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The COVID-19 Case Rate and California's Diversity: Patterns in Coronavirus Exposure

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Every case of COVID-19 is the result of someone having been exposed to the coronavirus. Here in California, as elsewhere, different people experience different exposures to the virus. Some individuals and families—those with work that can be done remotely, robust health insurance, and relatively easy access to a physician—have been able to reduce their coronavirus exposure by sheltering at home for the past eight weeks.

“If you can be infected when someone else breathes, talks, sings, coughs, or sneezes near you, you can protect yourself by not being near other people,” said David E. Hayes-Bautista, Distinguished Professor of Medicine and Director of the Center for the Study of Latino Health and Culture at UCLA.

In order for them to protect themselves by staying home, however, other individuals have had to expose themselves to the virus, in order to provide the essential goods and services that make sheltering at home possible for others. Farmworkers growing food, truck drivers delivering supplies, grocery store stockers and checkout clerks, bus drivers, auto mechanics, nursing home attendants, and construction workers expose themselves daily so that others can stay home. This, in turn, potentially exposes the essential workers' families more frequently to the virus. In addition to higher levels of exposure to the virus, many of these essential workers and their families are also less likely to have health insurance or regular access to a doctor.

Different patterns of coronavirus exposure in California's major racial/ethnic (R/E) groups can be seen in different patterns of actual COVID-19 cases per 100,000 population. State-level data released May 14, 2020, has been compared by R/E for six different age-groups: children (0–17), young adults (18–34) early middle age (35–49), late middle age (50–64), older adults (65–79) and oldest adults (80+).

In almost every age group, Latinos, African-Americans, Asian-Americans, and Native Hawai'ian/Pacific Islanders have higher age-specific case rates for COVID-19 than do non-Hispanic (NH) whites. This indicates that these four racial/ethnic populations are experiencing various degrees of greater exposure to the virus than are non-Hispanic whites.

“In an ideal world, there would be no difference in the case rates between the race/ethnic groups,” said Paul Hsu, who teaches epidemiology at UCLA. “But we see major differences in the infection rates of the different groups, indicating that exposure to the coronavirus falls more heavily on some groups than others.” The data indicate that exposure falls most heavily on the state’s Latino, African-American, Asian-American, and Pacific Islander populations. (Because there were fewer than 30 cases of infection for American Indians/Alaskan Natives in every age group, case rates could not yet be calculated for this population.)

Dr. Hsu cautioned that while the trends between groups are becoming clearer, the age-specific rates will vary slightly as scientists receive more data and come to understand the pandemic better. He pointed out, for example, that nearly one-third of the cases reported to the state lacked information about the patients’ race/ethnic background.

Yet even with only preliminary data, the emerging field of the “epidemiology of diversity” will help the health and medical sciences understand why some groups have higher infection rates than others. This knowledge, in turn, will help guide the development of programs to reduce exposure to the coronavirus.

Methods. COVID-19 cases, stratified by race/ethnicity and age group, were furnished by the California Department of Public Health (CDPH).¹ Of 74,936 cases across all age groups, 23,853 (32%) were missing data on race/ethnicity, and so were not included in these figures. Population denominators were tabulated from the 2018 American Community Survey, the latest available.²

About CESLAC. Since 1992, the Center for the Study of Latino Health and Culture (CESLAC) of the David Geffen School of Medicine at UCLA has provided cutting-edge, fact-based research, education, and public information about Latinos, their health, their history, and their roles in California society and economy.

For more information, or to arrange a telephone interview with the Center’s Director, David E. Hayes-Bautista, Ph.D., Distinguished Professor of Medicine, please contact Adriana Valdez, at (310) 794-0663 or cesla@ucla.edu

¹ <https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/COVID-19/Race-Ethnicity.aspx>

² <https://www.census.gov/programs-surveys/acs>