Title
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DISCLAIMER

The views expressed herein are those of the authors and not necessarily those of the University of California, Los Angeles or the University of California as a whole. The authors alone are responsible for the content of this report.

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INTRODUCTION

California, like the rest of the nation, is facing unprecedented and highly unpredictable social and economic disruptions due to the spread of COVID-19, a novel coronavirus that has infected at least 6.5 million people in the United States and caused more than 190,000 deaths as of September 15, 2020.[1] California alone is home to more than 750,000 of those cases and almost 15,000 deaths.[2] The pandemic has transformed every aspect of people's lives—most notably the ways in which people live, work, learn, socialize, and travel. Adapting to the seismic shifts has been imperfect because there are a plethora of unknowns about the pandemic, including how it directly and indirectly affects both people and institutions and how government and individuals respond. Responses have relied heavily on trying to learn the new fundamentals as they unfold, in as near real time as possible. The uneven and uncharted course is evident in the actions taken over the last half year, with frequent shifts between more restrictive and more lenient orders in an effort to keep the public safe, designated as different "stages." The state has gone through at least three of these stages and elected officials struggle with balancing public-health and economic demands: (1) an initial lockdown to curb the spread of the coronavirus; (2) a partial reopening of the economy; and (3) a partial regression back with a resurgence of infections and deaths. The next few months will be filled with new uncertainties and conflicts as the state faces the daunting challenge of how best to educate students with the start of a new academic year. What is obvious is that it is imperative to continue to rapidly generate much-needed information to guide collective and individual responses.

To "flatten the curve" and prevent the number of new cases from overwhelming the healthcare system, health experts have strongly advocated for limiting person-to-person interactions by restricting group gatherings, encouraging "social distancing," and ordering people to "shelter in place."[3] The official status of shelter-in-place has varied county by county since February, with most counties issuing restrictions that have alternatively become more strict, less strict, and then more strict again as information continues to become more available.[4] On March 19th, California Governor Gavin Newsom ordered a stay-at-home order, instructing all nonessential businesses across California to close. By April 1st, it was announced that all public schools were to remain closed for the rest of the academic year. On April 14th, a plan was established to begin gradually lifting shelter-in-place restrictions, however, the timeline for such a plan was not clear. By the 28th, a new four-stage plan was put in place to lift restrictions and reopen businesses, with changes spread over the course of months. By May 8th, California began "stage two" of lifting shelter-in-place restrictions. Gradually, businesses were allowed to reopen so long as there were major modifications to their operations to keep both employees and customers safe, including curbside pickup. By late May, many businesses opened as stage two progressed, including sit-down restaurants and bars. Casinos started to open up as well, despite Newsom's recommendation for them to open in stage 3. On May 26th, California officially moved into stage 3, permitting hair salons and barbershops to open, but not nail salons or other beauty services that involve touching of hands or face. By mid-June, Newsom declared masks or face coverings to be mandatory in public across the state. Some cities also decided to impose fines for

not wearing masks in public areas. Throughout June, case numbers continued to increase at alarming rates, prompting Newsom to reclose bars or delay future openings in several counties across the state. Closures continue to be reinstated and businesses were ordered to close prior to July 4th in an effort to prevent another spike in case numbers. By July 13th, indoor dining shut down, as well as movie theaters, gyms, bowling alleys, barbershops, hair salons, indoor places of worship, and other similar locations in which many people could gather in enclosed spaces. Closures varied county by county depending on their recent case trends. Throughout August, California continued to see the number of COVID-19 cases rise. Schools began preparing for the upcoming academic year, with a focus on online learning and outdoor learning, however, some schools were allowed to reopen for in-person instruction as early as September 8. Many businesses also reopened so long as they could operate outdoors only. By September 14th, indoor salons and indoor gyms were allowed to reopen in several counties across California for the first time in six months. Case numbers in California continued to rise, however, fluctuating in speed as testing procedures continue to develop.

Even with the fluctuations, California as a whole has seen a massive decrease in movement and social interaction, as these steps are designed to minimize the speed and extent of the spread of the virus. While social distancing and staying home are ideal steps toward combating the effects of the virus, it is easy to recognize that some are not able to follow these orders as easily as others, putting them more at risk for contracting COVID-19 and further burdening their lives. One of the pressing challenges during the pandemic is for policy makers and community stakeholders to have timely information that can help them better respond to emerging problems, including the problem of racial and income inequality. This project helps fill some of the information gaps.

PROJECT DESCRIPTION

This report consists of a series of policy briefs covering the social and economic impacts of COVID-19 on neighborhoods throughout California. It focuses on constructing census-tract level indicators to identify vulnerable neighborhoods along five dimensions of vulnerability described in the following text. We have partnered with the Public Health Alliance of Southern California and the University of California Berkeley's Urban Displacement Project to disseminate the data so that it may be shared with the public along with elected officials and their staff, public agencies, and community stakeholders to assist them in identifying neighborhoods at financial risk and to understand the nature of the vulnerability. We established an advisory committee who provided input to help identify priority. The members include Dr. Karen Chapple (Professor and Chair of City & Regional Planning at UC Berkeley), Bernadette Austin (Acting Director, UC Davis Center for Regional Change), Dr. Virginia Parks (Professor and Chair Department of Urban Planning and Public Policy School of Social Ecology UC Irvine), and Dr. Don Mar (Professor Emeritus of Economics at San Francisco State University). The project has also started collaborating and/or interacting with local jurisdictions and organizations interested in utilizing the vulnerability indicators to guide policy development and program implementation. We have been communicating or working with the city of Los Angeles' Mayor's Office of Budget and Innovation, the city of San Jose Department of Housing, Neighborhood Housing Services of Los Angeles County, the San Francisco Anti-Displacement Coalition, and the Anti-Eviction Mapping Project. We have made connections with the cities of Oakland (Department of Housing and Community Development) and Stockton (Mayor's Office).

The project focuses on both identifying the broad vulnerabilities to COVID-19 and the disparities of those across neighborhoods. Prior research has shown that existing spatial inequalities along economic class and ethnoracial lines are reproduced over time. This project draws on the emerging field of stratification economics (for a description see, for example, John B. Davis, "Stratification Economics and Identity Economics," Cambridge Journal of Economics, Volume 39, Issue 5, September 2015, Pages 1215–1229), specifically on the subfield of how urban spatial structures produce and reproduce socioeconomic inequality (for summary, see Paul M. Ong and Silvia R. Gonzalez, Uneven Urbanscape: Spatial Structures and Ethnoracial Inequality, Cambridge University Press, 2019). Based on the theoretical and empirical literature in this field, we hypothesize that systematic and systemic disparities are being replicated during the coronavirus crisis. Along with testing this hypothesis throughout the report, we examine the pattern and magnitude of the emerging inequality.

This project builds on the UCLA Center for Neighborhood Knowledge's (CNK) COVID-19 Equity Research Initiative, which includes studies examining how the negative economic impacts of COVID-19 are distributed across neighborhoods, defined by census tracts, in Los Angeles County. The Los Angeles report examines five dimensions of vulnerability across neighborhoods that have been adapted to be of use in this report. Appendix A lists the Initiative's briefs. Three out of the five vulnerability indicators constructed for this project are referred to as

version 2.0 as it includes modifications and enhancements to the very same indicators that were constructed for Los Angeles County (version 1.0).

This new report covers all of California and examines five dimensions of vulnerability: (1) which communities are most at risk from job displacement in the hospitality, retail, personal care, and service sectors; (2) which communities are at risk due to a disproportionate high percentage of residents not enrolled in Unemployment Insurance (UI) benefits; (3) which communities have high numbers of renter households that are experiencing extreme financial hardships; (4) which communities are most burdened by shelter-in-place mandates; and (5) which communities are likely to be unrepresented in the 2020 Census due to low response rates. While each component is separate in focus, the process, method of analyses, and goals related to each indicator are interconnected.

The basic geographic unit of analysis in this report is the census tract, which serves as a reasonable proxy for neighborhood bounds. We use these terms interchangeably in this report. The Bureau of the Census defines census tracts as "a relatively homogenous area with respect to population characteristics, economic status and living conditions." The average population of a census tract is 4,000 people (ranging from 2,500 to 8,000) and approximately 1,500 housing units.

Ultimately, the project's goal is to utilize the findings to improve the ability of the state of California, local jurisdictions, foundations, and community organizations to direct their immediate efforts to assist the communities in most need during the coronavirus crisis. Moreover, the hope is that the information will subsequently inform the development of more effective, equitable economic recovery plans and programs in the future.

This report is organized by the five dimensions of vulnerability described earlier. Each section includes five parts: (1) brief introduction describing the vulnerability indicator, (2) data and methodology utilized to construct the measure, (3) a series of maps displaying the indicator by neighborhoods across regions, (4) an analytical component examining how variations in each dimension correlate with neighborhood sociodemographic characteristics, and (5) a summary of key findings.

AT-RISK WORKERS INDEX 2.0 (ARWI 2.0)

INTRODUCTION

Declining demand and new temporary mandates have led to massive business closures and a corresponding surge in unemployment. This brief estimates the proportion of employed labor force at the census-tract level for California in three sectors highly impacted by COVID-19 related closures: (1) service workers in hospitality, (2) sales workers in retailing, and (3) workers in personal care and service operations.[5] Unlike many sectors where it is possible for workers to telecommute, the economic disruption is generating substantial layoffs and unemployment in face-to-face service industries. Those who continue working in essential businesses face another risk: potential exposure at the workplace through interactions with customers and co-workers who may have contracted COVID-19. The risk of contact exposure is further made worse with efforts to reopen the economy.

Although almost everyone has been affected by the pandemic, there are systematic socioeconomic and demographic variations in the economic impacts and their severity. A recent study conducted by the UC Berkeley Labor Center analyzed the demographics of such at-risk industries as well as the prevalence of low-wage working conditions. As expected, there were many crossovers between those at risk and people of color, as well as workers earning low wages. Of all California's low-wage workers, almost a third work in industries considered at risk.[6] Furthermore, people of color represent a majority of the workers at risk of job displacement due to COVID-19.[7] Clear inequalities exist both in the sectors mentioned that are pressured to remain open, or considered essential, and the demographics of those working in them.

The first indicator identifies workers most at risk due to the labor-market disruptions created by the pandemic. There are two types of risks, varying over time. The first risk is associated with job displacement during the early stage of the pandemic (when shelter-in-place mandates were implemented and many businesses closed) and the second is associated with frequent and close interaction with customers during a later stage of the pandemic (when the economy started to partially reopen).

This section then examines how variations in the existence of at-risk workers correlates with neighborhood sociodemographic characteristics, specifically whether socioeconomically disadvantaged neighborhoods (low-income and predominately minority communities) contain more workers in at-risk job sectors, experiencing financial and health difficulties due to COVID-19–related hardships. The results confirm that neighborhoods with high concentrations of at-risk workers tend to be low-income and with disproportionately large numbers of people of color.

DATA AND METHODOLOGY

For the purpose of this analysis, workers most at risk are operationally defined as service workers in hospitality, sales workers in retailing, and workers in personal care and service operations:[8]

- Hospitality service workers are individuals who provide a service for a person or company without producing a product (e.g., backroom preparation, interactions with customers, and cleaning).
    - Food services is the single largest component in this sector, accounting for more than three-quarters of the jobs.

- Retail sales workers are any individuals who work at the front of the store to help customers find and purchase items.
    - Some types of establishments (e.g., grocery stores, gas stations, and pharmacies) are exempt from the closure mandate; many of these stores, however, have closed or are partially closed because of declining demand.

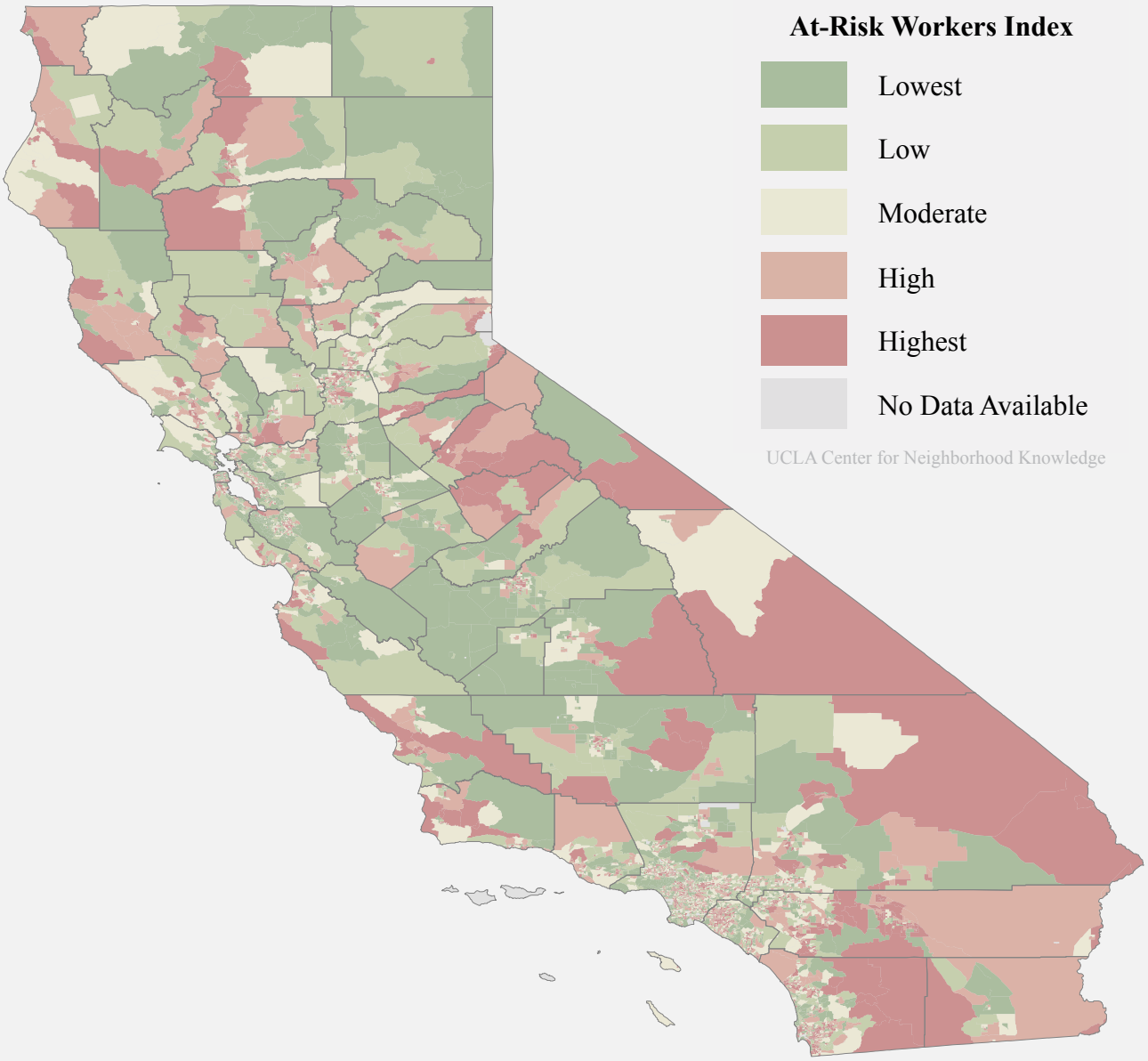
- Workers in personal care and service operations are individuals who work in customer-oriented stores.
    - Many personal care establishments (e.g., nail salons, beauty salons, and barbershops) have been closed fully due to government mandates and/or declining demand. Depending on the county, some establishments have fully or partially reopened for brief periods; the terms of their openings depend on the accessibility of outdoor space, medical necessity, and/or level of contact between customer and employee. Some establishments (e.g., auto repair shops) are exempt from closures as they are considered essential.

The data for this indicator comes from the 2014–2018 5-year average American Community Survey (ACS) estimates. The ACS is a continuous survey conducted by the U.S. Census Bureau to collect housing, demographic, social, and economic information. On an annual basis, the sample represents about 2.0–2.5% of households and individuals, as such, reported statistics are subject to sampling variation. For small geographies (less than 65,000 persons), statistics are reported as a five-year average. Census tracts fall into this five-year reporting category.

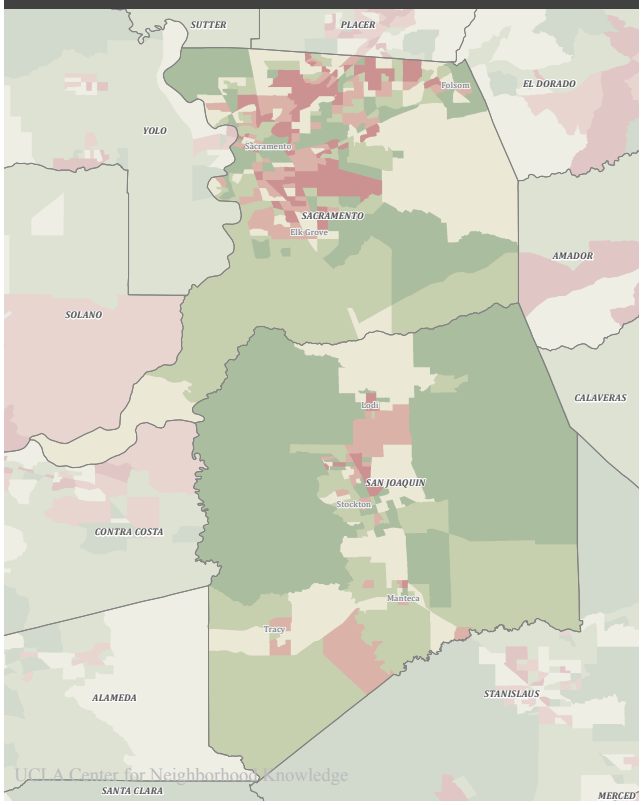
MAPS

The following maps display neighborhoods by their share of workers in at-risk jobs. The following are maps for California and for three subregions: San Francisco Bay Area, Central Valley (Sacramento and San Joaquin counties in particular), and Los Angeles County. The maps are displayed in quintiles (roughly 20% of all census tracts in each bin), ranging from lowest to highest vulnerability. The red areas represent neighborhoods with a greater than average share of at-risk workers, with the darker shade denoting the greatest share or greater vulnerability. The green areas represent neighborhoods with less than average share of at-risk workers, with the darker shade denoting the least share or lower vulnerability.

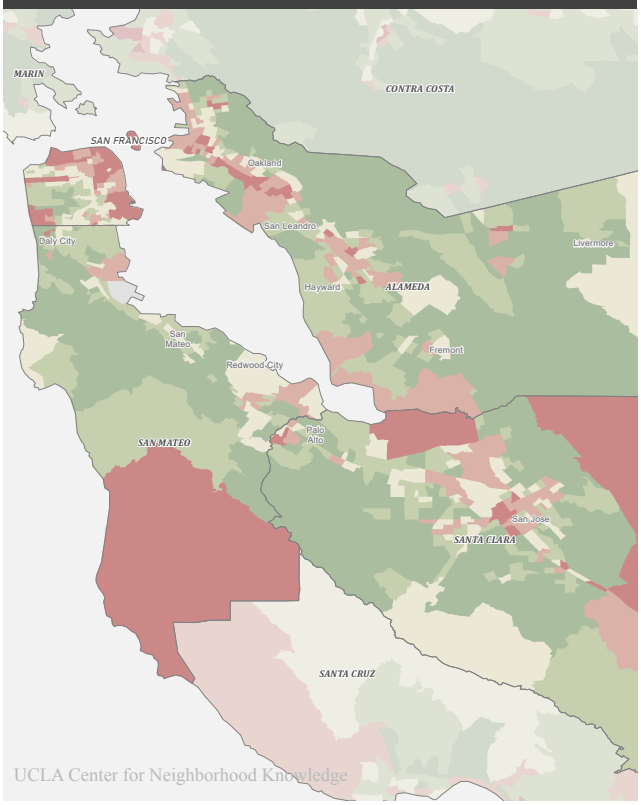
California


At-Risk Workers Index
Lowest
Low
Moderate
High
Highest
No Data Available
UCLA Center for Neighborhood Knowledge

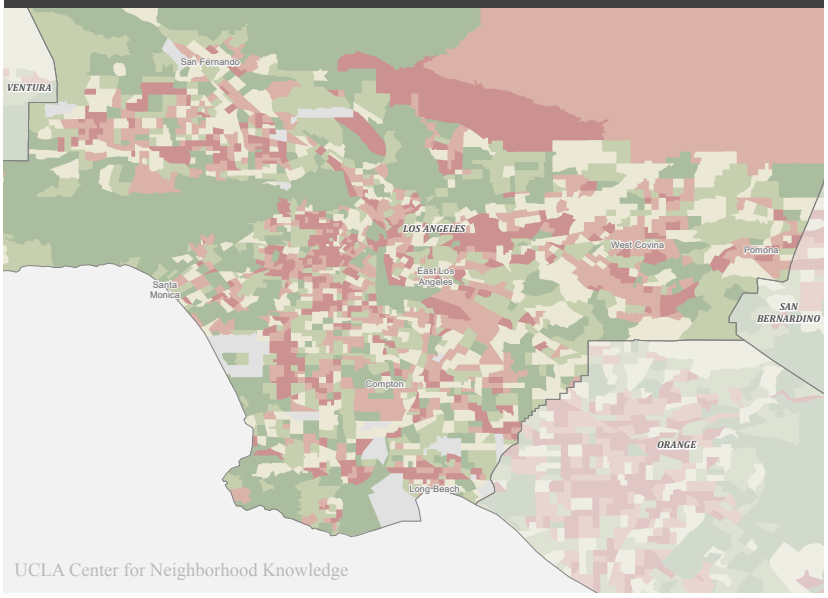
Central Valley



San Francisco Bay Area



Los Angeles County



At-Risk Workers Index

- Lowest
- Low
- Moderate
- High
- Highest
- No Data Available

ANALYSIS

The report's analytical component examines how variations in workers most at risk correlate with neighborhood sociodemographic characteristics. The focus is on whether burdens are higher in disadvantaged communities (low-income tracts, predominantly minority tracts, and tracts with a relatively large number of immigrants). The systematic and systemic variations among neighborhoods can be seen in **Table 1**. Neighborhoods are ranked from lowest to highest quintiles determined by the proportion of workers most at risk, or most vulnerable to hardships. The reported values represent the average (mean) of all the census tracts in each neighborhood group.

Neighborhoods with workers most vulnerable have disproportionately more Latinx residents. On average, nearly twice as many Latinx reside in the highest job-risk neighborhoods than in the lowest job-risk areas. Conversely, neighborhoods in the lowest risk category contain a higher percent of non-Hispanic whites when compared with the highest risk category, signifying an unequal distribution of negative economic burdens related to COVID-19's impact on the state's workforce. Moreover, immigrants are more relatively concentrated in higher job-vulnerable neighborhoods. The highest risk neighborhoods also tend to be lower income, where on average of nearly 1 in 4 individuals are living in poverty compared to 1 in 10 in the least vulnerable neighborhoods. Neighborhoods falling in the highest risk classification are also more likely to be renter neighborhoods; on average, more than half of households are renter households compared to just a little more than a third in the lowest risk neighborhoods.

Table 1: Neighborhood Sociodemographic Characteristics by Levels of Workers Most At Risk

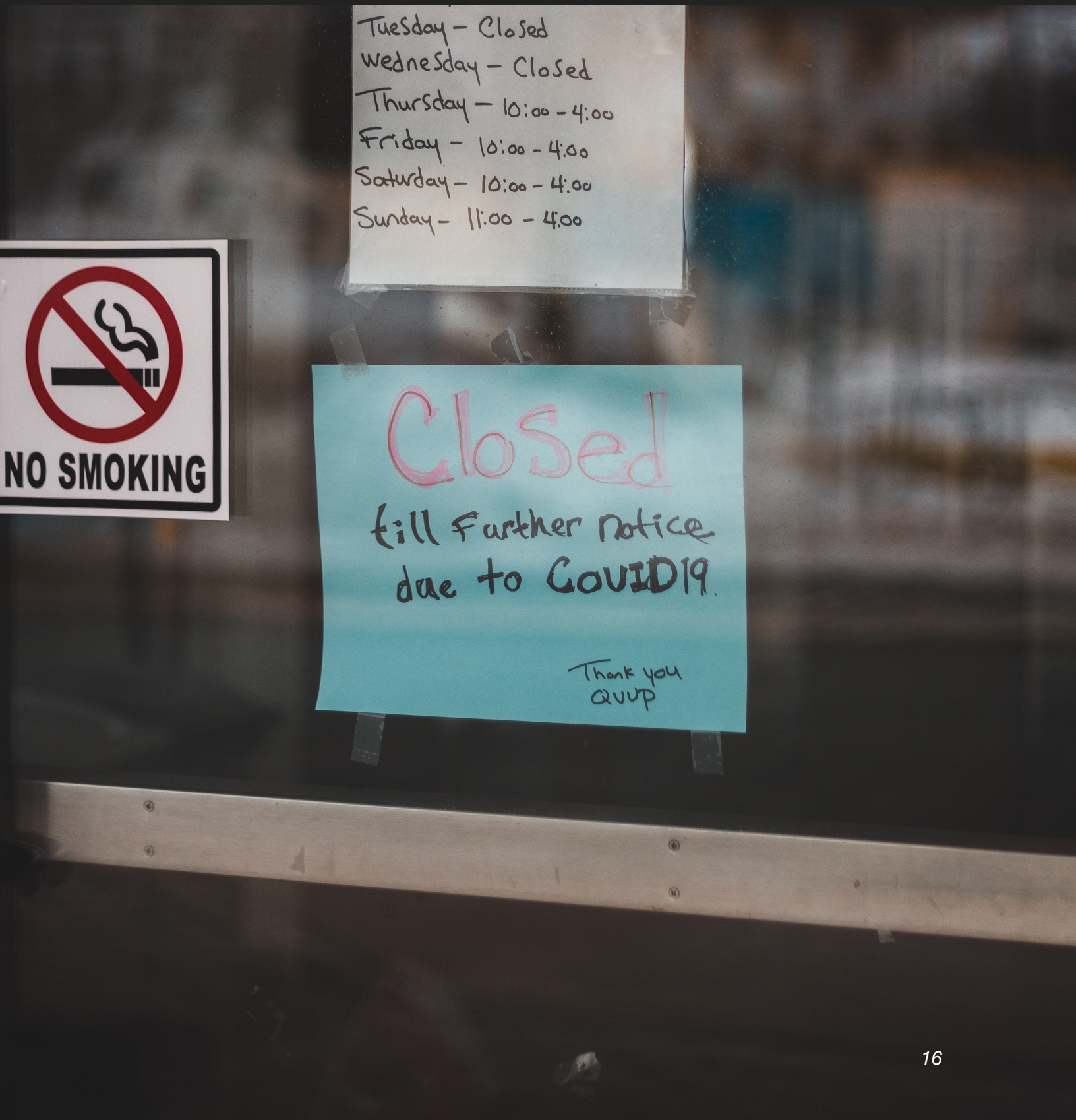
	Lowest	Low	Middle	High	Highest
% of workers at risk of job displacement	8%	12%	15%	17%	23%
Distribution by Race					
% NH White	48%	42%	38%	35%	33%
% Black	5%	6%	6%	6%	6%
% Latinx	26%	35%	40%	44%	44%
% Asian	17%	14%	13%	12%	14%
% Immigrants	25%	25%	26%	27%	30%
% Poverty	11%	13%	14%	16%	19%
% Renters	38%	40%	44%	49%	56%
Total Census Tracts	1,598	1,598	1,598	1,598	1,598

SUMMARY

The findings from these analyses show that there are systematic and systemic variations by income and race when comparing worker vulnerabilities across California neighborhoods. The concentration of at-risk workers disproportionately falls on neighborhoods that are low-income and have large populations of people of color. These households have the least resources to help them survive the economic recession generated by the COVID-19 pandemic.

Policy makers must prioritize the needs of these low-wage, high-risk workers when formulating state or local responses to augment federal investments. Job relief programs and resources must be targeted to help the state's most vulnerable communities; by narrowing the distribution of unemployment benefits to areas most in need, delivering economic aid that best supports the current and future workforce is improved, including for the state's poorest neighborhoods. Gaps in the federal COVID-19 stimulus package must be filled, such as enacting policies that use Individual Taxpayer Identification Numbers (ITIN) instead of Social Security numbers to include undocumented workers. Workers who are not covered by the UI program yet work in high-risk sectors should receive special attention, making sure they know their rights and resources. Furthermore, a consideration of culturally and linguistically tailored approaches will ensure workers in vulnerable communities are well informed of the benefits they have access to and how to apply for them. Finally, resources must be directed to support working families and residents in vulnerable communities to strengthen households against similar economic shocks in the future. These workers and their respective communities are on the fringes of the social safety net and must be given federal and state help so that they can survive this pandemic and stay afloat in the future.

NON-UNEMPLOYMENT INSURANCE RATE



INTRODUCTION

The second indicator is concerned with the dramatic increase in unemployment. The level of claims filed throughout the COVID-19 pandemic is several orders of magnitude higher than experienced in previous years, even those during the Great Recession. In the months since the pandemic began, the U.S. Department of Labor reports California's highest number of claims having come in the week ending on March 28th, with roughly 1,060,000 claims filed. Since then, the number of claims has steadily declined for the most part, but still remains at numbers more than five times as big as the weeks prior to the start of the pandemic.

For many displaced workers, the UI program provides a safety net. It was initially established by Wisconsin in 1932 to provide temporary relief for those laid off during the Great Depression, then subsequently spread to other states and adopted by the federal government.[9] The UI program is funded by a premium (or tax) paid by employers, with a higher rate for firms that tend to have frequent layoffs. Before the COVID-19 crisis, state programs provided no more than 26 weeks of payments, which replaced less than half of earnings.[10] Placing limits on UI benefits is a way to minimize perverse incentives to remain unemployed. The main goal is to move individuals back to work as quickly as possible, but benefits are not automatic for all unemployed. According to California's Employment Development Department (EDD), an individual must fulfill the following requirements to qualify for unemployment benefits: be totally or partially unemployed, be laid off through no fault of their own, be physically able and available for work, be actively seeking work, and be willing to immediately accept an offer.[11] UI payments are also based on prior earnings, so those who had earned more receive more. Unfortunately, the UI program is not designed to meet the unprecedented surge in claims nor the likely long duration of joblessness that is a result of the COVID-19 crisis. Some of the shortfalls of the UI system are addressed in H.R. 748, also known as the Coronavirus Aid, Relief, and Economic Security Act or the CARES Act, which was signed on March 27, 2020, and provides $2.2 trillion in economic relief. One of the Act's major provisions is the Federal Pandemic Unemployment Compensation, which provides an additional $600 of weekly benefits to that paid by the states and extends to the total number of weeks of assistance up to 39 weeks.

One shortcoming of the legislation is a failure to cover workers not in the UI system, potentially hurting the segment of the labor market most at risk of losing their jobs. Workers not covered include individuals who are not enrolled in the program, quit their job, do not meet the required minimum earnings, or have exhausted benefits. Low-wage workers and immigrants are disproportionately among those who do not qualify,[12] and even many of those who do qualify fail to apply for various reasons. For example, one study found that when nearly three-quarters of the unemployed did not apply for UI benefits, the majority of those non-applicants believed that they were not eligible for UI benefits so they did not apply.[13] Most undocumented immigrants are currently prohibited from collecting UI, even though their employers may have contributed payments to the UI funds. One possible exception includes Deferred Action for Childhood

Arrivals (DACA) individuals, so long as they have valid work authorization. Several states (including California) have stated they can apply.[14]

This section estimates the proportion of employed labor force (salary and wage workers) at the census-tract level for California not in the UI program, and therefore less able to benefit from the UI provisions of the recent CARES Act[15] or future COVID-19 relief package that seeks to include additional UI benefits. It seeks to identify neighborhoods with a disproportionate number of workers not enrolled in the UI program. This section then examines how variations in UI coverage correlate with neighborhood sociodemographic characteristics, specifically whether socioeconomically disadvantaged neighborhoods (low-income and predominately minority communities) contain more residents not covered by UI benefits and thus are more adversely impacted by COVID-19–related hardships. The results confirm that neighborhoods lacking UI coverage tend to be low-income and with disproportionately large numbers of people of color.

DATA AND METHODOLOGY

The estimates used in this brief are based largely on two data sources, which are used to extract and assemble two key variables to calculate a coverage rate—the number of covered employees in the UI system divided by the total labor force in the private sector.[16] The first data source is the U.S. Census Bureau's Longitudinal Employer-Household Dynamics (LEHD) program, which collaborates with states to assemble UI data and report statistics on employers and employees.[17] The program combines these administrative records with data from other administrative sources, censuses, and surveys. The number of jobs is not the same as the number of workers because some individuals hold more than one job. LEHD reports both primary jobs (based on the job with the highest earnings for workers) and total jobs (includes secondary or additional jobs held by a worker). Job counts are available for small geographies, including census tracts, and are reported by either job sites (the locations of the establishment where workers are employed) or residential locations (by the workers' addresses as recorded in tax records). This analysis uses the 2013–2017 average (mean) counts for workers at their primary job in the private sector. The second data source is the 2013–2017 5-year average ACS, specifically the information reported for census tracts. This analysis uses workers employed by for-profit businesses and nonprofit organizations.[18]

There are some data limitations to using LEHD and ACS counts. For LEHD numbers, the first is a possible error in assigning workers to their place of residence because LEHD relies on geocoding merged data from tax and other administrative records. These records contain addresses that may differ from the person's current place of permanent residence or may be outdated. There is also an issue of misusing Social Security numbers to secure employment, which affects undocumented immigrants and others who want to avoid being identified. Because of these problems, LEHD can over- or undercount workers, particularly for small geographies. The major limitation of the ACS is sampling error. Although selected randomly, a small sample size at the tract level produces a large confidence interval (the range that contains the real number of workers). In turn, under- and overcounts in both ACS and LEHD data can significantly impact the precision of the estimated UI coverage rate, particularly for tracts with few workers.[19] Finally, there is a temporal problem due to the different way ACS and LEHD collect data. LEHD includes anyone who worked during a given payroll quarter, which is equivalent to asking a person if she or he were employed over the last three months. ACS, however, is based on asking a respondent about her or his current employment status at a single point in time during the survey. The net result on the average is that LEHD tends to produce a larger count than ACS for a hypothetical sample of workers; consequently, there is a corresponding upward bias in estimated UI coverage. The bias is more severe among workers who have high turnovers.

Despite these data limitations, the available information is nonetheless sufficient for first-order approximations and statistical analyses. For this brief, it is more useful to look at the relative ranking of neighborhoods by the estimated proportion of workers not in the UI program as

opposed to numbers for those that are enrolled. The estimate rate may not be very precise and may have a bias, but the relative ranking in large quantiles is reasonable.

The rate of UI coverage by neighborhood (defined by census tract) is calculated by dividing the number of covered employees in the UI system by the total labor force in the private sector. To calculate the proportion of workers who are not covered by UI, the proportion covered are subtracted from 100% (100% minus the percent with UI coverage). Variables affecting an individual's risk of not being covered include:

- Individuals who do not qualify according to California's EDD. According to the EDD, individuals must be totally or partially unemployed, be laid off through no fault of their own, be physically able and available for work, be actively seeking work, and be willing to immediately accept an offer to qualify for UI benefits. UI payments are based on prior earnings, so those who had earned more receive more. Low-wage workers and immigrants are disproportionately among those who do not qualify.[20]

- Individuals who are not enrolled in the program, quit their job, do not meet the required minimum earnings, or have exhausted benefits.

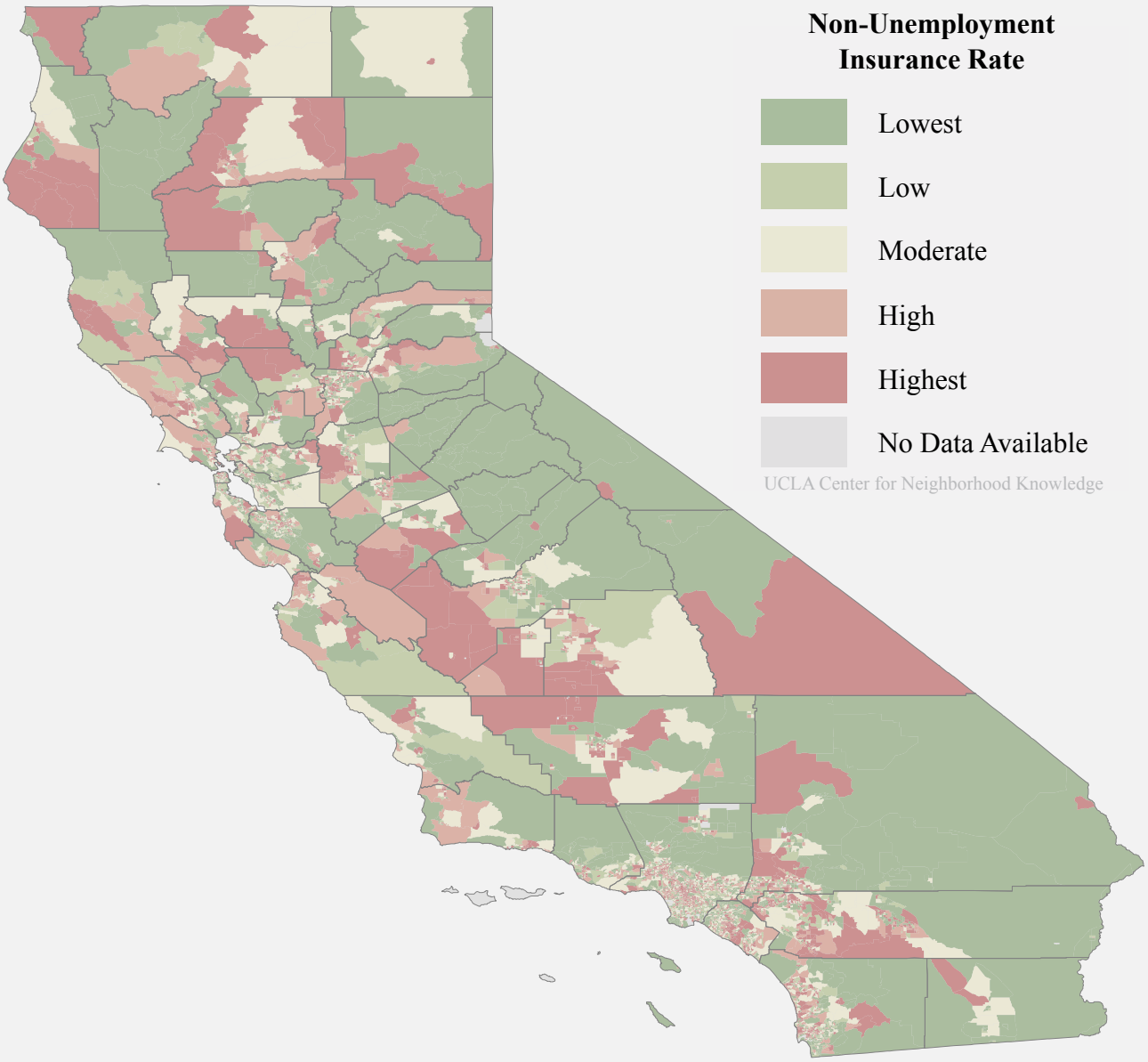
- Individuals who qualify but did not apply for UI benefits in the first place. These qualifying non-applicants exist for various reasons, including the belief that they are not eligible.[21]

- Most undocumented immigrants are prohibited from collecting UI (even though their employers may have contributed payments to the UI funds) as well as benefits from the CARES Act, such as the stimulus payment of $1,200 as eligibility was based on recipients' having a Social Security number (even though many undocumented workers pay tax through an ITIN). Exceptions to this rule include DACA recipients, provided they have valid work authorization.[22] Another exception includes California's Coronavirus Disaster Relief Assistance for Immigrants fund, targeting undocumented immigrants ineligible for CARES Act and pandemic unemployment benefits.

MAPS

The following maps display neighborhoods by their proportion of workers in the for-profit and nonprofit sectors that are outside the UI system or do not have UI coverage. The green areas represent neighborhoods with greater than average UI coverage, with the darker shade denoting greater coverage. The red areas represent neighborhoods with below average UI coverage, with the darker shade denoting the least coverage. The latter are tracts at the greatest risk of disproportionately receiving the least from the enhanced UI payments and extended weeks of UI benefits under the recent CARES Act and possibly next round of COVID-19 stimulus packages. Dark red neighborhoods contain a large number of workers who are not eligible to apply for UI, while the dark green neighborhoods contain a higher concentration of eligible workers.

California


Non-Unemployment Insurance Rate
Lowest
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Moderate
High
Highest
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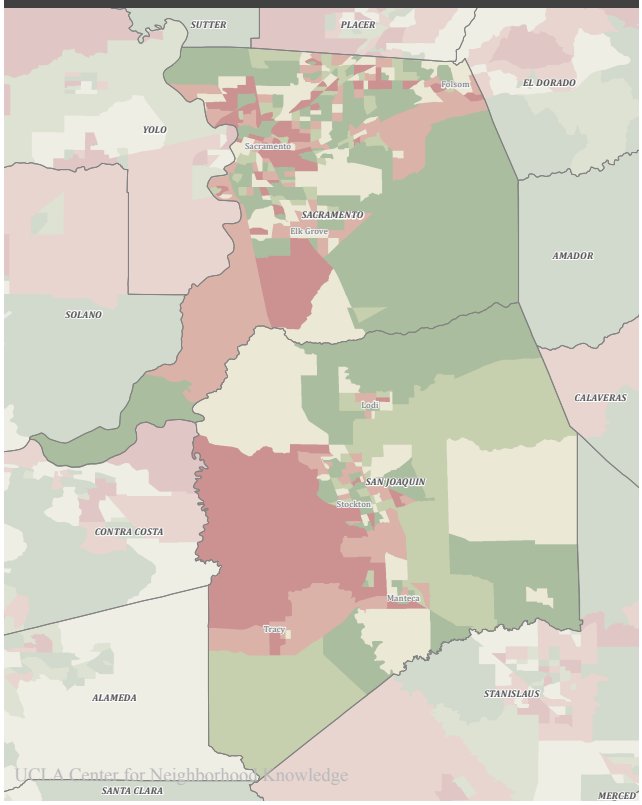
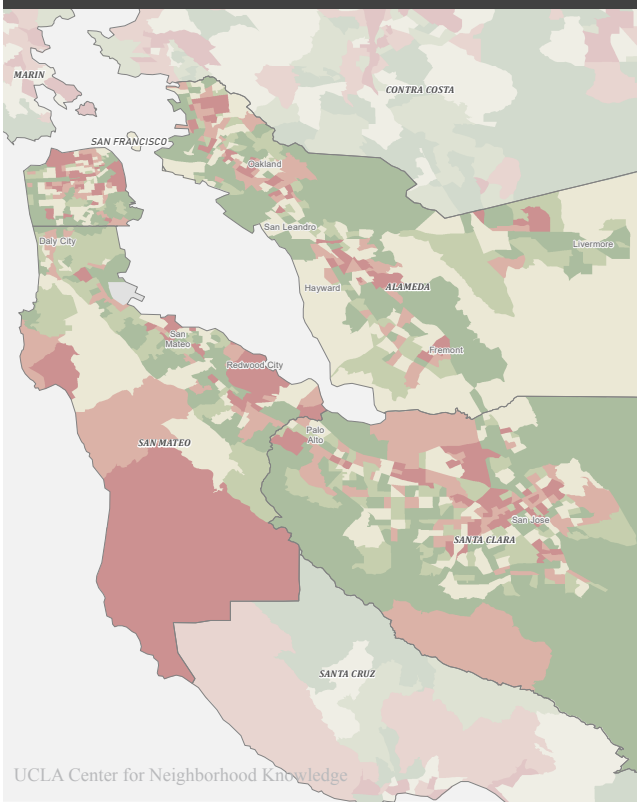
UCLA Center for Neighborhood Knowledge

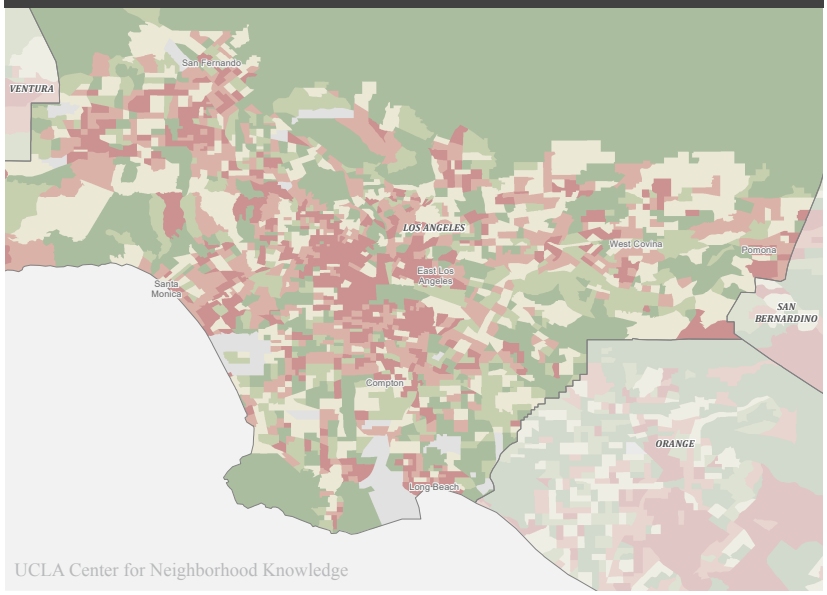
Central Valley



San Francisco Bay Area



Los Angeles County



Non-Unemployment Insurance Rate

- Lowest
- Low
- Moderate
- High
- Highest
- No Data Available

ANALYSIS

This indicator aims to examine how variations in the UI coverage correlate with neighborhood sociodemographic characteristics. The focus is on whether burden is higher in disadvantaged communities (low-income tracts, predominantly minority tracts, and tracts with a relatively large number of immigrants). The systematic and systemic variations among neighborhoods can be seen in **Table 2**. Workers not in the UI system are more concentrated in poorer neighborhoods than affluent ones. The most advantaged places (areas with a lower share of those who are not covered by UI) tend to have fewer Latinx and more non-Hispanic Whites than the neighborhoods with the highest percentage uncovered by UI. Moreover, more than half of the residents are renters in neighborhoods with the highest percentage uncovered.

Table 2: Neighborhood Sociodemographic Characteristics Ranked by UI Coverage

	Lowest % Uncovered by UI	Low	Middle	High	Highest % Uncovered by UI
% of workers not covered by UI	0%	3%	10%	18%	30%
Distribution by Race					
% NH White	45%	41%	40%	36%	31%
% Black	6%	6%	5%	6%	6%
% Latinx	31%	34%	36%	42%	48%
% Asian	14%	15%	15%	13%	11%
% Immigrants	23%	25%	27%	28%	31%
% Poverty	14%	12%	13%	15%	19%
% Renters	37%	39%	43%	49%	59%
Total Census Tracts	2,050*	1,143	1,597	1,597	1,597

* The number of tracts with full UI coverage is greater than one-fifth of all tracts

SUMMARY

The findings from the analyses show that low-income, minority, and immigrant communities have a disproportionate high number of workers who are receiving inadequate UI benefits. This exclusion places enormous strain on families already in a precarious financial situation. It also greatly weakens the economic base of neighborhoods that have historically suffered from underinvestment. These neighborhoods have the fewest resources and the lowest capacity to weather the economic crisis created by COVID-19.

To establish a fair and equitable immediate response to the COVID-19 crisis, and subsequently post-coronavirus recovery efforts, it is critically important to continually monitor developments and, when possible, analyze direct measurements of unemployment benefits payment at the neighborhood level. State and federal policies should make special efforts to provide UI benefits to marginalized populations least likely to receive UI benefits in the next round of stimulus packages. It must be ensured that these marginalized populations are aware of, and take advantage of, resources in the private and the philanthropic sectors to help weather the COVID-19 storm. Federal and state policies as well as fund programs should be enacted to equip economically displaced persons with job skills that are marketable during and after the COVID-19 crisis.

RENTER VULNERABILITY INDEX 2.0 (RVI 2.0)

INTRODUCTION

California is experiencing an unprecedented crisis in the rental housing market due to the effects of COVID-19. A study released in early August 2020 found that more than 1.9 million adults in California were unable to pay their rent on time in early July, causing many to be at risk of becoming homeless.[23] Of those renters, the percent of Black and Latinx adults was roughly two times as great as the percent of Whites and Asians unable to pay.[24] Furthermore, it can be seen that the trends in those who are unable to pay varies with employment factors, as those who have experienced a loss of employment themselves or by someone in their household were more than four times as likely to miss paying rent during the pandemic.[25] As expected, there are also systematic disparities by income as those earning less than $25,000 in annual income were almost 20% more likely to not pay rent than those earning at least $100,000 in annual income. Relative to affluent households, low-income households were about 5.5 times as likely to experience an issue with paying rent during the pandemic. Similarly, there is a systematic difference by educational attainment. Those who have had the most schooling have almost 15% percentage points less than those who have had the least schooling in terms of percent of households not paying rent. It is clear that there are significant ethnoracial differences in the relative number of households burdened by their monthly rent payments, with Blacks and Latinxs being the most adversely affected.

Local governments have stepped in by passing ordinances that allow affected renters to defer payments without the risk of eviction during the health emergency. However, there is a daunting problem of effectively implementing the policies because of numerous barriers impacting the most vulnerable populations. This study provides information to help better identify neighborhoods with a high concentration of vulnerable renters and to understand the neighborhoods' socioeconomic and demographic characteristics. This study also finds that many of the most vulnerable neighborhoods face multiple barriers to learning, understanding, and utilizing the new temporary protections. The findings provide information that local officials and community stakeholders can use to target resources in recovery efforts. While effective and quick implementation is critical, it is important to note that the temporary deferral of rent payment will create a new set of threats to renters.

In an effort to assist public agencies and community organizations in implementing the temporary renter protection policies, this report developed a renter vulnerability index (RVI 2.0) for each neighborhood (defined by census tracts). This effort was built on our earlier RVI 1.0 work for Los Angeles County, with modifications to the index to adjust for the availability of statewide data.[26] The index identifies places with a disproportionate concentration of renters "one paycheck away from financial disaster," and the subsequent analysis provides neighborhood profiles related to potential outreach barriers and challenges. Both types of information can be used to better target resources to educate the most vulnerable renters about the new protections and to assist them to avail themselves of the temporary relief. This brief seeks to identify neighborhoods that are most vulnerable in California based on the RVI. An examination then follows on how variations in vulnerability correlate with neighborhood sociodemographic characteristics.

DATA AND METHODOLOGY

This study utilizes four dimensions to identify vulnerable neighborhoods:

1. Neighborhoods with a disproportionate large number of renters on the edge of financial vulnerability due to high housing cost burden;
2. Neighborhoods with a disproportionate large number of workers vulnerable to job displacement due to COVID-19 retail and service-sector closures;
3. Neighborhoods with a disproportionate number of people excluded from the UI program; and
4. Neighborhoods with a disproportionate number of undocumented individuals.

Renters on the edge of financial vulnerability are defined as households that pay more than half of their income on rent, particularly low-income renters.[27] Exposure to job displacement is defined by two separate variables: pre-COVID-19 unemployment probability and proportion of workers in industrial-occupational sectors that have experienced the greatest job losses because of sheltering-in-place mandates.

The first dimension uses data from the 2014–2018 5-year ACS, which are the most recently available census-tract level estimates. Specifically, this analysis uses two measures. The first is the overall proportion of renters who pay more than 50% of their income on housing, and the second is the proportion of low-income renters who have too little income left after paying their housing costs. For the latter, we estimate the number and proportion of renter households that have less than $12,000 annually after paying for housing costs (e.g., rent, utilities).

The second dimension also uses the 2014–2018 ACS. The reported unemployment rate is defined as the number unemployed divided by the civilian labor force. The second is defined as those in the economic sectors most impacted by COVID-19, and includes sales workers in retailing, service workers in hospitality, and workers in personal care and service occupations.

The third dimension is exclusion from the UI program (thus exclusion from economic-relief programs). The UI coverage rate is defined as the number of private-sector workers in the UI program divided by the number of workers in the private for-profit and nonprofit sectors. Estimates of those in the UI program are based on data from the LEHD for 2013–2017 (the five most recent years available), and the estimated labor force comes from the corresponding 2013–2017 ACS. The non-UI coverage rate (which may indicate higher vulnerability) is the complement of the UI coverage rate (100% minus the percent with UI coverage).

The fourth dimension includes estimates of the undocumented population, as many are excluded from receiving federal pandemic-relief packages such as the one-time cash payments under the recent CARES Act. Estimate for this measure is based on a regression model for Los Angeles County using Zip Code Tabulation Area (ZCTA) level data. The dependent variable is the

number of undocumented persons divided by total persons. The former comes from an aggregated administrative file for a social-service program (proprietary data). The independent variables are noncitizens as percent of population, percent Asian, percent Latinx, and poverty rate. All are from the 2014–2018 ACS 5-year estimates. The model has an R-squared of .89 and is weighted by ZCTA population (due to large variance in the population across ZCTAs).

The basic geographic unit of analysis for the RVI is the census tract. This analysis only includes census tracts with at least 500 renters to improve statistical precision (ACS has sampling variance because it covers only about one-eighth of the population). The excluded tracts account for 38% of all census tracts in the state, but only 14% of all renter households (conversely, tracts included in the analysis covers 62% of all census tracts and 86% of all renter households). Census tracts that are excluded from the analysis tend to have fewer people of color and are more affluent, thus not as vulnerable to economic disruptions. **Table 3** summarizes some key neighborhood characteristics of these tracts compared to the tracts that are included in the analysis. The reported values in the table represent the average (mean) of each characteristic for the census tracts reported in each column.

Table 3: Key Neighborhood Characteristics of Included and Excluded Census Tracts

	Included	Excluded
% NH White	35%	46%
% Black	7%	5%
% Latinx	42%	32%
% Asian	14%	14%
% Immigrants	29%	23%
% Living in Poverty	17%	10%
% Renters	58%	26%
Total Census Tracts	4,956	3,101

Source: 2014–2018 5-year ACS

To generate the RVI, the individual components are first transformed. These components tend to be nonlinear and skewed and have different coefficients of variance (a measure of the spread in value across tracts); therefore, each variable is transformed into ordinal ranking. Each component has the same weight, and the rankings are summed up to produce an overall score. For analytical purposes, neighborhoods or census tracts are assigned into five hierarchical groups based on each neighborhood's RVI score. The ranking ranges from neighborhoods with the lowest renter vulnerability to neighborhoods with the highest vulnerability. Each tract's ranking is relative to all census tracts in the state (for those tracts that are included in the analysis).

Table 4 reports the neighborhoods' averages (mean) of the six variables used to generate the RVI. As expected, more vulnerable neighborhoods have a larger share of renters that are severely burdened by housing costs and have less disposable income after paying for housing-related expenses. These vulnerable neighborhoods also have higher rates of unemployment and workers at risk of job displacement due to closures in sectors impacted by COVID-19. Moreover, the most vulnerable neighborhoods are the least likely to have workers that are covered by UI and far more individuals who are undocumented.

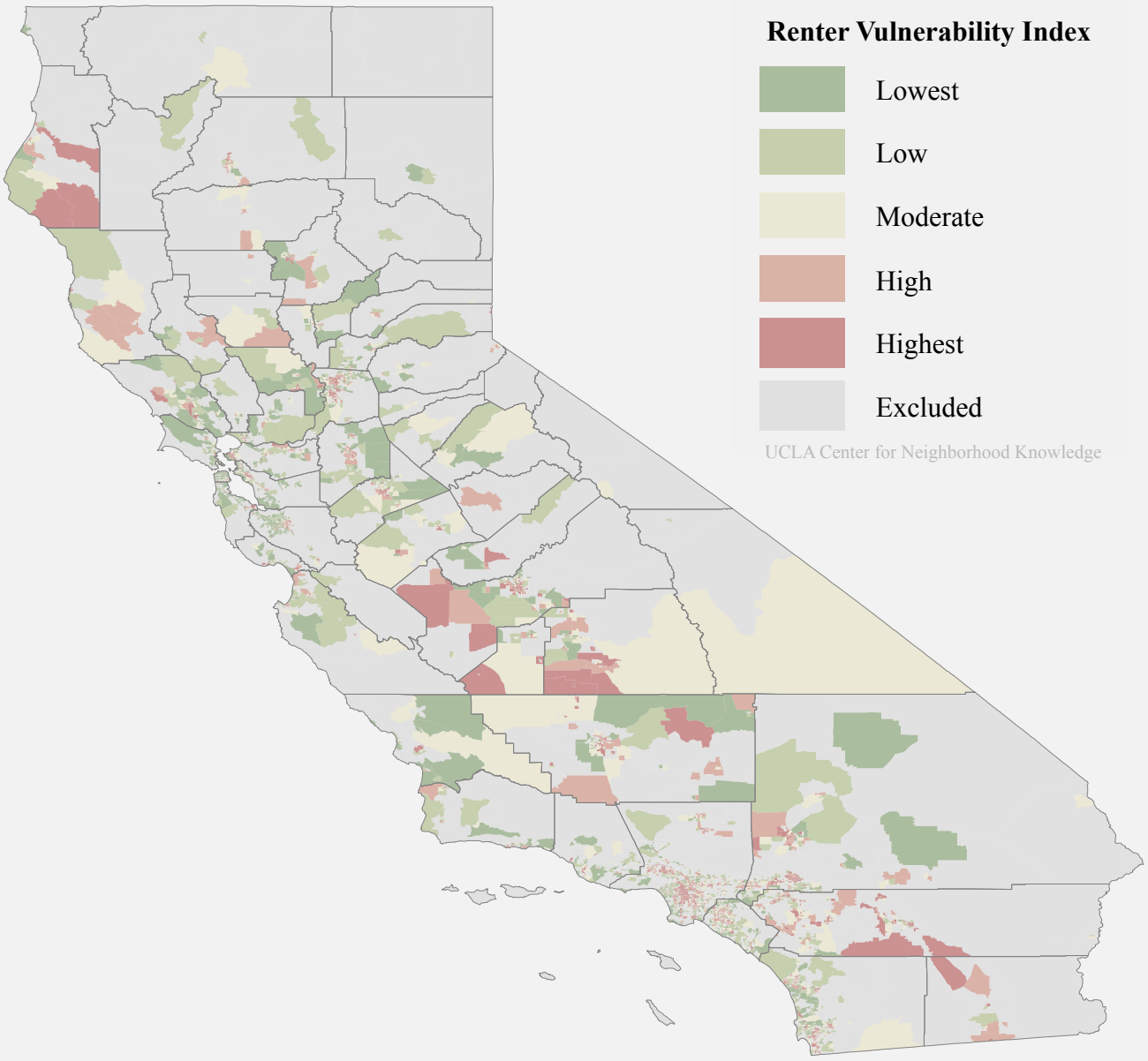
Table 4: Components of Renter Vulnerability Index by Levels of Vulnerability

	Lowest Vulnerability	Low	Moderate	High	Highest Vulnerability
% Severe rent burden HHs	18%	24%	27%	31%	37%
% Renter HHs with less than 12K	16%	23%	30%	36%	42%
% Unemployed	4%	6%	7%	9%	10%
% Workers at risk of job displacement	11%	14%	16%	18%	19%
% Workers without UI coverage	10%	13%	14%	15%	22%
% Undocumented population	1%	2%	3%	5%	7%
Total Census Tracts	994	992	995	989	986

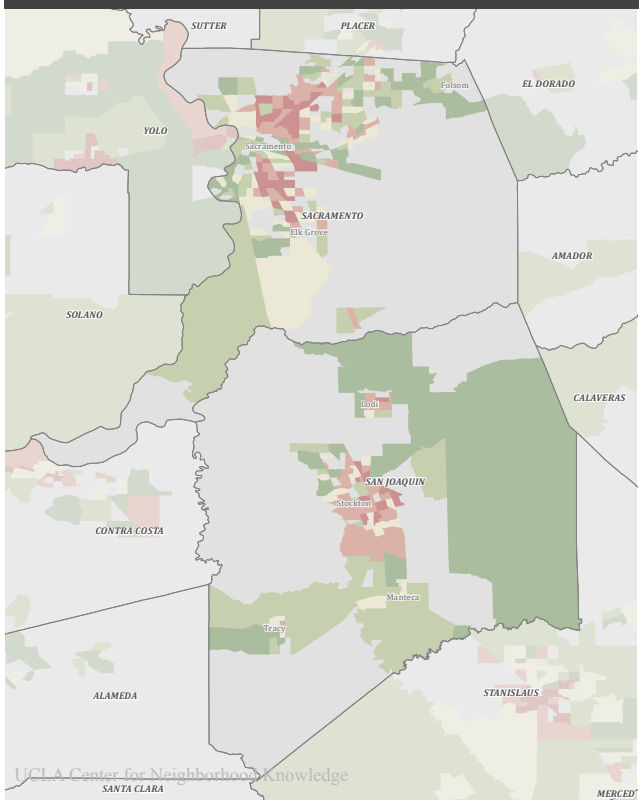
MAPS

The following maps display neighborhoods by their RVI for California and for three subregions: San Francisco Bay Area, Central Valley (Sacramento and San Joaquin counties in particular), and Los Angeles County. The maps are displayed in quintiles (roughly 20% of all census tracts in each bin), ranging from lowest to highest vulnerability. The red areas represent neighborhoods that are vulnerable, with darker red denoting the greatest vulnerability. The green areas represent neighborhoods that are less vulnerable, with the darker green denoting the lowest vulnerability. Neighborhoods or census tracts shaded in gray represent areas that are excluded from the analysis. It should be noted that the map displays some college areas as being vulnerable. This is not surprising given that many college students fit the conditions of vulnerability under the RVI definition (e.g., college students are more likely to be renters, unemployed, have lower household income).

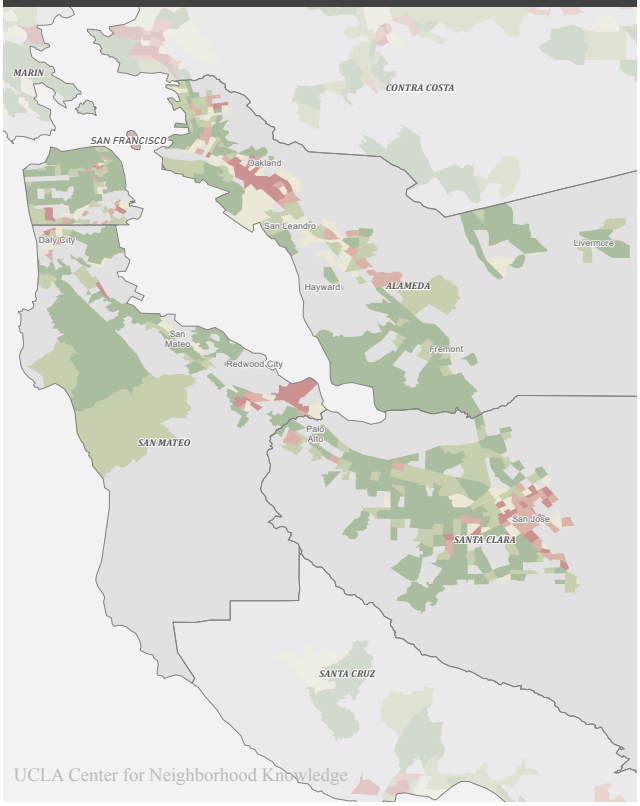
California


Renter Vulnerability Index
Lowest
Low
Moderate
High
Highest
Excluded
UCLA Center for Neighborhood Knowledge

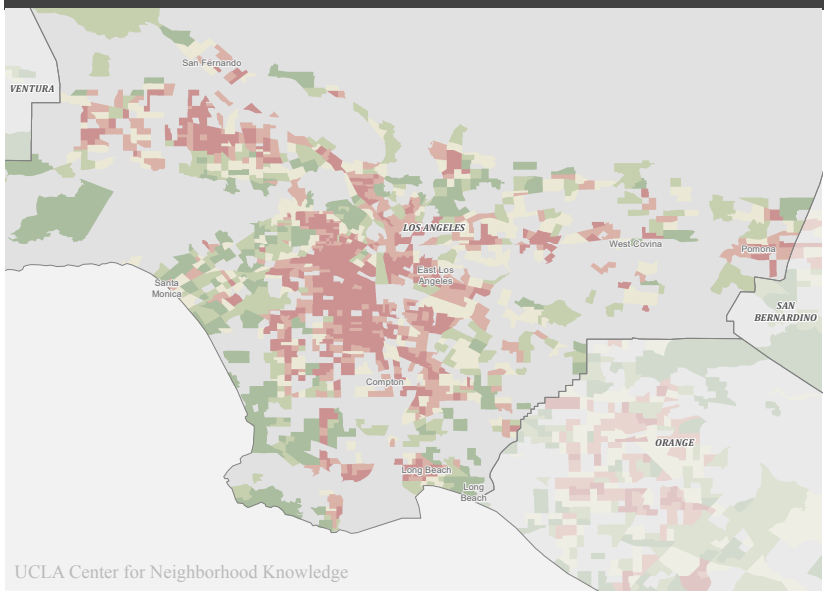
Central Valley



San Francisco Bay Area



Los Angeles County



Renter Vulnerability Index

- Lowest
- Low
- Moderate
- High
- Highest
- Excluded

ANALYSIS

This indicator of vulnerability examines how variations in renter vulnerability correlate with neighborhood sociodemographic characteristics. The focus is on whether vulnerability is higher in disadvantaged communities (low-income tracts, predominantly minority tracts, and tracts with a relatively large number of immigrants). The systematic and systemic variations among neighborhoods can be seen in **Table 5**. The reported values in the table represent the average (mean) of all the census tracts in each neighborhood group.

The most vulnerable neighborhoods have a high concentration of those living in poverty. The average poverty rate for the highest vulnerable neighborhoods is more than four times greater than the average poverty rate in the least vulnerable neighborhoods (30% vs. 7%, respectively). Moreover, the most vulnerable neighborhoods have disproportionately more Latinx and Blacks and fewer non-Hispanic Whites than the least vulnerable neighborhoods. Finally, immigrants are more relatively concentrated in high-renter vulnerable neighborhoods.

Table 5: Neighborhood Sociodemographic Characteristics by Levels of Renter Vulnerability

	Lowest Vulnerability	Low	Middle	High	Highest Vulnerability
Renter Vulnerability Index*	227	356	450	543	661
Distribution by Race					
% NH White	54%	45%	35%	24%	15%
% Black	4%	5%	7%	8%	9%
% Latinx	18%	30%	42%	53%	64%
% Asian	19%	15%	12%	12%	10%
% Immigrants	23%	24%	27%	32%	38%
% Poverty	7%	12%	17%	22%	30%
% Renters	47%	51%	56%	63%	71%
Total Census Tracts†	994	992	995	989	986

* Higher RVI value = higher vulnerability
† Only tracts with at least 500 renter households

SUMMARY

This study identifies a concentration of neighborhoods with struggling renter-households. Residents in many of the most vulnerable neighborhoods are also likely to face multiple barriers to learning, understanding, and utilizing the new temporary protections due to limited English proficiency and limited access to the Internet.[28]

California has now placed several new temporary renter protection policies. They were developed quickly, and still need further refinement and stronger provisions. An immediate and urgent need is to implement and enforce the existing policies. As documented in the preceding text, the most vulnerable renters and neighborhoods to the disruptions being created by COVID-19 are also the ones facing multiple barriers to utilizing the protections. It is critically important to continually monitor developments in real time, particularly by identifying the renters who fall behind in their payment during the COVID-19 crisis and their ability to utilize the temporary protection. This can only be done by greater collaboration among public agencies, community groups, and researchers to gather and analyze the data. It may also require new ways to gather information through social media and crowdsourcing. Such information is vital to effectively implement the policies.

Our elected officials should also prepare for the looming problem after the end of the public health emergency. The temporary renter protection policies only defer rent payments. A real and frightening outcome is a new wave of evictions and homelessness in the post–COVID-19 era. Affected renters must pay their regular rent and the accumulated debt. The most affected renters are exactly the ones who will come out the least able to survive financially. Today, they are suffering from COVID-19 unemployment and exclusion from COVID-19 financial relief (recent CARES Act rebates and UI benefits). They are likely to be among the last to recover economically. It is not too early to start developing policies and strategies to ensure a more just recovery for these households.

SHELTER-IN-PLACE BURDEN INDEX 2.0 (SIPBI 2.0)

INTRODUCTION

The Shelter-in-Place Burden Index (SIPBI) is utilized to identify neighborhoods that are disproportionately burdened by COVID-19 shelter-in-place mandates in California. Five variables are used to measure the relative difficulty (or ease) in complying with sheltering in place: neighborhood population density, availability of public open space per person, estimations of the relative number of households without access to a nearby supermarket (adjusted for household vehicle ownership), crowding within housing, and whether or not residents have access to broadband Internet from their home.[29] This section then examines how variations in the burden imposed by sheltering in place correlate with neighborhood sociodemographic characteristics, specifically whether socioeconomically disadvantaged neighborhoods (low-income and predominately minority communities) contain more residents with a much greater difficulty of complying with shelter-in-place policies. The results confirm that neighborhoods more burdened by the mandates tend to be low-income and with disproportionately large numbers of people of color.

DATA AND METHODOLOGY

Five variables are used to measure the relative difficulty (or ease) in complying with shelter in place. Neighborhoods are operationalized as census tracts. The first variable is the population density in an area, operationally defined as the total number of persons divided by the land area (in square miles) of the census tract. For the same level of neighborhood activity (exercising, local shopping, etc.), densely populated places increase the odds and frequency of encountering people, thus increasing the chances of encountering a COVID-19 carrier and decreasing the chances of maintaining social distancing. Both contribute to spreading the coronavirus.

The second variable is in-housing crowding, operationally defined as having 1.51 persons or more per room. Like population density, in-housing overcrowding can increase one's odds of contracting COVID-19 if another person in the household is infected and there is not another room to separate the individual from other members in the household. In a study conducted by CalMatters, researchers found that neighborhoods with the highest rates of COVID-19 experience three times the rate of overcrowding compared to those with the lowest. Furthermore, roughly four-fifths of residents are people of color in the infected and overcrowded neighborhoods, whereas half of the residents are White in the lesser affected and less crowded neighborhoods. Researchers also found that around two-thirds of Californian's living in overcrowded homes are essential workers, of which three-fourths live in poverty and nine-tenths are people of color.[30] Neighborhood residential density and in-housing crowding are both constructed using data from the 2014–2018 ACS.

The third variable is the availability of public open space per person. Areas with more open space enable individuals to keep physically and mentally fit more easily through outdoor exercise. This measure is constructed with data from the ACS and the California Department of Parks and Recreation (DPR). Although the department has its own measure of park access, this report uses calculations of an alternative measure that accounts for open spaces adjacent to a tract rather than just the open spaces within a tract.

The fourth variable is an estimate of the relative number of households without access to a nearby supermarket. Those who fall into this category face enormous barriers to fulfilling an essential shopping activity—that is, purchasing food. Proximity to a supermarket is based on data from the U.S. Department of Agriculture's (USDA) Food Access Research Atlas. Calculations for an alternative index to the one reported by USDA are utilized to focus on access to nearby stores and to take into consideration the availability of vehicles in a household. Data on the latter comes from the ACS.

The final variable is the share of households without access to broadband Internet. The lack of access to broadband Internet could be a barrier for many households to access information or receive services as agencies and direct service organizations are increasingly using the web as their primary mode of communicating availability of resources during the COVID-19 pandemic.

Shelter in place has changed the way people work (remotely for those who are fortunate), learn (school shutdowns and distance learning), get entertainment (e.g., Netflix and other streaming services), shop (e.g., Amazon), socialize (e.g., Zoom gathering with family and friends), and get vital information (e.g., accessing announcements about what type, when, and where one can go out to exercise; COVID-19 symptoms). The digital divide becomes more divisive with sheltering in place. This information is derived from the ACS.

The five measures are combined to produce an overall SIPBI. A composite ranking is calculated because the three dimensions are not evenly nor normally distributed, and they are nonlinear. All five components are skewed but to varying degrees and have disparate coefficients of variance. The method used is to rank each of the five dimensions into 233 categories (each containing roughly 10 tracts), and then sum the five ranks for each tract. Higher value denotes greater total burden. **Table 6** displays the average rankings of each key variable used to construct the SIPBI. As indicated by the columns, neighborhoods are ranked from lowest to highest vulnerability based on their SIPBI scores. Each column represents roughly 20% of all census tracts in the state. Not surprisingly, neighborhoods most burdened by shelter in place tend to be more dense neighborhoods with more households that are overcrowded, have less access to publicly open space, have less access to nearby grocery stores, and more households without broadband Internet access.

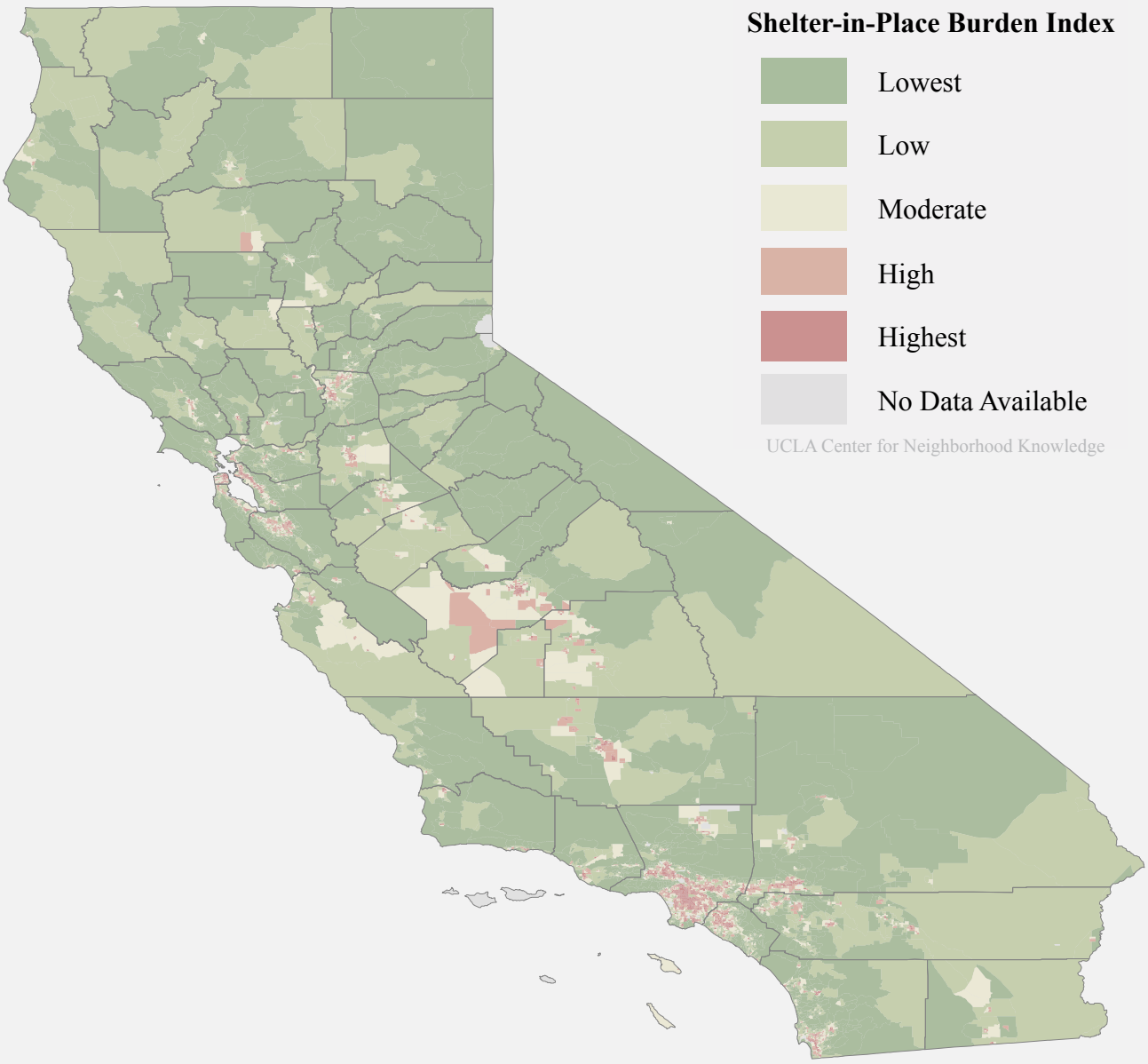
Table 6: Components of Shelter-in-Place Burden Index

	Lowest Burden	Low	Moderate	High	Highest Burden
Population Density Rank (higher = worse)	46	82	115	147	193
Overcrowded Housing Rank (higher = worse)	51	79	108	147	194
Availability of Public Open Space Rank (lower = worse)	190	146	112	84	47
Food Access Rank (higher = worse)	44	82	116	149	189
Without Broadband Internet Rank	62	88	111	138	181
Shelter-in-Place Burden Index	245	417	569	728	942
Total Census Tracts	1,592	1,598	1,597	1,594	1,599

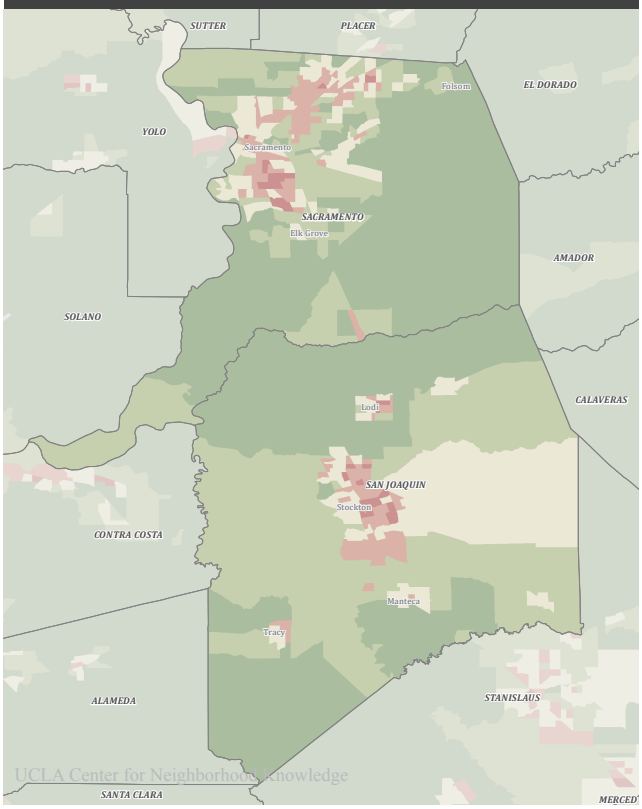
MAPS

The following maps display neighborhoods by their SIPBI for California and for three subregions: San Francisco Bay Area, Central Valley (Sacramento and San Joaquin counties in particular), and Los Angeles County. The maps are displayed in quintiles (roughly 20% of all census tracts in each bin), ranging from lowest to highest vulnerability. The red areas represent neighborhoods that are vulnerable, with darker shades denoting the greatest vulnerability. The green areas represent neighborhoods that are less vulnerable, with the darker shade denoting the lowest vulnerability. Neighborhoods or census tracts shaded in gray represent areas that are excluded from the analysis. It is clear from the maps that dense urban areas have a greater burden for sheltering in place than rural areas do.

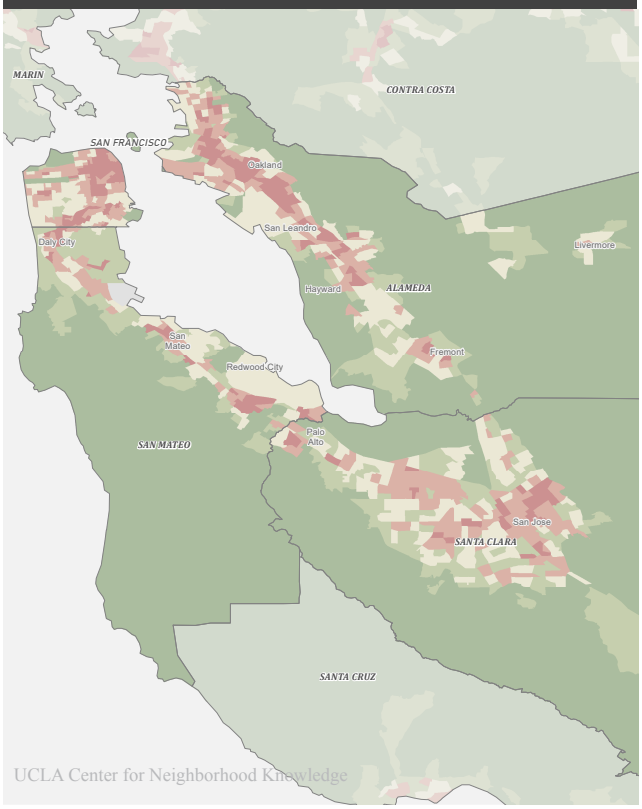
California


Shelter-in-Place Burden Index
Lowest
Low
Moderate
High
Highest
No Data Available
UCLA Center for Neighborhood Knowledge

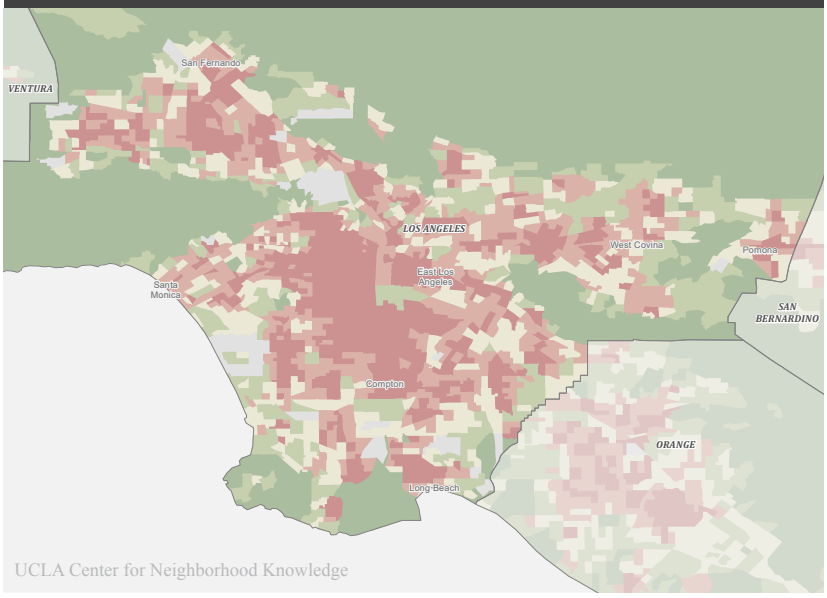
Central Valley



San Francisco Bay Area



Los Angeles County



Shelter-in-Place Burden Index

- Lowest
- Low
- Moderate
- High
- Highest
- No Data Available

ANALYSIS

The report's analytical component examines how variations in the SIPBI coverage correlate with neighborhood sociodemographic characteristics. The focus is on whether burden is higher in disadvantaged communities (low-income tracts, predominantly minority tracts, and tracts with a relatively large number of immigrants). The systematic and systemic variations among neighborhoods can be seen in **Table 7**. Neighborhoods with the greatest burden are typically poorer than the least burdened. The average poverty rate for the tracts with the highest SIPBI is three times higher than that for the tracts with the lowest SIPBI (24% vs. 8%, respectively). The most burdened neighborhoods have more Latinx and Blacks and fewer Whites. Conversely, the least burden neighborhoods have more Whites and fewer people of color. Immigrants are also disproportionately more concentrated in higher burden neighborhoods and the higher burden neighborhoods are disproportionately renter neighborhoods.

Table 7: Neighborhood Sociodemographic Characteristics by Levels of Shelter-in-Place Burden Index

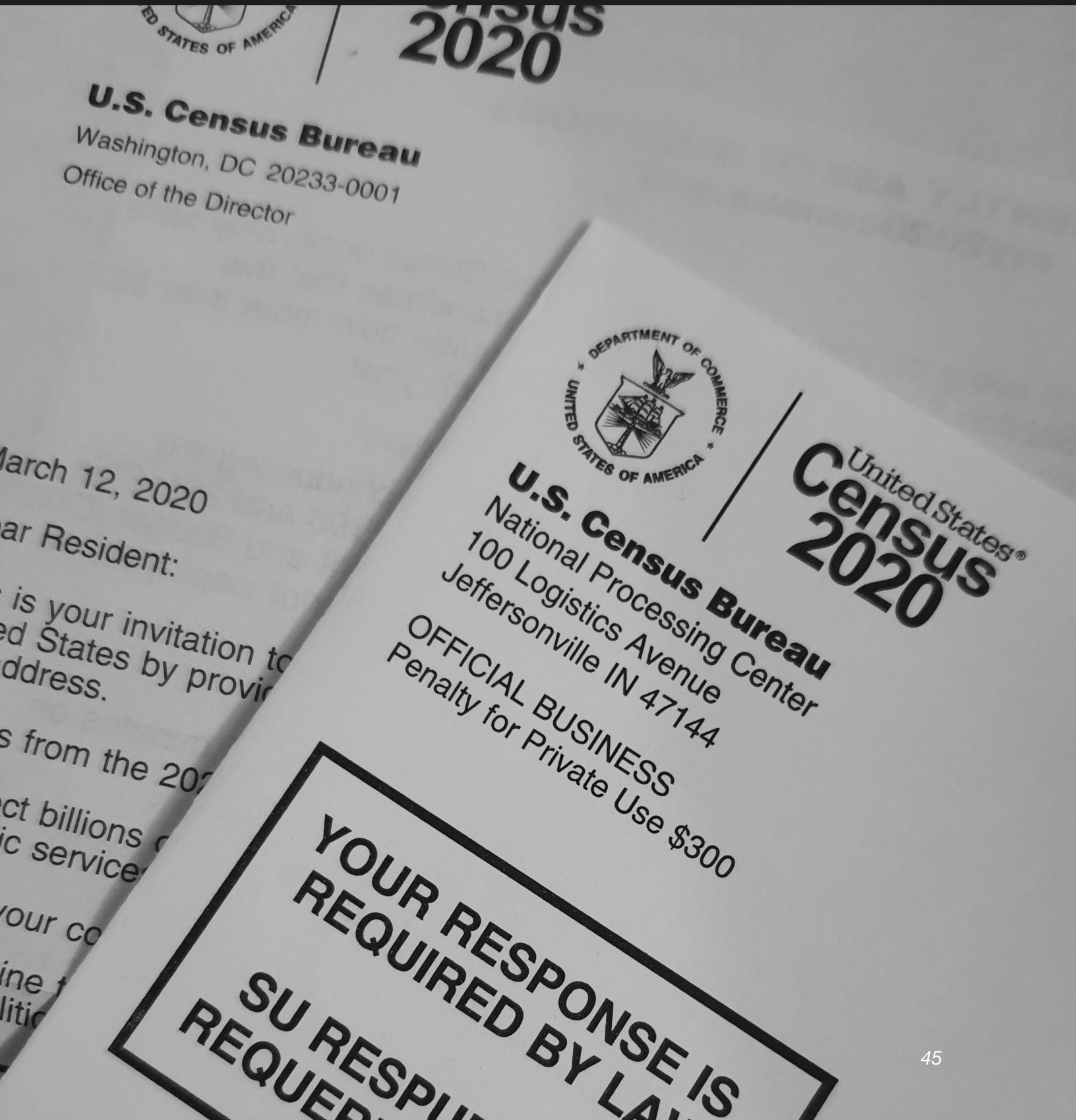
	Lowest Burden	Low	Middle	High	Highest Burden
Shelter-in-Place Burden Index	245	418	570	729	943
Distribution by Race					
% NH White	62%	51%	40%	28%	15%
% Black	3%	4%	6%	7%	9%
% Latinx	19%	27%	36%	46%	62%
% Asian	12%	14%	15%	15%	13%
% Immigrants	17%	20%	25%	31%	40%
% Poverty	8%	11%	13%	17%	24%
% Renters	24%	34%	45%	55%	71%
Total Census Tracts	1,600	1,600	1,598	1,595	1,587

SUMMARY

Overall, the analysis finds systematic disparities in burden along economic, ethnoracial, and other demographic lines, and that the burden is correlated with the ability to remain connected to the places and people outside one's immediate location. Low-income, immigrant, and minority communities face the highest burdens to sheltering in place. This analysis reinforces the structural inequities communities of color are experiencing during this pandemic: higher risks of COVID-19 exposure, restricted access to open spaces, and limited access to food.

The need to address these inequities has heightened as government leaders redesign national stimulus packages to include essential workers and state leaders focus on economic recovery. It is crucial that state and local government leaders consider policies that minimize shelter-in-place burden for vulnerable communities, especially communities of color and immigrant communities. This includes increased COVID-19 testing availability not just across the state, but specifically focused on neighborhoods who face the highest risks to sheltering in place with special note of aspects such as cost, culture sensitivity, and language availability. Furthermore, transportation accessibility to these testing sites is crucial. Pandemic-related transportation vouchers and accessibility of hand sanitizer and masks at public transit hubs are two ways to support those who must use public transportation to reach testing facilities. To increase accessibility further, establishment of hazard pay for those most at risk of contracting the virus and offering paid sick leave and medical leave can support workers' rights and safety. For neighborhoods that struggle most with sheltering in place, an introduction of pandemic-related food benefits, such as vouchers for delivery services or expanding service networks to cover these at-risk neighborhoods can severely lessen the burden on vulnerable homes. By recognizing the social inequalities that are being reproduced during COVID-19, policy makers can make sure the most vulnerable communities are meaningfully integrated into relief and recovery efforts to offset their unequal burden of the pandemic and recognize their critical role in rebuilding the economy.

CENSUS RESPONSE BARRIERS



INTRODUCTION

The 2020 Census is facing immense challenges to ensure a complete and fair count due to the onset of the COVID-19 pandemic early in the year. Factors such as race, economic class, and disadvantages caused by the pandemic all affect the accuracy of the 2020 Census enumeration. As of early August 2020, 93 million households, less than an estimated 63 percent, responded to the 2020 Census.[31]

In 2010, 74 percent of households in the United States filled out and mailed back their 2010 Census questionnaire, matching the final mail participation rate achieved in the 2000 Census.[32] The lack of response this year could spell big problems for California, as the 2020 Census enumeration is crucial for political, economic, and social reasons. Constitutionally, the decennial census is required so that congressional seats can be reapportioned to account for geographic shifts in the population. The official count is also used for redrawing electoral district boundaries (i.e., redistricting) for congressional representatives, state legislators, and local officials. Equally important, the numbers are used for allocating public funds, enforcing laws (particularly voting rights), and understanding demographic trends to plan for business, community, housing, and economic development. For example, estimates show that for every person uncounted, California could lose about $1,000 a year for 10 years, equating to $10,000 per person in lost funds over the next decade.[33] It is predicted that the 2020 Census will be extremely flawed due to severe undercounts of people of color and low-income individuals. It will be critically important to start developing methods to adjust the 2020 Census counts to develop an accurate representation of America and its people.

There are two major phases in the enumeration: the self-response phase and nonresponse follow-up (NRFU) phase. The first relies on individuals and households to respond to an invitation to complete the questionnaire online, by telephone, or by mail. The Bureau introduced using the Internet for 2020 as an innovative, cost-saving, and effective utilization of technology. This self-response phase has become increasingly important in the past couple months due to the unexpected onset of the COVID-19 pandemic, which has significantly disrupted people's lives, social behavior, and the economy. A higher self-response rate would mean fewer homes to visit during the NRFU. Due to the pandemic, the Bureau has been forced to extend the self-response phase and delay other operations.

While the overall 2010–2020 response gap has closed to three to four percentage points as of August 1, 2020,[34] some communities experience more barriers to participating. Low-income and minority neighborhoods experienced lower response rates in 2010 than more advantaged neighborhoods, and the gap widened in 2020. Racial and economic class biases threaten and undermine the goals of equal political representation and just allocation of resources. Unfortunately, there are now too many barriers to a complete and fair count.
This section of the report estimates the proportion of California residents who have not responded to the 2020 Census as of August 1, 2020. It seeks to identify neighborhoods with a

disproportionate number of individuals that have not responded to the 2020 Census and subsequently are not counted and underrepresented in the overall count. This section further examines how variations in response rates across California neighborhoods correlate with neighborhood sociodemographic characteristics, specifically whether socioeconomically disadvantaged neighborhoods (low-income and predominately minority communities) have high nonresponse rates and contributing factors as to why this may be true.

DATA AND METHODOLOGY

We use data from the U.S. Census Response Rates for the 2020 Decennial Census to determine the response rates of Californians by neighborhood as of August 1, 2020. It is predicted that sources of inaccuracy connected with race and economic class combined with the COVID-19 crisis has already led to severe miscounts for this coming decade. Several major factors could hamper 2020 responses, which vary depending on racial group and economic class, including the shift to the Internet as the primary mode of data collection, the growth of vacant and seasonal housing, and the growth of the hard-to-reach Latinx population. For both cost and other reasons, the Census Bureau shifted to the primary mode of self-reporting to responding online, although the public has the option to respond by phone or mail as well. This strategy has had its intended effect, with about 85% of all responses coming in online.[35] However, this data-collection method places an extra burden on households without a computer or broadband connected, which for others has become the lifeline connecting them to the outside world while staying home during the pandemic.

Race and economic class have historically contributed to a "differential undercount," defined by the Census Bureau as:

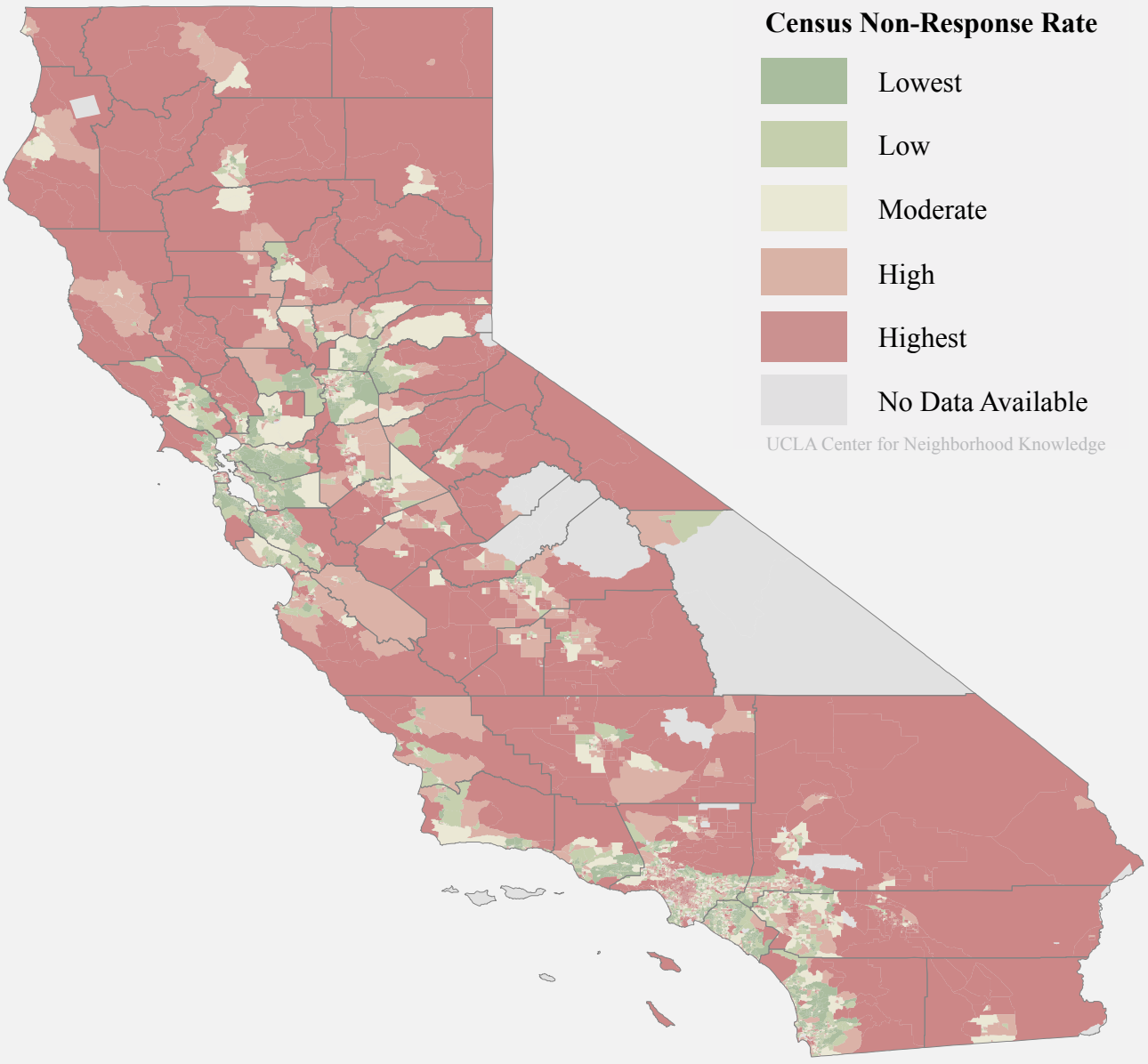
> The difference between the net undercount rate for a particular demographic or geographic domain and the net undercount rate either for another domain or for the nation.[36]

In more concrete terms, minority and low-income groups and neighborhoods are among the most adversely affected.[37] While the strict definition of a differential undercount applies to the final tabulation, the self-response rate and the final count are linked directly. It is more challenging to successfully close out the enumeration for neighborhoods with significantly lower than average self-response rates, especially if the Census Bureau reduces resources and time for the NRFU phase.

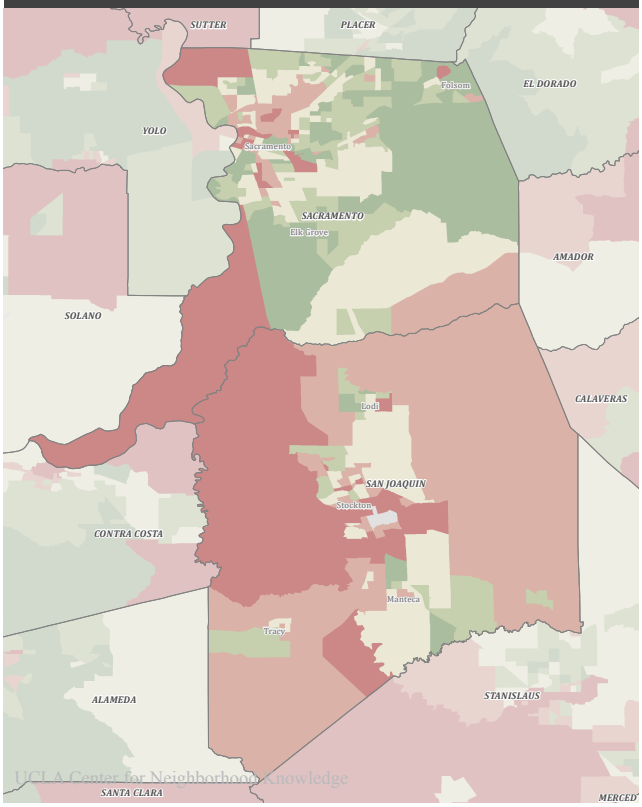
MAPS

The following maps display neighborhoods by their Census 2020 Non-Response Rates as of August 1, 2020, for California and for three subregions: San Francisco Bay Area, Central Valley (Sacramento and San Joaquin counties in particular), and Los Angeles County. The maps are displayed in quintiles (roughly 20% of all census tracts in each bin), ranging from lowest to highest rates of response. The red areas represent neighborhoods that have low response rates, with darker shades denoting those with the greatest occurrence of non-response. The green areas represent neighborhoods that have higher response rates, with the darker shade denoting the greatest rates of response. Neighborhoods or census tracts shaded in gray represent areas that are excluded from the analysis.

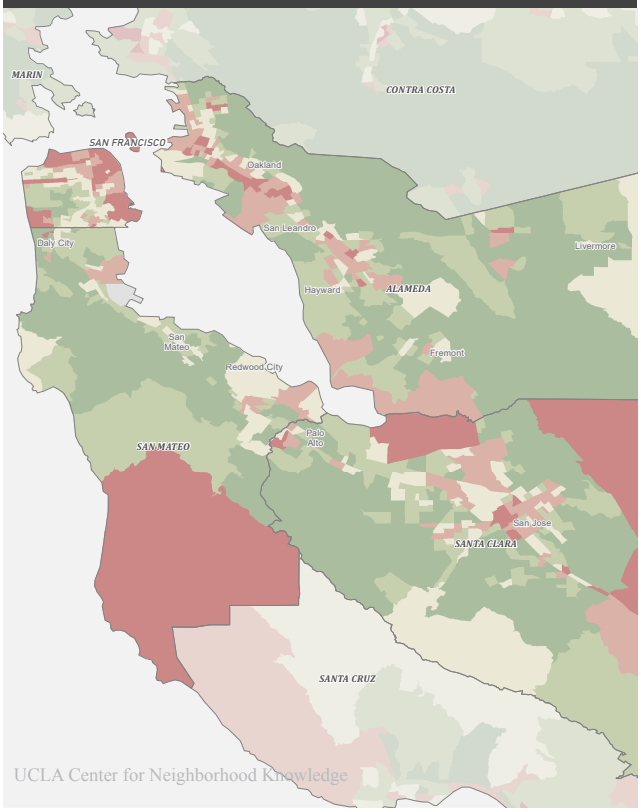
California


Census Non-Response Rate
Lowest
Low
Moderate
High
Highest
No Data Available
UCLA Center for Neighborhood Knowledge

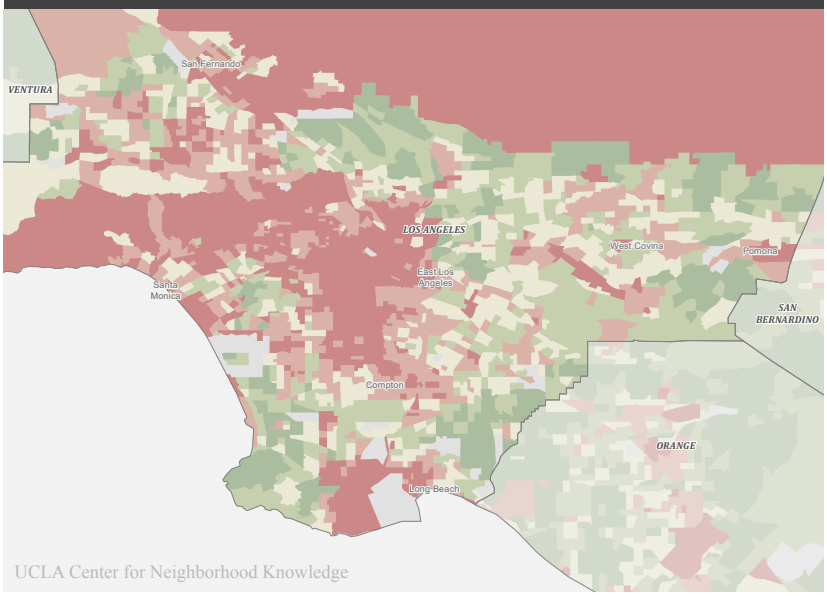
Central Valley



San Francisco Bay Area



Los Angeles County



Census Non-Response Rate

- Lowest
- Low
- Moderate
- High
- Highest
- No Data Available

ANALYSIS

This indicator of vulnerability examines how variations in the 2020 Census nonresponse rate correlate with neighborhood sociodemographic characteristics. The focus is on measuring whether the nonresponse rate is higher in disadvantaged neighborhoods (low-income, renter heavy, and relatively high immigrant-populated neighborhoods) and non-White neighborhoods when compared with other neighborhoods across California. These results can be seen in **Table 8**, showcasing the data behind the systematic and systemic variations across neighborhoods. The reported values in the table represent the average (mean) of all the census tracts in each neighborhood group.

Neighborhoods with the greatest disadvantages when it comes to their 2020 Census response rate are those with the highest levels of nonresponse. From the table, it is clear that the neighborhoods with higher rates of nonresponse rate are disproportionately communities of color. Neighborhoods classified as having the highest rate of nonresponse disproportionately have a higher share of Latinx and African Americans residents relative to the areas with lowest response nonresponse rates. In comparison, neighborhoods with the lowest rates of nonresponse are disproportionately White and Asian. The neighborhoods with higher than average nonresponse rates are also disproportionately more likely to be immigrant neighborhoods and have higher rates of poverty when compared to areas with lowest nonresponse rates. It is also interesting to note that the percent of renters in neighborhoods with the highest rates of nonresponses is on average roughly three times that than the neighborhoods with the lowest nonresponse rates.

Table 8: Neighborhood Sociodemographic Characteristics by Rates of Nonresponse to the 2020 Census

	Lowest Nonresponse	Low	Middle	High	Highest Nonresponse
Nonresponse Rate	20.3	28.4	34.4	41	53.6
Distribution by Race					
% NH White	54%	43%	37%	29%	32%
% Black	3%	5%	6%	8%	8%
% Latinx	18%	32%	40%	50%	50%
% Asian	21%	17%	14%	10%	8%
% Immigrants	23%	25%	27%	29%	30%
% Poverty	6%	10%	14%	19%	24%
% Renters	23%	37%	47%	58%	62%
Total Census Tract	1,607	1,566	1,589	1,585	1,587

SUMMARY

The problems that come with the 2020 enumeration have been known for months. Even back in April, recently after the pandemic consumed the nation, the New York Times reported that the COVID-19 crisis had seriously hampered self-reporting, causing the Census Bureau to adjust their timeline and initially prolong the collection process to counter any shortfalls.[38] The lagging and differential self-response rates have continued to create a major crisis in the ability to conduct a complete and unbiased 2020 enumeration. Although a self-response phase is just one part of the effort, problems and delays at this stage are producing nearly insurmountable hurdles. Lower self-response rates generate disproportionately more homes that must be visited during the abbreviated labor-intensive NRFU phase. This would add a great strain on the Census Bureau's limited budget and resources. Despite the need for a greater NRFU effort due to the lower self-response rates, the Census Bureau has decided to cut back on the time allotted to finish the enumeration.[39] This shortened schedule has added enormous and likely overwhelming burdens on Census workers and other stakeholders. COVID-19 further compounds the challenges by creating barriers to face-to-face contacts, limiting the scope of Census workers' usual duties in ensuring the population is counted. Finally, the systematic low self-response rates in disadvantaged neighborhoods compound the problems because these are the same neighborhoods most affected by COVID-19.

Unfortunately, a seriously flawed enumeration is unavoidable—a significant overall undercount and differential undercount is inevitable and will disproportionately hurt the poor and people of color. This unfortunate situation is a by-product of one of the nation's worst public-health crises, exacerbated by ineffective actions. Given this looming outcome, it is imperative that data is compiled and methods are developed that enable us to adjust the count to produce a more accurate and unbiased numerical picture of America and its people. The Bureau's post-enumeration study will help, but it is also critically important for academic researchers to develop independent approaches. An adjustment is fundamental to ensuring fair political representation, just resource allocations, and social equality.[40]

CONCLUSION

One of CNK's COVID-19 Equity Research Initiative goals is to develop data tools to inform policy on the nature, magnitude, patterns, and consequences of socioeconomic and demographic disparities that are generated by the pandemic crisis. It is a daunting challenge to produce timely information under conditions of enormous uncertainties and unchartered paths. A starting point is to identify preexisting pre-pandemic vulnerabilities, particularly how these vulnerabilities are disproportionately concentrated spatially (geographically) and within certain populations and neighborhoods. The pre-pandemic factors are very likely to put disadvantaged groups and communities at greater risk of experiencing the direct and indirect adverse impacts of the public-health crisis. Unfortunately, systemic inequality works to reproduce systematic disparities over time, particularly along racial and economic lines.[41] This reproduction of structured inequality is already evident in COVID-19 cases and deaths, the labor market, and housing.

Knowing these preexisting vulnerabilities can be useful in developing policies and interventions that assist the most at risk. This project developed four key indicators capturing different dimensions of pandemic impacts among California's neighborhoods (tracts), building on and refining previous work done for Los Angeles County. The at-risk workers index 2.0 (ARW 2.0) captures the potential disruption to selective sectors of the labor market, initially in terms of layoffs and joblessness, and later in terms of exposure through frequent interactions with customers. The non-UI rate portrays the financial hardship of not receiving the enhanced UI payments and extended weeks of UI benefits from the recent CARES Act if displaced from a job. The SIPBI 2.0 captures the difficulty of adhering to mandated lockdowns imposed by the state. Finally, the RVI 2.0 encapsulates the difficulties renters experience while trying to socially distance and pay rent during pandemic times. This report also includes an additional indicator known as the 2020 Census nonresponse rate, which analyzes regions with high and low rates of response, the demographics of these areas, and connecting factors that may contribute to variations in response rates.

These five indicators share commonalities but are not identical. The analyses presented in the previous sections reveal similarities in the socioeconomic and demographic profiles of the most and least vulnerable neighborhoods. Consistently across all indicators, the highest risk places are disproportionately people of color and low-income, relative to communities at the other end of the spectrum. In other words, minorities, poor households, and immigrants face the greatest challenges when it comes to navigating day-to-day life and getting the help they may need to weather the crisis. This is not surprising because racial and class disparities are often produced similarly in different arenas, forming a set of interlocking and reinforcing disparities that are part and parcel of systemic inequality. Demographic trends of urban areas versus rural areas further perpetuate the existence of vulnerable neighborhoods.

At the same time, there are variations across dimensions. The four indicators are moderately correlated (r values range from 0.59 for SIPBI 2.0 and RVI 2.0 to 0.17 for ARW 2.0 and NUI),

indicating that each indicator is partially capturing unique elements of risk. In other words, systemic inequality of vulnerability is complex, requiring multiple indices to fully understand the systematic pattern. This also means that addressing one pandemic vulnerability does not automatically translate into addressing other risks. The usefulness of the indicators varies with whether one is interested in the impact of COVID-19 on employment, housing, infection, or government support.

Identifying preexisting vulnerabilities is only an initial step in how institutions of higher learning should respond to the pandemic crisis. COVID-19 has transformed how people live, work, learn, consume, and interact at a pace that is still new to comprehend. The crisis is also transforming the way people conduct research, particularly applied research. Yesterday's mode of scholarly research is outdated, inadequate to today's massive societal needs and challenges. The impacts and damages are so severe that analyzing the phenomena cannot wait months or years from now. Immediate policies and actions are needed, and effective interventions require relevant information, methods, and knowledge. This evolution to a new norm has been apparent in the quick development and refinement of systems to monitor coronavirus infections, hospitalization, and deaths, and to model the impact of policy interventions on the pandemic's trajectory. The same must be done for the non-health impacts.

The next step is to monitor and track the actual pandemic's impacts on jobs, housing, and other societal arenas. This, in turn, requires new data sources and analytical techniques, and the ability to respond rapidly as outcomes materialize. This effort requires commitment and resources to be successful, and a willingness to strengthen the connection with non-university stakeholders. Community engagement is a key to impactful applied research. In the long run, this type of research can help not only during the pandemic but also in informing policies so people can have a just and fair recovery.

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[14] According to one source, California, Colorado, Illinois, Michigan, Texas, and New York, https://www.informedimmigrant.com/guides/daca-coronavirus/#

[15] The brief does not cover workers in the "gig economy" or the self-employed. They are eligible for CARES Act assistance, but they may have considerable difficulties because there is no existing data system to verify their status.

[16] We do not cover government workers because they are far less likely to be displaced and because LEHD information on this sector may be more problematic.

[17] https://lehd.ces.census.gov/

[18] Nonprofit organizations are not required to participate in the UI program, but many do. We also examined UI coverage rate for workers just in the for-profit sector, and found similar results.

[19] A simple test for heteroscedastic finds that the variance around tract-level estimates of UI-coverage is correlated with the ACS estimates of the size of the labor force in tracts. Moreover, the estimates for tracts with few workers can produce unrealistic coverage levels. When the denominator (ACS estimate of the labor force) is significantly undercounted and the numerator (LEHD report of workers) is overcounted, the combination may lead to a calculated coverage rate greater than 100%. Not surprisingly, this affects the tracts with few workers, and the coverage rate is top coded to 100%.

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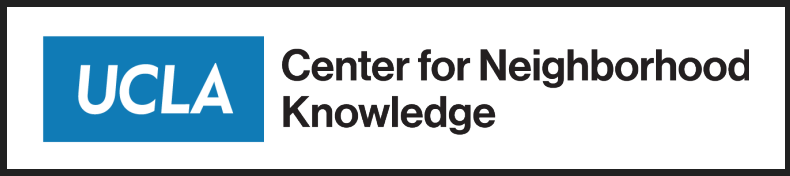

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