COVID-19 Quarterly Report

Oregon's Quarterly Surveillance Summary

Oregon Health Authority

Age adjustment quarterly report - October 25, 2021

Background

Age adjustment is a way to compare groups of people who have different age distributions. Populations that are younger, on average, would be expected to experience less disease and fewer severe outcomes, like hospitalization and death. In comparison, a group that is older, on average, would be expected to experience more severe outcomes. By adjusting for age, it is possible to estimate how much age is a factor in the amount or severity of disease experienced by a particular group.[1] OHA publishes cumulative ratios of age-adjusted rates of COVID-19 for cases, hospitalizations, and deaths by race and ethnicity in the Weekly Data Report, available here: https://www.oregon.gov/oha/covid19/Documents/DataReports/Weekly-Data-COVID-19-Report.pdf.

Introduction

This report includes the ratio of age-adjusted rates of COVID-19 cases, hospitalizations and deaths by race and ethnicity, over time.[2] Ratios of age-adjusted case rates are calculated by quarter. A different time frame was chosen for deaths and hospitalizations because of the comparatively smaller numbers. Deaths and hospitalizations are split into two time periods – the period of Jan. 1, 2020 to April 30, 2021 and the period of May 1, 2021 to the most recently completed quarter. These time periods were chosen because COVID-19 vaccine became widely available for adults as of April 2021.[3] In all figures, the rate of cases, hospitalizations and deaths are compared between each race and ethnicity group and a reference group (white persons) and accounts for differences in population distributions in each group. The reference group is represented by the horizontal line across the graph, at a value of 1.

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[1] U.S. Census Bureau; American Community Survey, 2019 American Community Survey 5-Year Estimates.

[2] During the case investigation, people are asked to self-report their race, ethnicity, tribal affiliation, country of origin or ancestry.

[3] Data for deaths and hospitalizations lag behind case data. Data for the most recent time period may not include all deaths and hospitalizations.

Data are provisional and subject to change
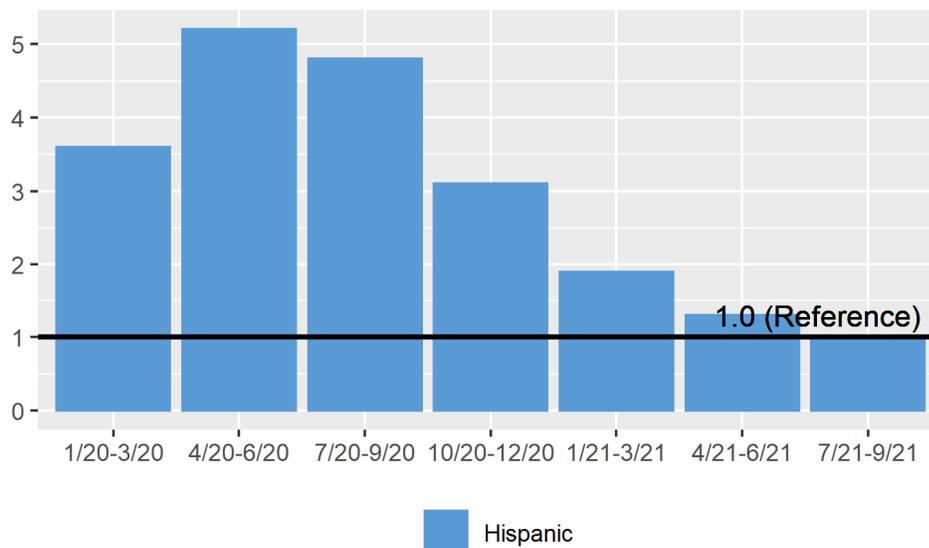
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Inequities between racial and ethnic groups in age-adjusted rate ratios of cases, hospitalizations and deaths have generally declined over time.

Hispanic persons were much more likely than white persons to be infected with COVID-19 in 2020. This inequity peaked in Quarter 2 of 2020.

Figure 1. Age-adjusted rate ratios over time, by ethnicity (cases)
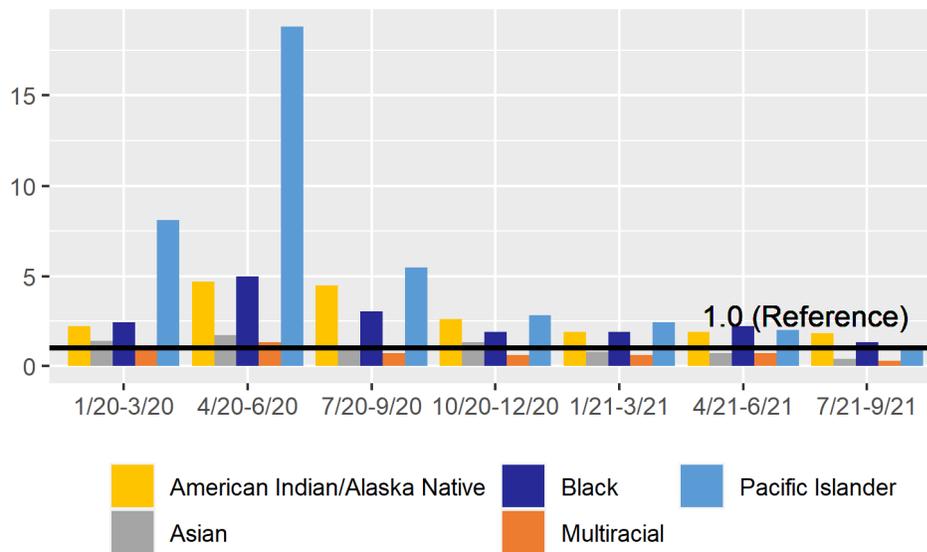

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Inequity between racial groups was highest in Quarter 2 of 2020. This inequity in case rates has declined over time. American Indian/Alaska Native persons have been consistently more likely to be infected with COVID-19 than white persons.

Figure 2. Age-adjusted rate ratios over time, by race (cases)

Hispanic persons were much more likely that white persons to be hospitalized with COVID-19 before April 2021. More recently, inequities between ethnic groups have been smaller.

Figure 3. Age-adjusted rate ratios over time, by ethnicity (hospitalizations)
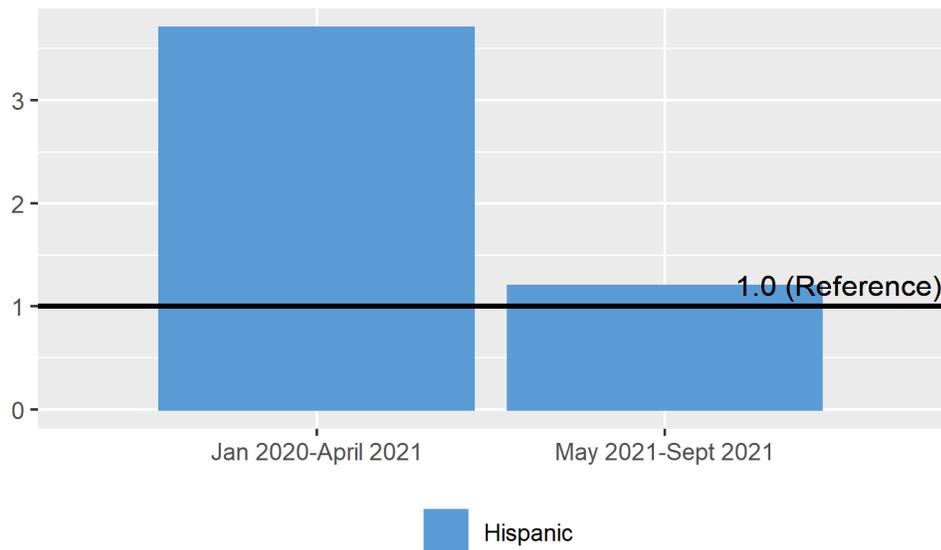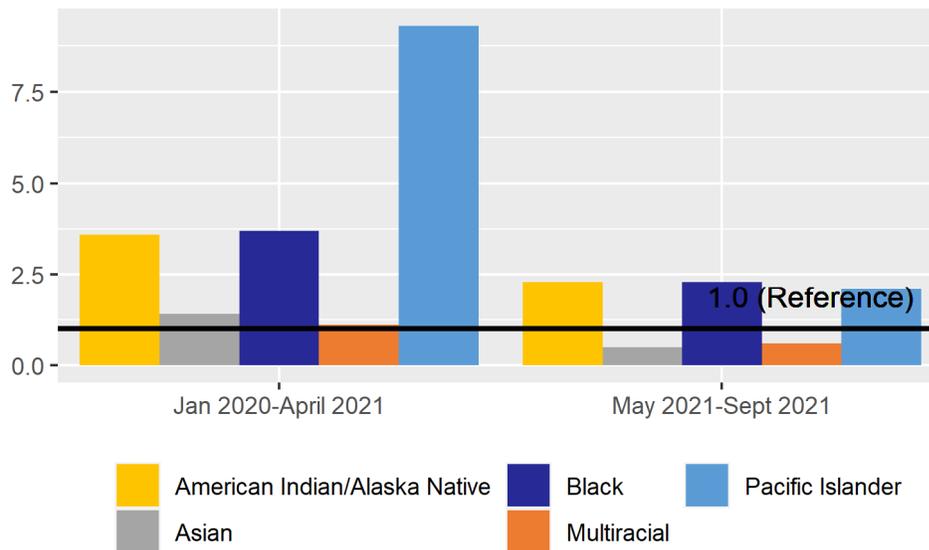

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Inequity among racial groups has declined in the second time period. American Indian/Alaska Native, Black and Pacific Islander persons are still more likely to be hospitalized with COVID-19 than white persons.

Figure 4. Age-adjusted rate ratios over time, by race (hospitalizations)
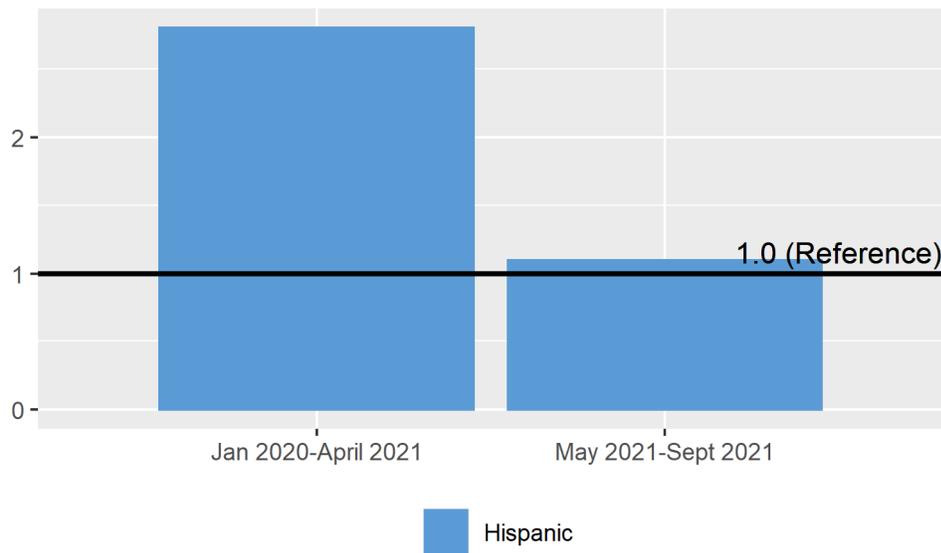

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Hispanic persons were more likely than white persons to die with COVID-19 before April 2021. More recently, inequities between groups have been smaller.

Figure 5. Age-adjusted rate ratios over time, by ethnicity (deaths)

Legend: Hispanic

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American Indian/Alaska Native, Black and Pacific Islander persons were more likely than white persons to die with COVID-19 in the period ending April 2021. Inequities between groups have been smaller in the more recent time period, but remain substantially elevated for American Indian/Alaska Native persons.

Figure 6. Age-adjusted rate ratios over time, by race (deaths)
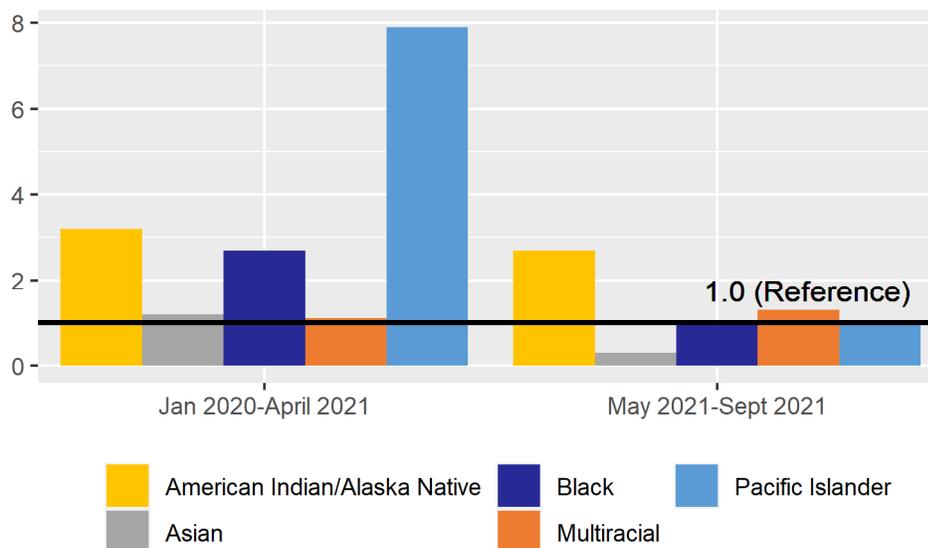
Limitations

The graphs in this report generally show a decline in disparities between racial and ethnic groups over time. The improvements in disparity may be due to vaccination uptake, community efforts and individual choices that reduce risk. However, this report is subject to limitations in the completeness of the COVID-19 data. For example, as the number of cases has risen, public health has not been able to interview all cases. Therefore, some data are incomplete. People with unknown racial identity, ethnic identity or hospitalization status could not be included in this analysis. The following section of the report shows the completeness of the COVID-19 data for race, ethnicity, and hospitalization status.

Data are provisional and subject to change

The proportion of cases with unknown racial identity, ethnic identity and hospitalization status has risen over time.

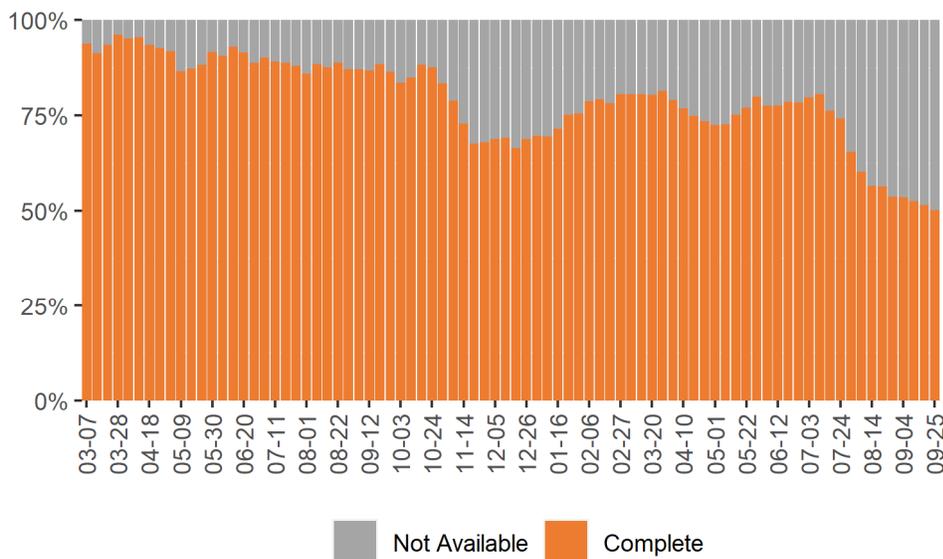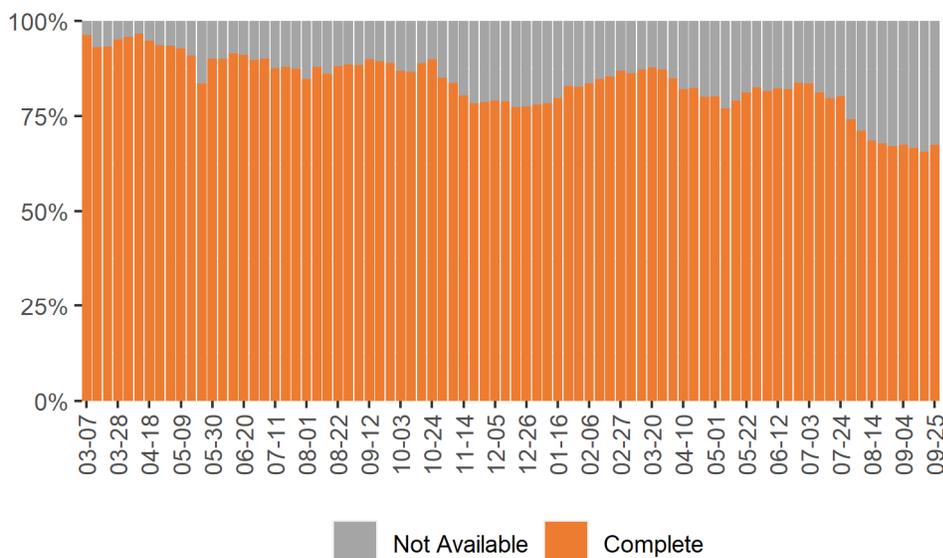## Figure 7. Proportion of cases with unknown ethnicity
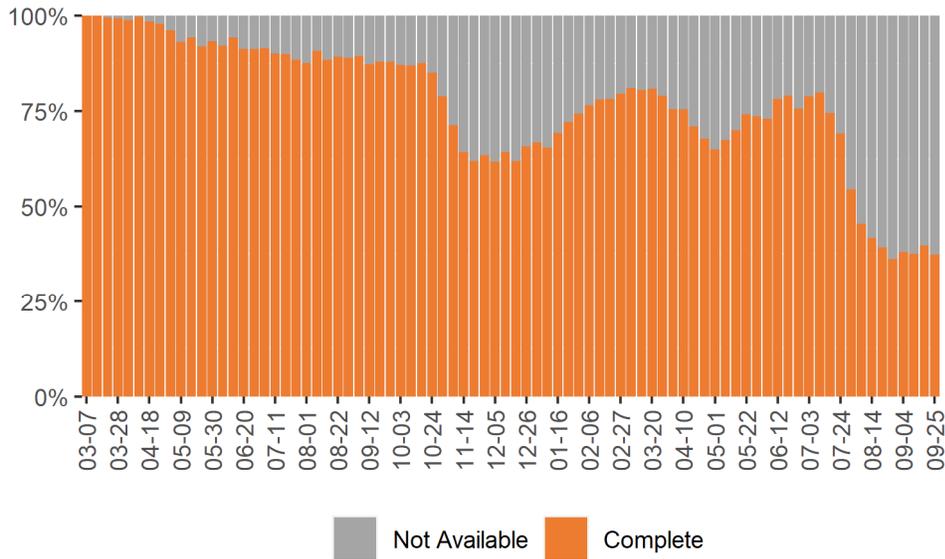

Figure 8. Proportion of cases with unknown race

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Figure 9. Proportion of cases with unknown hospitalization status