomarkers not adequately captured in administrative claims data
- Data represent association between race and COVID-19 outcomes among the commercially insured population in the US