

## BACKGROUND

- From January 2020 to July 2022, COVID-19 has resulted in over 88 million US cases and over 1 million deaths. Studies conducted earlier in the pandemic reported racial differences in COVID-19 positivity and hospitalization.

## OBJECTIVE

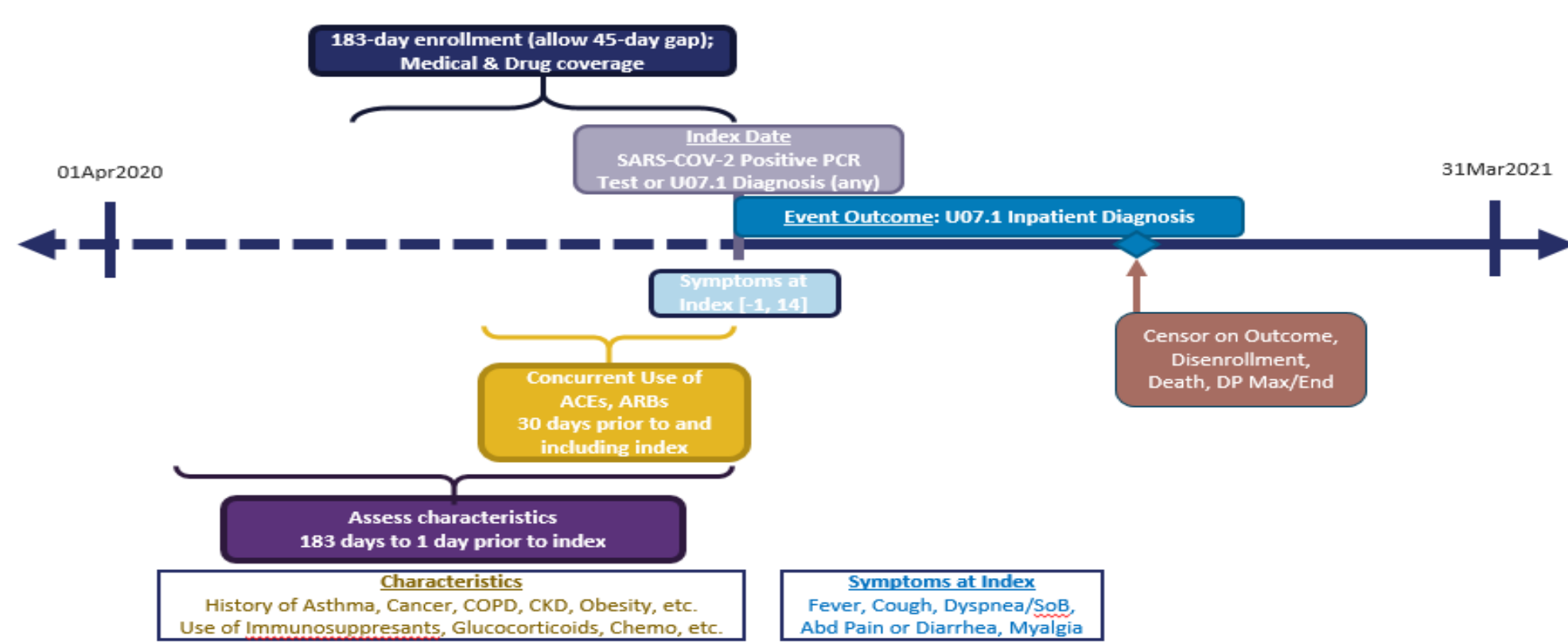
- To examine racial differences in COVID-19 testing, positivity, hospitalization, and mortality during the first year of the pandemic.

## METHODS

- We identified all enrollees with at least 6 months of continuous medical and drug coverage from April 1, 2020, through March 31, 2021, in the Rapid Sentinel Distributed Database.
- We examined the occurrence of COVID-19 testing, positivity, hospitalization including critical COVID, and mortality.
- We defined critical as COVID-19 patients admitted to the ICU, on mechanical ventilator or ECMO, or with acute renal failure and receiving renal replacement therapy.

### Sample design diagram

Hospitalized out of those positive



## RESULTS: Racial Differences in COVID-19 Outcomes

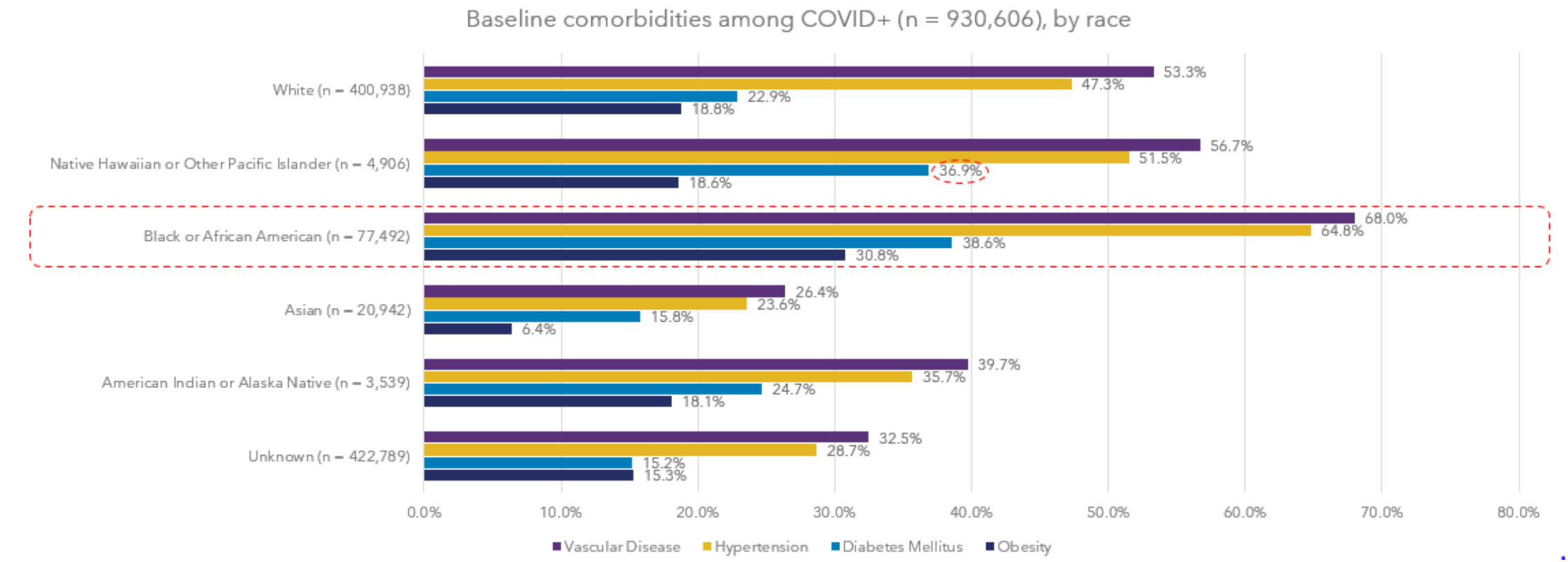
- Of 16,070,578 eligible enrollees, 42% were White, 7% were Black, 3% were Asians, 0.5% were Native Hawaiians/Pacific Islanders, 0.3% were American Indians/Alaska Natives and 47% were of unknown race.
- Of eligible enrollees, 2,270,701 (14%) were tested for COVID-19 (mean age: 49.8). Testing among eligible enrollees by race was 17% in Whites, 16% in Blacks, 16% in Asians, 15% in Native Hawaiians/Pacific Islanders, 20% in American Indians/Alaska Natives and 11% in unknown race.
- Among tested enrollees, 383,447 (17%) were COVID-19 positive overall. By race, positivity was 15% in Whites, 19% in Blacks, 14% in Asians, 18% in Native Hawaiians/Pacific Islanders, 16% in American Indians/Alaska Natives, and 19% in unknown race.
- Among 930,606 COVID-19 infections (positive test and/or diagnosis) (mean age: 53.9), 133,341 (14%) were hospitalized (mean age: 71.2) and occurrence of hospitalizations by race was 17% in Whites, 26% in Blacks, 10% in Asians, 22% in Native Hawaiians/Pacific Islanders, 16% in American Indians/Alaska Natives, and 10% in unknown race.
- Among hospitalized persons, 74,389 (56%) were critical (mean age: 71.9) and 21,054 (16%) died. Occurrence of critical COVID by race was 55% each in Whites, Asians, and unknown race, 58% in Blacks, 59% in Native Hawaiians, and 52% in American Indians/Alaska Natives. By race, mortality among COVID-19 hospitalized persons was 17% in Whites, 16% each in Blacks and American Indians/Alaska Natives, 15% in Asians, 20% in Native Hawaiians/Pacific Islanders and 14% in unknown race.

## RESULTS: Racial Differences in Age, Sex and Comorbidities at Baseline

Among COVID-19 positive enrollees, Blacks had the highest mean age (61.4 years) and highest proportion of women (60.5%)

Race	N (column percent)	Mean age (SD)	% female (row percent)
Overall	930,606 (100%)	53.9 (19.6)	54.1%
Unknown	422,789 (45.4%)	46.5 (20.7)	52.8%
American Indian or Alaska Native	3,539 (0.4%)	51.8 (16.8)	58.2%
Asian	20,942 (2.3%)	45.7 (16.6)	52.6%
Black or African American	77,492 (8.3%)	61.4 (15)	60.5%
Native Hawaiian or Other Pacific Islander	4,906 (0.5%)	61 (12.3)	49.7%
White	400,938 (43.1%)	60.7 (16.8)	54.4%

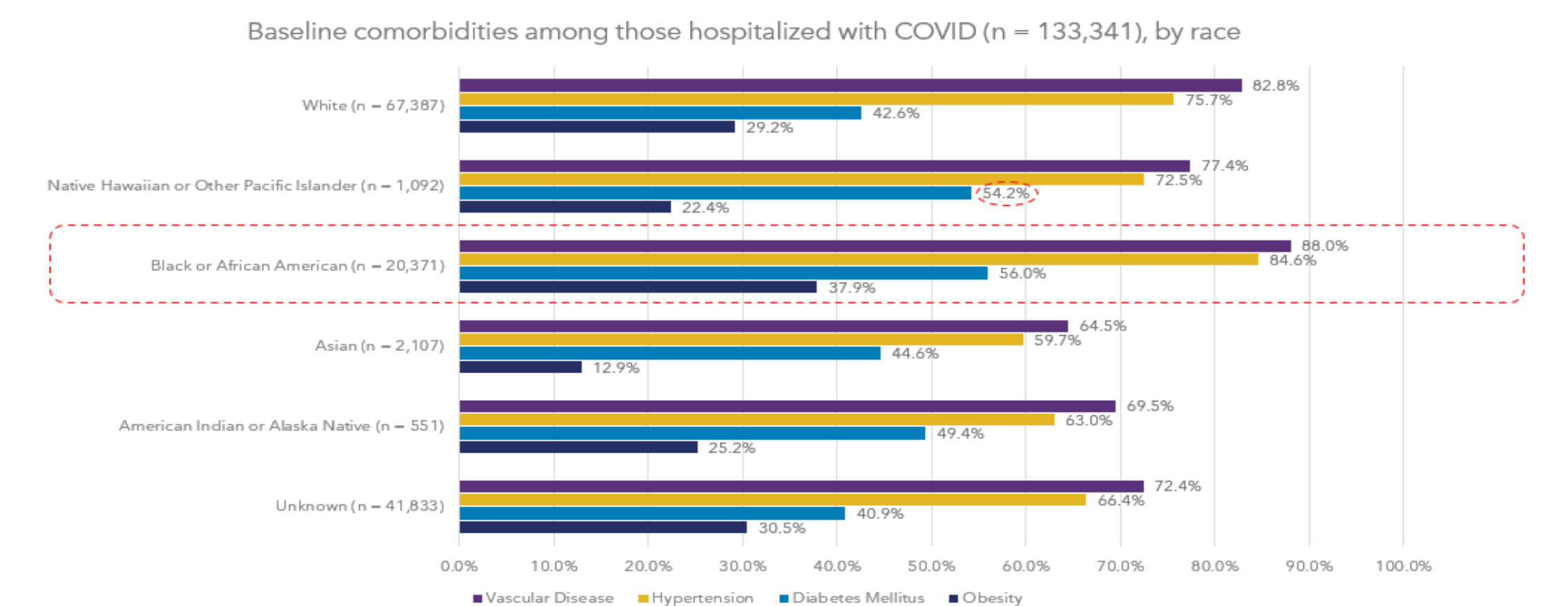
Among COVID-19 positive enrollees, Blacks had the highest burden of comorbidities



Among enrollees hospitalized with COVID-19, Whites (74.4 years), Native Hawaiians (71.4 years) and Blacks (71 years) had the highest mean age, while Blacks had the highest proportion of women (55.7%)

Race	N (column percent)	Mean age (SD)	% female (row percent)
Overall	133,341 (100%)	71.2 (13.4)	48.5%
Unknown	41,833 (31.4%)	66.5 (15.5)	46.6%
American Indian or Alaska Native	551 (0.4%)	65.7 (13.2)	53.7%
Asian	2,107 (1.6%)	65.3 (14.6)	44.4%
Black or African American	20,371 (15.3%)	71 (11.9)	55.7%
Native Hawaiian or Other Pacific Islander	1,092 (0.8%)	71.7 (9.9)	39.1%
White	67,387 (50.5%)	74.4 (11.6)	47.8%

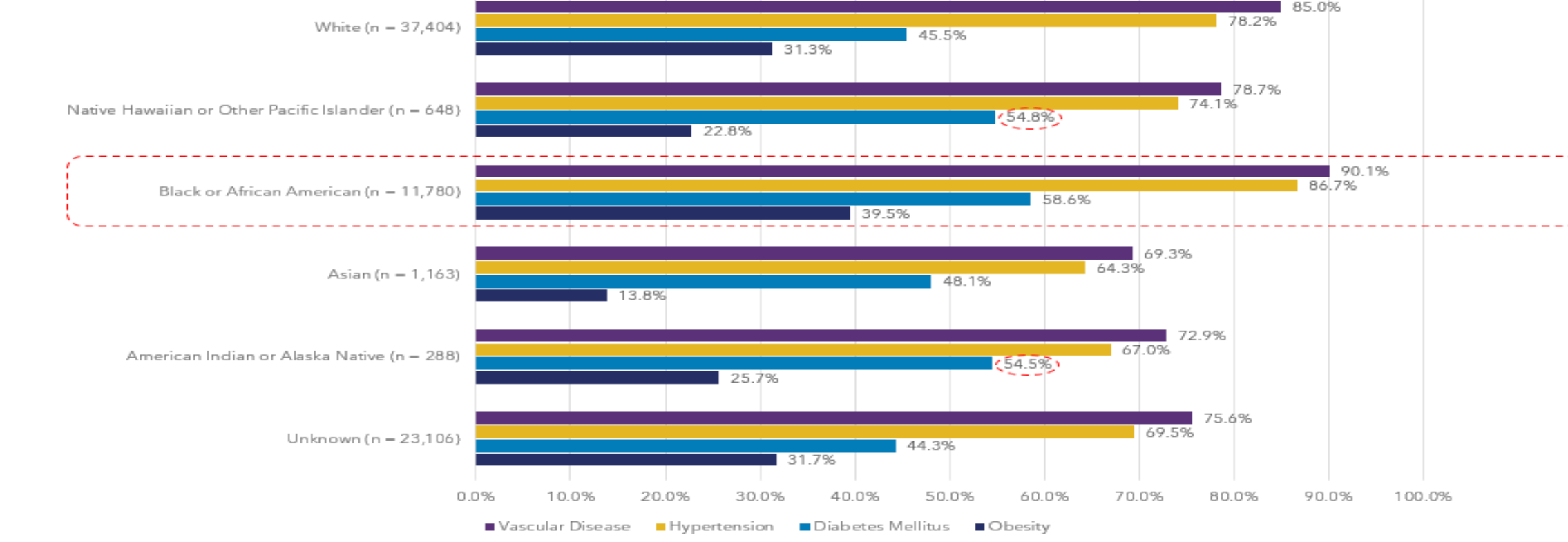
Among enrollees hospitalized with COVID-19, Blacks had the highest burden of comorbidities



Among enrollees hospitalized with critical COVID-19, Whites (74.8 years), Native Hawaiians (72.3 years), and Blacks (71.4 years) had the highest mean age, while Blacks had the highest proportion of females (53.6%)

Race	N (column percent)	Mean age (SD)	% female (row percent)
Overall	74,389 (100%)	71.9 (12.5)	45.3%
Unknown	23,106 (31.1%)	67.6 (14.2)	42.9%
American Indian or Alaska Native	288 (0.4%)	67.8 (12.5)	49.0%
Asian	1,163 (1.6%)	67.3 (13.1)	39.4%
Black or African American	11,780 (15.8%)	71.4 (11.5)	53.6%
Native Hawaiian or Other Pacific Islander	648 (0.9%)	72.3 (9.7)	33.5%
White	37,404 (50.3%)	74.8 (10.8)	44.5%

Among enrollees hospitalized with critical COVID-19, Blacks had the highest burden of comorbidities



## CONCLUSIONS

- Our descriptive study shows that among those of known race with COVID-19, Blacks and Native Hawaiians carry the highest burden of COVID-19 outcomes and comorbidities at baseline.
- Mortality following COVID-19 hospitalization appeared similar between Blacks and Whites in unadjusted data.

## LIMITATIONS

- We report unadjusted racial differences in COVID-19 outcomes. There may be additional factors outside of, but related to, race that need to be adjusted for. FDA is conducting a follow-up analysis to evaluate the association between race and COVID-19 outcomes adjusting for baseline differences in demographics and clinical factors.
- Results may not be generalizable to the entire US population as study population are privately insured.
- A large proportion of study population had unknown race and ethnicity in the administrative claims data; FDA is conducting similar analyses in electronic health record databases with more complete race and ethnicity capture.