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## No Equity without Data Equity: Data Reporting Gaps for Native Hawaiians and Pacific Islanders as Structural Racism

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### Abstract

Data on the health and social determinants for Native Hawaiians and Pacific Islanders (NHPIs) in the United States (U.S.) are hidden because data are often not collected or are reported in aggregate with other racial/ethnic groups, despite decades of calls to disaggregate NHPI data. As a form of structural racism, data omissions contribute to systemic problems such as inability to advocate, lack of resources, and limitations to political power. We conducted a data audit to determine how U.S. federal agencies are collecting and reporting disaggregated NHPI data. Using the COVID-19 pandemic as a case study, we reviewed how states are reporting NHPI cases and deaths. Last, we calculated the extent of NHPI underrepresentation in communities targeted for COVID-19 resources in California using the state’s neighborhood equity metric—Healthy Places Index (HPI). Our analysis shows that while there has been improvement in collection and reporting of NHPI data nationally, federal data gaps remain. States are vastly underreporting—over half of states are not reporting NHPI COVID-19 case and death data. The HPI, used

to inform political decisions about allocation of resources to combat COVID-19, systematically underrepresents NHPI communities. We make recommendations for improving NHPI data equity to achieve health equity and social justice.

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## INTRODUCTION

Native Hawaiians and Pacific Islander (NHPI) leaders in the United States (U.S.) have for decades advocated for disaggregated data in order for social and health issues to no longer remain invisible in the public eye (Office of Hawaiian Affairs 1982; Office of Management and Budget 1997; Chang, Penaia, and Thomas 2020). NHPIs are diverse, with origins ranging across the Pacific regions of Polynesia, Melanesia, and Micronesia (Hixson, Hepler, and Kim 2012). In the U.S., NHPIs comprise 0.4% of the population (about 1.4 million people) and are one of the fastest growing populations (U.S. Census Bureau 2020). Yet, data for NHPIs are often hidden due to gaps in data collection and reporting<sup>1</sup> (Panapasa, Crabbe, and Kaholokula 2011; Kana'iaupuni 2011; Taulii et al. 2011). The result is that the issues that need attention in NHPI communities are made invisible.

The lack of collected and reported NHPI data equates to a form of structural racism that disproportionately harms NHPI communities (Morey et al. 2020). Structural racism is defined as the ways in which society fosters racial discrimination via macrolevel systems, institutions, ideologies, and processes the result in reinforcing discriminatory values, beliefs, and distribution of resources throughout history (Bailey et al. 2017; Gee and Ford 2011). Often supported by interconnected institutions and policies, structural racism does not need to be initiated by a particular individual or group individuals with racist intent. Rather, structural racism can result from subconscious or automatic disparate treatment that results in harm to historically oppressed people of color (Reskin 2012). Historical and continued oppression of NHPIs can be attributed to settler colonialism—the occupation of indigenous lands by a society of settlers through the forcible removal of indigenous peoples—which results in the continued erasure of these populations in public discourse (Tuck and Yang 2012).

Structural racism and settler colonialism manifest to harm NHPI communities through data gaps and limitations. With limited data on health disparities, public health efforts to support NHPI health are under-resourced (Samoa et al. 2020). NHPI policy advocates experience decreased political power due to lack of data on social and health inequities, limiting their ability to advocate for policy changes (Morey et al. 2020). The complete omission or aggregation of NHPI data with other race groups, often with Asian Americans, reinforces the marginalization that NHPIs experience in U.S. society (Chang, Penaia, and Thomas 2020; Kaholokula et al. 2020). In this paper, we contend that social and health equity for NHPIs can be achieved when there is equity in the collection and reporting of data, especially in conjunction with community-based mobilization of those data.

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<sup>1</sup>Data may be collected improperly in surveys that do not provide a separate race category for NHPI identification on forms. Data may be reported improperly by aggregating NHPIs with Asians or other race categories prior to releasing the data.

## Background

On October 30, 1997, the Office of Management and Budget (OMB) announced revisions to the standards for the classification of federal data on race and ethnicity (Office of Management and Budget 1997). This notice, which revised the initial classifications provided by Statistical Policy Directive Number 15 created 30 years prior, included three major modifications: 1) treating the Asian or Pacific Islander category as two separate categories—“Asian” and “Native Hawaiian or Other Pacific Islander,” 2) changing the term “Hispanic” to “Hispanic or Latino,” and 3) allowing more than one self-identified race.<sup>2</sup> The implementation of these revisions represented a major milestone for those identifying as Native Hawaiian or Other Pacific Islander, reflecting hard-fought efforts aimed at advocating for changes to the standard race classifications that previously aggregated Asians and Pacific Islanders together.<sup>3</sup>

The aggregation of NHPIs with Asians rendered NHPI health and social inequities invisible, because Asians represent a significantly larger population that is more socioeconomically advantaged on average (Kana’iaupuni 2011; Panapasa, Crabbe, and Kaholokula 2011; Taulii et al. 2011). Compared to Asian American populations as an aggregate group, NHPI populations experience higher rates of chronic and infectious disease and have very different profiles regarding the social determinants of health leading to such health inequities, including lower educational attainment, higher rates of poverty, and limited access to preventative health care (U.S. Census Bureau 2020; Hixson, Hepler, and Kim 2012). Disaggregating NHPIs separately from Asians acknowledges these experiences, which also reflect differences in the histories, cultures, languages, and ancestries of these groups<sup>4</sup> (Hosaka, Castanera, and Yamada 2021). The OMB’s racial and ethnic categories are important because they set the minimum standard for federal data on the classification of race/ethnicity used to produce demographic data as well as to monitor civil rights enforcement and inform program implementation.

The revisions to the OMB 15 race and ethnic classification standards in 1997 did not arise automatically. The process began in 1993, when the OMB underwent a comprehensive review of the categories used to measure race and ethnicity (Office of Management and Budget 1997). This occurred after the OMB received criticism following the 1990 U.S. Census from the public who felt that the minimum categories inadequately reflected the diversity of the nation’s population. The comprehensive review of the OMB racial/ethnic classifications included hearings, testimony, and a research agenda by the Interagency Committee to evaluate the effect of possible changes to the race and ethnic categories. In 1997, the OMB released a Federal Register Notice (62 FR 36874 – 36946) requesting public

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<sup>2</sup>Allowing people to self-identify with more than one race on forms, rather than automatically having people mark a single “multiracial” category, helps with identifying the diversity of multiracial people. This is important for NHPIs, over half of whom are multiracial, but who often strongly identify with their NHPI ancestry, as described below.

<sup>3</sup>Historically, NHPIs have often been aggregated with Asians to increase political and social influence, achieving common goals as a broad panethnic group (see Okamoto & Mora 2014). However, automatically using the “Asian and Pacific Islander” panethnic category outside of the purpose of these efforts has also inflicted harm on the relatively smaller NHPI grouping (see Tuck & Yang 2012).

<sup>4</sup>Although it is important to note that the OMB racial/ethnic standards for classification make it clear that these categories do not reflect scientific (i.e. biological or genetic) or anthropometric (i.e. phenotypic) distinctions, these categories may reflect social characteristics placed in the context of the experiences and histories of these groups (Office of Management and Budget 1997).

comment on the Interagency Committee's Report to the OMB on the Review of Statistical Policy Directive No. 15.

However, the Interagency Committee recommended that data on Native Hawaiians continue to be classified in the "Asian or Pacific Islander" category. In response, the OMB received approximately 300 letters and 7,000 individually signed and mailed preprinted yellow postcards specifically on the issue of classifying Native Hawaiian data separately from Asians. The OMB additionally received about 500 signed form letters from members of the Hapa<sup>5</sup> Issues Forum in support of reporting multiple races. Over half of NHPIs identify as multiracial (U.S. Census Bureau 2020; Hixson, Hepler, and Kim 2012). The 7,000 individuals who signed and sent preprinted yellow postcards, the Hawaiian congressional delegation, the State of Hawai'i departments and legislature, Hawaiian organizations, and individual advocates strongly opposed the Interagency Committee's recommendation. Their arguments supported reclassifying Native Hawaiians with American Indians or Alaska Natives, given their identification as the original inhabitants of Hawai'i. Their comments further expressed that disaggregated data were needed to monitor the socioeconomic conditions, as well as to address systematic discrimination in housing, education, employment, and other sectors against Native Hawaiians. At the time, Native Hawaiian advocates did not request a separate category for Native Hawaiians, because the Interagency Committee had expressed opposition to adding more race categories to the original four OMB 15 race categories (American Indian or Alaska Native, Asian or Pacific Islander, Black, and White). In the end, the OMB decided to add the additional fifth category, splitting the "Asian or Pacific Islander" category into two: "Asian" and "Native Hawaiian or Other Pacific Islander." The latter was defined as a "person having origins in any of the original peoples of Hawai'i, Guam, Samoa, or other Pacific Islands." At the time, it was estimated that about 60% of the NHPI category would consist of Native Hawaiians, but it would also include Carolinian, Fijian, Guamanian (Chamorro), Kosraean, Melanesian, Micronesian, Northern Mariana Islander, Palauan, Papua New Guinean, Ponapean (Pohnpelan), Polynesian, Samoan, Solomon Islander, Tahitian, Tarawa Islander, Tokelauan, Tongan, Trukese (Chuukese), and Yapese. The revised race and ethnicity OMB standards reflect a federal review process that was shaped by the urgent desires of NHPI community members and organizations.

By treating NHPIs as a separate race category, the 1997 revised OMB 15 standards allowed for greater attention to be paid to the health, social, and economic issues affecting NHPI populations into the future. The important implications of this disaggregation of NHPIs from the "Asian Pacific Islander" category becomes apparent in times of crisis, including during the COVID-19 pandemic. Initial COVID-19 disaggregated data in the states of Arkansas, California, Colorado, Hawai'i Oregon, Utah, and Washington (some of the first states reporting COVID-19 data by race for NHPIs) in the spring of 2020 revealed that NHPIs were experiencing the highest rates of COVID-19 cases and deaths of any other racial/ethnic group in those states (Chang, Penaia, and Thomas 2020). These early reports led to a coalition of NHPI community leaders forming the National Pacific Islander COVID-19

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<sup>5</sup>Hapa is a Hawaiian word that traditionally refers to someone of mixed Native Hawaiian and foreign ancestry.

Response Team (NPICRT) (Samoa et al. 2020). The NPICRT championed for the formation of the NHPI Data Policy Lab—housed at the UCLA Center for Health Policy Research—made of researchers, data analysts, and policy advocates to consolidate and represent NHPI data to inform COVID-19 advocacy efforts from the local to the national levels. However, as members of the NHPI Data Policy Lab quickly learned, there was and continues to be inconsistent collection and reporting of NHPI COVID-19 case and death data across states and localities, obstructing grassroots efforts to respond to NHPI community needs in those areas during the pandemic (Chang, Penaia, and Thomas 2020).

Given this context, an up-to-date review of compliance with the 1997 revised OMB 15 standards is warranted. In 2011, Panapasa, Crabbe, and Kaholokula (2011) reviewed data sources from federal agencies for compliance with the 1997 revised OMB-15 standard on the collection and reporting of NHPI data. They found that while these data sources were collecting disaggregated NHPI data appropriately, the vast majority of the data sources were not reporting NHPI data. Panapasa, Crabbe, and Kaholokula (2011) highlighted the ongoing problems with data reporting for NHPIs, due to inadequate sample sizes or inappropriate re-aggregation of NHPIs into “Asian American or Pacific Islander” or “Other race” groups. The authors made recommendations to increase efforts to oversample NHPI populations, create reliable data estimates, and partner with NHPI communities in federal data sources. Nevertheless, special surveillance efforts are often needed. An example is the NHPI National Health Interview Survey (NHPI NHIS), the first and largest nationally representative survey of NHPI health conducted by the Center for Disease Control and Prevention’s National Center for Health Statistics in 2014 (National Center for Health Statistics 2017).<sup>6</sup>

NHPIs continue to be systematically missed in efforts to achieve health equity (Morey et al. 2020). In recent years, more attention has been given to issues of neighborhood inequity, including environmental injustices due to the overlapping issues of residential segregation, concentrated poverty, decreased political power, disproportionate pollution burden, poor health infrastructure, lack of green space, unsafe built environments, and more (Diez Roux and Mair 2010; Pastor and Morello-Frosch 2014). While these are important issues, NHPIs have often been excluded from efforts that mitigate neighborhood injustices (Morey 2014). It is more common now to rely on algorithms that calculate neighborhood social disadvantage and disease risk in plans for the distribution of limited resources (Maizlish et al. 2019). Unfortunately, NHPI community members report that these neighborhood measures often miss NHPI populations. Therefore, policies that rely on these widely-used neighborhood algorithms may systematically exclude NHPIs—another example of structural racism.

In the current study, we assess data equity for NHPIs as structural racism in three ways. First, we re-assess the federal data sources reviewed by Panapasa, Crabbe, and Kaholokula (2011) 10 years ago for compliance with the revised OMB 15 standards for collecting and reporting NHPI data, adding some additional data sources that are relevant for understanding health and social determinants of health for NHPI populations nationally. Second, using

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<sup>6</sup>Although the NHPI NHIS is nationally representative and the first of its kind, it is a standalone cross-sectional survey and is not incorporated into the National Health Interview Survey.

the COVID-19 pandemic as a case study, we review the public availability of NHPI case and death data for COVID-19 by state. Third, we evaluate within the state of California the use of a health equity metric—the Healthy Places Index (HPI)—as an indicator of neighborhood disadvantage to determine whether NHPIs and other communities of color are underrepresented in “high risk” neighborhoods. The goal of these three steps is to demonstrate how data inequity operates on a national, state, and local level to have implications for health equity and social justice efforts for NHPI populations.

## METHODS

### Review of Federal Data Sources’ Collection and Reporting of NHPI Data

In the first analysis, we reviewed national data based on those datasets first reviewed by Panapasa, Crabbe, and Kaholokula (2011) to determine progress in the past 10 years on the collection and/or reporting of NHPI data. The 2011 paper originally reviewed data from six federal agencies: the Department of Commerce, Department of Health and Human Services, the Department of Education, the Department of Agriculture, the Department of Housing and Urban Development, and the Department of Justice. We reviewed 19 of the original 20 data sources.<sup>7</sup> In addition, we selected 10 other national datasets to review, based on the criteria originally used to select datasets: 1) accessibility, 2) degree of national coverage of the U.S. population, and 3) potential source of information for policy and intervention. We added an additional criterion: 4) collection of data is current and ongoing. In total, we reviewed 29 national datasets. The data sources are not an exhaustive list but represent datasets that collect and report race/ethnicity that could be useful for informing future policy decisions or to conduct research illuminating health disparities and the underlying social determinants. For each data source, we examined the public websites to determine whether NHPI data were being collected and reported, and if so, how these data were being collected and reported.<sup>8</sup> At least two authors examined the public websites for each data source for evidence (i.e. text descriptions of available data, links to datasets, data outputs, codebooks, questionnaires, etc.) of how race was being collected and reported in the survey. This allowed us to determine compliance with the revised OMB 15 standards and to assess the level of disaggregation of NHPI data. We also made note of whether NHPI data collection or reporting had changed from 2011 to 2021 in the data sources previously reviewed.

### Review of NHPI U.S. COVID-19 Case and Death Data in States

To assess COVID-19 data in states, we used data from the NHPI COVID-19 Data Policy Lab Dashboard (NHPI COVID-19 Data Policy Lab 2021). This dashboard systematically reports NHPI COVID-19 case and death rates in states that disaggregate NHPI data. The dashboard collected counts of COVID-19 cases and deaths from The COVID Tracking Project and the Hawai’i COVID-19 Dashboard and calculated rates using American Community Survey 2015–2019 5-year population estimates (The Atlantic 2021; State of Hawai’i 2021; U.S. Census Bureau 2020). Of states that do not report disaggregated NHPI data, the dashboard provides information on how NHPI data are being treated in those states. We used these

<sup>7</sup>One data source—the National Hospital Discharge Survey—was not included because data collection is no longer ongoing.

<sup>8</sup>Most surveys determine race/ethnicity by self-report, which is preferable and likely most accurate. However, other data sources (e.g. death certificate data) use the report of a proxy (e.g., coroner or doctor), and may have lower accuracy.



data to calculate the number and percentage of states in each of these categories separately for COVID-19 cases and deaths: 1) reports disaggregated NHPI data, 2) uses the obsolete pan racial “Asian Pacific Islander” category, 3) specifies NHPI data under the “Other race” category, 4) does not specify an NHPI reporting practice, 5) does not report any race/ethnic data, or 6) does not disaggregate NHPI death data (for COVID-19 death rates only). Data were up to date as of February 21, 2021.

### Evaluation of the Healthy Places Index in Representing NHPs in California Census Tracts

California Governor Gavin Newsom announced the “Blueprint for a Safer Economy” on August 28, 2020, which included a health equity metric called the California Healthy Places Index (HPI) that would be used to determine which counties could move to less restrictive reopening tiers.<sup>9</sup> The stated purpose of applying the health equity metric was to incentivize a reduction in disease transmission for all communities, especially those disproportionately impacted by COVID-19. We downloaded HPI data for California census tracts from the Public Health Alliance of Southern California’s website (Public Health Alliance of Southern California 2021). The HPI provides an index score for all 2010 California census tracts with a population of 1,500 or more. The HPI includes 25 different community characteristics combined into a single score at various geographic levels. The 25 characteristics fall into eight policy action domains, including economic (e.g. income), social (e.g. two parent households), education (e.g. bachelor’s education or higher), transportation (e.g. automobile access), built environment (e.g. park access), housing (e.g. homeownership), clean environment (e.g. ozone), and healthcare (e.g. insured). Notably, the HPI does not include measures of race or ethnicity to allow state agencies to remain within compliance with California Proposition 209, which prohibits the use of race or ethnicity for allocating public resources.<sup>10</sup> Each included domain was weighted, contributing to an overall HPI score. Based on the distribution of the HPI score across California census tracts, the HPI places census tracts into four quartiles of neighborhood disadvantage, with 4 indicating the highest level of neighborhood disadvantage (i.e. bottom quartile). These quartiles are used to make public policy decisions about which neighborhoods are most disadvantaged, with the bottom quartile neighborhoods representing those that may be identified for additional resources during public health emergencies.

We then determined whether racial/ethnic groups are underrepresented in these most disadvantaged neighborhoods as defined by the HPI. We used American Community Survey 2015–2019 5-year data to determine the population of each of six OMB single race/ethnic groups (Hispanic/Latino, White, Black, American Indian/Alaska Native, Asian, or NHPI) in counties and census tracts (U.S. Census Bureau 2020). We determined whether each racial/ethnic group was underrepresented by the HPI by calculating whether the total percentage

<sup>9</sup>The HPI health equity metric applied to California counties with more than 106,000 residents. In order to move to a less restrictive tier, a county must meet specific COVID-19 case and test positivity rates within their lowest quartile HPI (i.e., most disadvantaged) census tracts. The Blueprint for a Safer Economy: Equity Focus from September 30, 2020 can be found at: <https://web.archive.org/web/20201002172646/https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/COVID-19/CaliforniaHealthEquityMetric.aspx>

<sup>10</sup>Proposition 209 was approved by voters in 1996, making a constitutional amendment that reads, “The State cannot discriminate against or grant preferential treatment on the basis of race, sex, color, ethnicity or national origin in the operation of public employment, public education, and public contracting” (California Constitution, Article I, Section 31). This amendment essentially bans the use of race/ethnicity or nationality as the basis of appropriating state resources, including resources to combat COVID-19.

of the racial/ethnic group residing within bottom quartile (most disadvantaged) census tracts in a county according to the HPI was lower than the percentage of the racial/ethnic group in the county's total population. Using this standard, we identified the number and percent of the 43 counties that underrepresent each race/ethnic group. We then listed the California counties with a population greater than 150,000 (29 of 43 California counties have population >150,000) that underrepresent communities of color. Underrepresentation was conceptualized this way since the California Blueprint for a Safer Economy would likely incentivize resources for these lowest HPI quartile census tracts. However, it was unclear whether these resources would help NHPI communities or underrepresent them, despite having the highest statewide COVID-19 case rates of any other racial/ethnic group.

## RESULTS

### Review of Federal Collection and Reporting of NHPI Data

Table 1 displays the results of our review of 29 sources of federal data for compliance with the 1997 revised OMB 15 standards for collecting and reporting NHPI data. Of the 29 federal data sources, the majority (26 or 90%) are collecting data for NHPIs as a separate race category. The three data sources that are not in compliance with the revised OMB 15 standards are either collecting data inconsistently by state, are erroneously collecting data using the panracial Asian or Pacific Islander category, or are no longer collecting race data. Of the 29 federal data sources, 19 (66%) are reporting data for NHPIs as a separate race category. When data for NHPIs are not being reported separately, it is usually due to NHPI data being reported in aggregate with the Asian race category or "other" race category, or it is unclear how NHPI data are being treated.

There was an improvement in the reporting of NHPI data from 2011 to 2021. Of the 19 data sources originally reviewed by Panapasa, Krabbe, and Kaholokula (2011), 9 (47%) improved their data reporting practices and now report NHPI data as a separate race category. In some of these cases, the public data are available, but require some downloading of public use data files and statistical software to access the NHPI data. On the other hand, 6 of the original 19 reviewed data sources (32%) fail to provide disaggregated NHPI data 10 years later.

### Review of State Reporting of NHPI COVID-19 Cases and Deaths

Figure 1 presents maps created by the NHPI COVID-19 Data Policy Lab Dashboard, showing U.S. COVID-19 NHPI cases and deaths by state. As of February 21, 2021 there were 52,695 NHPI reported cases (Figure 1A) and 798 NHPI reported deaths (Figure 1B) in the U.S. At that time, the states with the highest NHPI case rates were Louisiana, Alaska, Iowa, Illinois, Idaho, and Minnesota. The states with highest NHPI death rates were Louisiana, Iowa, Illinois, Arkansas, California, and Minnesota.

Table 2 shows that of the 50 states, only 20 (40%) are reporting disaggregated NHPI case data and only 16 (32%) are reporting disaggregated NHPI death data. Of those not reporting disaggregated NHPI case and death data, 9 states (18%) are using the obsolete panracial "Asian Pacific Islander" category, while 5 states (10%) are including NHPI data in the



“other race” category. For the remaining states, it is unclear how NHPI data are being treated, or the states are not reporting COVID-19 data for NHPIs or by race/ethnicity at all. Of the states that are properly reporting disaggregated data, the NHPI rates per 100,000 population rank the number one highest of any other racial group in 16 of 20 (80%) for COVID-19 cases and 11 of 16 (69%) for COVID-19 deaths.

### Evaluation of the Healthy Places Index in Representing NHPIs in California

Table 3 shows for each OMB race/ethnic group the number and percentage of the 43 California counties where that group is considered underrepresented in the most disadvantaged (fourth quartile) census tracts according to the HPI. Results show that the HPI underrepresented certain populations by race in California counties. Of communities of color, Asian Americans were most affected, with 34 out of 43 (79%) counties underrepresenting Asian populations compared to the county’s total population’s percentage that reside within bottom quartile census tracts. NHPIs were the second most affected, with 22 out of 43 (49%) counties underrepresenting NHPI populations in bottom quartile census tracts. American Indian/Alaska Native populations are underrepresented in 16 out of 43 (37%) counties in the bottom quartile census tracts. Latino/Hispanic populations were generally overrepresented in the majority of fourth quartile tracts ranked by the HPI. Table 4 lists the California counties that underrepresent communities of color in the fourth quartile of the HPI, out of the 29 counties with populations greater than 150,000 people. The counties that underrepresent Asian, NHPI, American Indian/Alaska Native, and Black populations are listed separately for each race group.

## DISCUSSION

Members of the NHPI community have long advocated for greater representation in data as an issue of data equity (Office of Hawaiian Affairs 1982; Office of Management and Budget 1997; Panapasa, Crabbe, and Kaholokula 2011; Chang, Penaia, and Thomas 2020). Disaggregated NHPI data are instrumental in supporting program implementation and policy advocacy to address long standing social and health inequities. On the other hand, omissions of NHPI data through data collection gaps or inappropriate aggregation of data in reporting are a form of structural racism and an extension of settler colonialism that stymies the passage and implementation of more inclusive public policies (Morey et al. 2020; Tuck and Yang 2012). This paper represents a review of publicly available data at the national, state, and local levels that could support public health and public policy efforts for NHPI populations through data disaggregation in accordance with the revised OMB 15 standards. By reviewing these data, we aimed to evaluate the current state of data equity for NHPIs.

Our analysis of U.S. federal data compliance with the revised OMB 15 standard for reporting NHPIs separately from Asian Americans found that there has indeed been progress since these same datasets were reviewed 10 years ago by Panapasa, Crabbe, and Kaholokula (2011). Our findings that some federal datasets that were not previously reporting disaggregated NHPI data are now in compliance with the revised OMB 15 standards indicate the success of many years of advocacy efforts by NHPI community members. Nevertheless, there is still work to be done. This is especially true of health data

from the Department of Health and Human Services. Seven out of 13 federal health data sources are not reporting NHPI data separately from other racial/ethnic groups. One health data source, the Web-based Injury Statistics Query and Reporting System (WISQARS) is not collecting NHPI data in accordance with the revised OMB 15 standards. The remaining gaps in reporting are likely due to insufficient sample sizes among the datasets that are collecting disaggregated NHPI data, but not reporting the data. Many population-based samples, especially for health surveys, are limited in their reporting of NHPI data because they do not collect large enough samples of NHPIs to report the data publicly (Panapasa, Crabbe, and Kaholokula 2011).

Small sample sizes among NHPIs are a longstanding problem, as statistical estimates resulting from these small samples are often unstable. Confidentiality is a potential problem that limits the release of data for a small number of people who may be identifiable. At times, large enough sample sizes can be obtained for NHPIs by pooling data across multiple years of data collection (Subica et al. 2017). However, such efforts often require accessing the restricted data files for these federal datasets. Accessing restricted data is not an easy task and is at times impossible due to confidentiality concerns. There are financial, time, geographic, and skillset barriers that prevent the majority of even researchers from enduring such an arduous process of accessing restricted federal data. Therefore, researchers and data analysts of relatively small and under resourced populations such as NHPIs must pay greater penalties to access the data that may also underrepresent population needs. There have been efforts to mitigate this problem. For example, the NHPI NHIS in 2014 collected a separate nationally representative NHPI sample in order to estimate the prevalence of disease in this population for the first time (National Center for Health Statistics 2017). We recognize that there are greater fiscal costs of oversampling smaller populations. Nevertheless, these costs are outweighed by the health, societal, and financial costs associated with overlooking inequities for minoritized populations that become compounded over time. More efforts are needed to make sure NHPIs are included in nationally representative surveys and that collected data are made available for the public to access to inform policy decisions.

Timely and transparent data are extremely important to inform public health efforts, especially during a global pandemic. As the COVID-19 pandemic has shown, the numbers are constantly changing, as are the corresponding scientific and policy recommendations. From the early days of the pandemic, states and counties were reporting extremely high rates of COVID-19 cases and deaths among NHPI populations (Chang, Penaia, and Thomas 2020; Morey et al. 2020). The formation of the NHPI Data Policy Lab allowed for these data to be consolidated and disseminated, supporting local, state, and national efforts to garner resources to address the disproportionate effects of COVID-19 on NHPI populations (Samoa et al. 2020). As the NHPI Data Policy Lab Dashboard shows, NHPI populations continue to be greatly impacted by the pandemic, with the highest rates of COVID-19 cases and deaths compared to any other racial/ethnic group in the majority of states that report NHPI data (NHPI COVID-19 Data Policy Lab 2021). Although NHPI populations may be found in all 50 states, most states are not disaggregating NHPI case and death data. It is unclear how NHPI data are being specified in some states. There are eight states that are reporting NHPI data with Asian data in a panracial “Asian Pacific Islander” category, while five states are consolidating NHPI data in the “other race” category.

Using the panracial “Asian Pacific Islander” category goes against the revised OMB 15 standards, and inflicts harm on NHPI communities (Panapasa, Crabbe, and Kaholokula 2011; Office of Management and Budget 1997). Although we recognize that NHPI and Asian panracial coalitions continue to collaborate to achieve common goals, when it comes to directing public resources to address social and health problems, more data disaggregation for NHPI and Asian subpopulations are crucial. In states where the majority of Asian Americans are experiencing lower COVID-19 case and death rates and also make up a larger proportion of the population than NHPIs, the plight of NHPIs is obscured, hiding disparities (Chang, Penaia, and Thomas 2020; Ponce, Shimkhada, and Tulua 2021). In one state, North Carolina, data were showing that NHPIs were experiencing the highest COVID-19 death rates in the state. However, for reasons unknown, the state began aggregating NHPIs with Asian Americans, now hiding the disparity within the racial group currently experiencing the lowest death rates in the state (NHPI COVID-19 Data Policy Lab 2021). Therefore, aggregating NHPIs with Asian Americans commits harm against NHPI communities, limiting their ability to advocate for resources to combat the pandemic. In a situation as dire as the COVID-19 pandemic, NHPI disaggregated data are desperately needed to mobilize efforts to save lives. This is why even though statisticians and epidemiologists have cited problems with small numbers, including potential anonymity issues, NHPI advocates have been calling for the release of NHPI COVID-19 case and death data as a separate race category, regardless of the size of the numbers (Samoa et al. 2020; Morey et al. 2020). The treatment of NHPI COVID-19 data influences life and death decisions about whether NHPI communities are included in plans for equitable COVID-19 response.

The exclusion of NHPIs in equity plans to combat the COVID-19 pandemic become clear at the local level. In the state of California, the HPI is being used to inform the distribution of COVID-19 resources—including vaccines—to the neighborhoods considered most disadvantaged (Lin II, Money, and Shalby 2021). However, our analysis shows that the HPI underrepresents NHPI populations, even while NHPI populations are experiencing the highest COVID-19 case rate (10,572 per 100,000) and death rate (204 per 100,000) in California compared to all other race and ethnic groups. While the HPI by design does not include neighborhood data on race/ethnicity due to Proposition 209, the purpose of it is to allocate resources to the areas most affected by the pandemic. In the case of NHPI populations who are suffering under the pandemic, the HPI vastly underrepresents them. This may be due in part to NHPI and other smaller populations such as American Indians/Alaska Natives being more spread out and less concentrated than other larger minoritized populations experiencing residential segregation. Further, place-based measures may systematically bias against socioeconomic dimensions of household composition. The HPI measures socioeconomic status using median household income, which is artificially inflated for NHPI households which tend to be large, multigenerational, and multifamily (Delaney et al. 2018). This unintended bias against NHPI communities embedded in neighborhood socioeconomic measures is a form of structural racism. In the absence of allowing race data in California to be considered as part of a plan for equitable distribution of resources due to Proposition 209, other metrics might be more relevant to capture neighborhood risk for groups such as NHPIs in equity metrics such as the HPI. For example, per capita income can be used instead of median household income, which will address the

problem of underestimating the socioeconomic needs of families living in large multifamily homes with several income earners.

The underestimation of NHPI need by only focusing on the most disadvantaged neighborhoods identified by area-level metrics like the HPI demonstrates a form of structural racism that often persists unnoticed (California Pan-Ethnic Health Network 2021). Increasingly, health organizations in the government, non-profit, and for-profit realms are relying on similar algorithms to make decisions about how to target resources. The availability of big data allows for these types of algorithms to be created and used widely, with concrete consequences. Recent research has shown that such algorithms that are “race neutral” on the surface can end up unjustly disadvantaging communities of color and proliferating societal biases (Obermeyer et al. 2019; Zou and Schiebinger 2018). Although California Proposition 209 was originally marketed as a civil rights initiative to make public policy decisions in a “colorblind” way, evidence from this study and others have shown that ignoring race/ethnicity completely by public and private institutions results in conscious and unconscious biases against communities of color to be proliferated (Kidder 2013). Most of the time, the average consumer is unaware of how these algorithms work or how they were developed, even while they have serious implications for health and social equity. Therefore, we shed light on the weaknesses of the large-scale use of algorithms to determine the allocation of resources that may disadvantage the communities of color that need the most resources to combat racial injustices, including NHPIs. With the increasing use of big data to make program and policy decisions, we caution against the widespread application of such metrics without transparency and without deliberate attention paid to the potential problems of racial inequity that result (Green 2020).

## Recommendations

Having demonstrated the importance of data equity as fundamental to achieving social and health justice for NHPIs, we provide the following recommendations. First, data at the national, state, and local levels must collect and report data in accordance with the revised OMB 15 Guidelines set in 1997, if they are not already doing so. All systems currently collecting race data systematically should be collecting data for NHPIs separately from Asian Americans, and from other race categories. This is the same call to action that has been ongoing for decades (Chang, Penaia, and Thomas 2020; Panapasa, Crabbe, and Kaholokula 2011; Office of Hawaiian Affairs 1982). Every effort should be made to report disaggregated NHPI data and to make these data easily and publicly accessible, in accordance with the revised OMB 15 standards. As a majority of NHPIs are multiracial, but also strongly identify being NHPI, we recommend that statisticians consider including multiracial NHPIs into a separate “multiracial NHPI” category or into the larger NHPI category. This should be done with transparency, noting how data for multiracial people are being treated. Although epidemiologists and statisticians often hesitate to report the small numbers for NHPIs due to unstable rates or lack of reaching a certain statistical threshold, we contend that the data should be reported anyway, with caveats outlining the limitations of the data. As in the case of the COVID-19 pandemic, these numbers were essential in the early days of the crisis to mobilize grassroots community responses to the spread of the virus, even when the initial numbers were low (Samoa et al. 2020). Making

data more transparent allows communities to make informed decisions and to understand how their data are being treated. The agencies collecting population data should realize the power that they wield when making decisions on which data to make publicly available. NHPIs and other relatively smaller populations have a higher transaction cost to access their own community's data. Therefore, agencies should make efforts to lower these costs for communities like NHPIs who are underrepresented, so that community researchers have equitable and ethical access to data.

Second, recognizing that often there are not large enough sample sizes of NHPIs collected at the federal level to be reportable or to make informed decisions, we recommend a second round of NHPI NHIS data collection. The 2014 NHPI NHIS has been extensively used to report on NHPI disparities (Narcisse et al. 2020). A subsequent iteration of the NHPI NHIS will bolster the sample size and provide more accurate surveillance of NHPI health nationally.

Third, when possible, NHPI data should be further disaggregated into subpopulations given the diverse languages, cultural practices, and histories of each Pacific Island groups that have been impacted by settler colonialism, militarization, and migration in ways unique to each other. For example, Native Hawaiians have experienced the historical trauma of having lands and culture stripped away by the U.S. government (Kaholokula et al. 2020; Dougherty 1992; Ong 2009). Pacific Islanders from Federated States of Micronesia, Republic of Marshall Islands, and Republic of Palau who are under the Compacts of Free Association (COFA) were subjected to severe health consequences and loss of land due to the U.S. government's nuclear testing on the islands from 1946 to 1958. Although COFA migrants are allowed to live and work in the U.S.,<sup>11</sup> they were denied access to Medicaid under the 1996 Personal Responsibility and Work Opportunity Reconciliation Act until Congress restored Medicaid access in December 2020 (Asian & Pacific Islander American Health Forum 2020; McElfish, Hallgren, and Yamada 2015). Chamorros, the indigenous people of Guam, have survived centuries of settler colonialism, first by Spain and then by the U.S. as an unincorporated territory, and is used as a military outpost.<sup>12</sup> Although people born and living on Guam are considered U.S. citizens, they are denied constitutional protections such as the right to vote in presidential elections. American Samoa has had a similar history of militarization and settler colonialism as an unincorporated U.S. territory. American Samoans are considered U.S. nationals and must go through the naturalization process to earn the rights of U.S. citizenship, such as applying for certain jobs or voting in presidential elections<sup>13</sup> (Empowering Pacific Islander Communities and Asian Americans Advancing

<sup>11</sup>This is another example of settler colonialism operating. The land and waters were seen as a valuable military outpost, to be used for military nuclear testing to advance U.S. power, while the people were treated as expendable. COFA serves to continue this legacy of settler colonialism, displacing Pacific Islanders from their native lands in exchange for the U.S. having continued access to the islands for military purposes, simultaneously exploiting COFA migrants' bodies and labor in the U.S.

<sup>12</sup>Another example of militarization, Guam was long under rule by the U.S. Navy, while Chamorros were often treated as expendable by the U.S. government. For example, during World War II, Guam was bombed and seized by Japan only hours after the bombing of Pearl Harbor, leading to the suffering and death of many Chamorros (see [Cultures of Commemoration: The Politics of War, Memory and History in the Mariana Islands](#) by Keith L. Camacho).

<sup>13</sup>American Samoa is the only unincorporated U.S. territory where people born there are not automatically considered U.S. citizens. A recent (June 15, 2021) federal appeals court ruled that U.S. citizenship should not be forced on American Samoans. This is in response to a lower court ruling siding with three people from American Samoa who sued to be recognized as U.S. citizens. Some government leaders and community members in American Samoa have fought against automatic citizenship, which could disrupt traditions of communal land ownership. Still others argue that the naturalization path is too costly for American Samoans.

Justice 2014). Although we cannot illuminate each unique story of the many Pacific Islands here, we provide these few examples to demonstrate how the various historical contexts and political forces differentially shape the wellbeing and social standing of NHPI subpopulations in the U.S. Therefore, fine-grained data are needed to highlight the diversity within the NHPI aggregate grouping.

Fourth, stronger partnerships are needed between government, academic, and community-based organizations to increase NHPI sample sizes and to make data more useful. Institutions should listen to and learn from NHPI voices to understand the types of data outputs that will be most appropriate and to make data collection efforts more effective. Egalitarian relationships, open communication, and sensitive outreach to NHPI community organizations will allow for the improvement of data collection and quality. Furthermore, institutions of higher education and national funders should invest in building capacity among NHPI community organizations to support the next generation of researchers and data scientists who understand the specific needs of NHPI populations. Building stronger infrastructure within the NHPI community will enable grassroots efforts to mobilize data towards policy and programmatic solutions. Such commitments will help to mitigate the systemic underinvestment in communities of color such as NHPs.

Fifth, we recognize that in the era of big data and machine learning that algorithms can be inherently biased against people of color, especially populations such as NHPs who are underrepresented in data systems to begin with. Therefore, we recommend that algorithms must be made with a careful and deliberate equity lens in mind (Green 2020). The consideration of equity should apply broadly to communities of color, including NHPI populations. Algorithms used to determine the distribution of resources must be made transparent, to allow the public to evaluate whether these algorithms are truly effective and equitable. As these algorithms are being increasingly created and applied, we recommend that there be purposeful evaluation of the effects of these algorithms on racial equity. People creating these algorithms must be educated on issues of racial equity. These steps will help to ensure that machine learning algorithms do not perpetuate and exacerbate existing racial biases that exist in society.

## Conclusion

We recognize the great progress that has been made in the collection and reporting of data for NHPI populations in the U.S., largely due to the grassroots efforts and advocacy that has been ongoing from NHPI community members for decades. However, our work is far from complete. We continue to advocate for the appropriate disaggregation of NHPI data to achieve equity. By achieving data equity, our hope is that future generations will be able to achieve health and social equity for all communities of color.

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## Biographies

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Vanh D. Tran is a third-year medical student at the David Geffen School of Medicine at UCLA and is part of the Program in Medical Education – Leadership and Advocacy (PRIME-LA). She graduated from Brown University in 2016 with a double concentration in Public Health and Biology. Growing up in a low-income, Vietnamese, refugee household,

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Ninez Ponce, M.P.P., Ph.D. is Professor at the UCLA Fielding School of Public Health, Director of the UCLA Center for Health Policy Research. She leads the California Health Interview Survey, the nation's largest state health survey, recognized as a national model for race/ethnicity data collection. Dr. Ponce has served on committees for the National Center for Health Statistics, and National Academy of Medicine where her expertise has focused on the measurement and use of race/ethnicity to monitor health equity. In 2019 Dr. Ponce received the AcademyHealth Impact award for her contributions to population health measurement to inform public policies.

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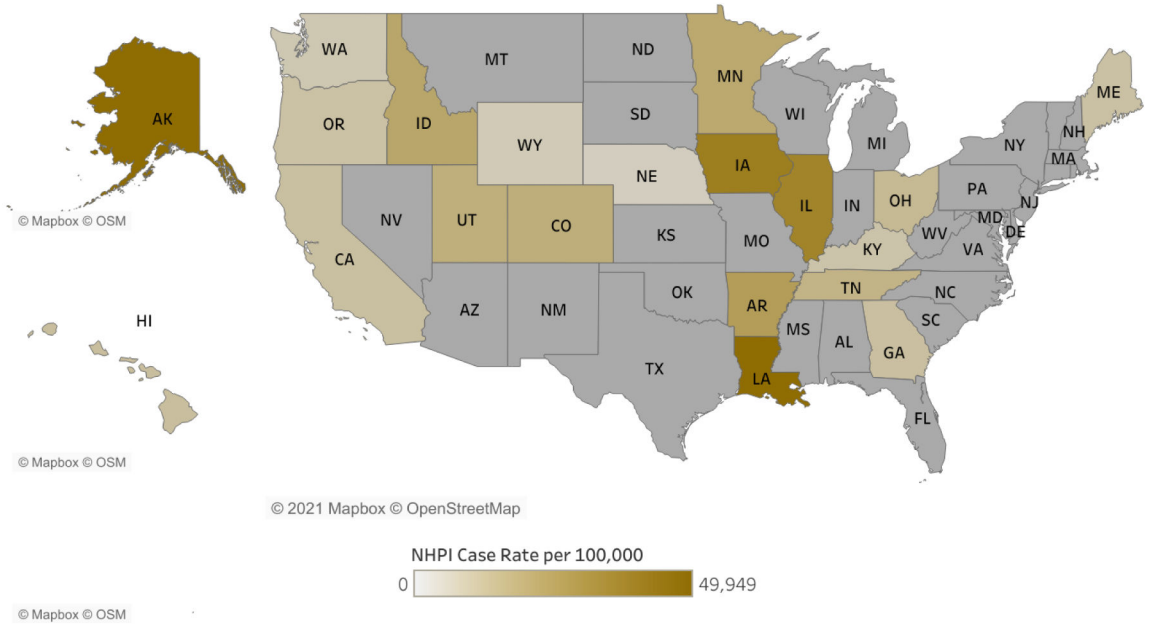
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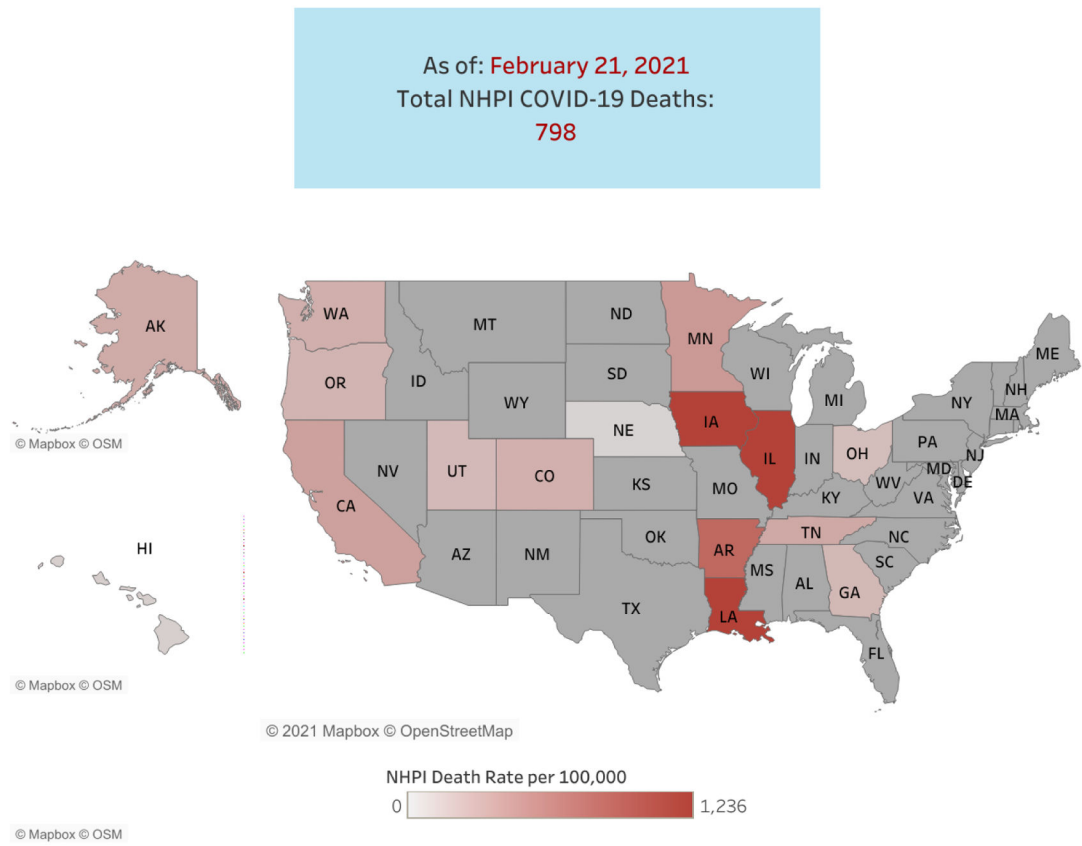
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### A. NHPI COVID-19 Case Rates in States

As of: **February 21, 2021**  
Total NHPI COVID-19 Cases:  
**52,695**



### B. NHPI COVID-19 Death Rates in States



**Figure 1.** Snapshots of NHPI Data Policy Lab Dashboard Showing COVID-19 Case Rates and Death Rates in States Reporting Disaggregated NHPI Data

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**Table 1.**

Review of Federal Data Sources for Compliance with Revised OMB 15 Guidelines for Reporting Disaggregated Native Hawaiian and Pacific Islander (NHPI) Data

Federal Agency & Data Source	Collecting data using OMB 15? (Yes/No)	How are data collected for NHPIs? (Race/ethnic categories)	Reporting data for NHPIs using OMB 15? (Yes/No)	How are data reported for NHPIs? (Race/ethnic categories, aggregated, other race, or NHPI subgroup)	Change in data collection or reporting since Panapasa, Crabbe, and Kaholokula (2011) review
<b>1. Department of Commerce</b>					
US Census FY 2000, 2010, 2020	Yes	Detailed NHPI race	Yes	NHPI total, alone or in combination, Polynesian, Micronesian, or Melanesian, Native Hawaiian, S moan, Tongan, other Polynesian, Guamanian or Chamorro, Marshallese, other Micronesian, Fijian, other Melanesian, Other Pacific Islander (not specified)	No. Compliant.
American Community Survey (ACS) (Multiple years)	Yes	Detailed NHPI race	Yes	NHPI alone or in combination, Native Hawaiian, Guamanian or Chamorro, other Micronesian, S moan, Tongan, Fijian, other Pacific Islander (not specified)	Yes, improvement in reporting.
Current Population Survey (CPS)	Yes	NHPI, Native Hawaiian, Guamanian or Chamorro, S moan, other Pacific Islander	Yes	NHPI alone, NHPI alone or in combination	Yes, improvement in reporting.
Survey of Income and Program Participation (SIPP)	Yes	NHPI	Yes	Native Hawaiian or Other Pacific Islander alone, White-NHOPI, Black-NHOPI, Asian-NHOPI, White-Asian-NHOPI, other 4 or more races	Not included in previous review.
<b>2. Department of Health and Human Services</b>					
National Vital Statistics System	Yes	Detailed NHPI race	Partial*	For births: NHPI alone, NHPI in combination. For Deaths: Hawaiian (includes multiracial), other Asian or Pacific Islander	No. Reporting non-compliant.
National Longitudinal Mortality Study	Yes	Detailed NHPI race	Yes	NHPI alone, NHPI in combination, Hawaiian, other Pacific Islander (e.g. S moan, Guamanian, Tongan)	No. Compliant.
National Health Interview Survey (NHIS)	Yes	Native Hawaiian, Other Pacific Islander	No	For public data: Other single and multiple races, Non-Hispanic Asian Indian or Alaska Native and any other group; For restricted data: Non-Hispanic NHPI only, Non-Hispanic Other only, All other combinations	No. Reporting non-compliant.
National Health and Nutrition Examination Survey (NHANES)	Yes	Native Hawaiian or Pacific Islander & specific sub-group: Native Hawaiian, Guamanian/Chamorro, S moan, other Pacific Islander	No	other race including multi-racial	No. Reporting non-compliant.

Federal Agency & Data Source	Collecting data using OMB 15? (Yes/No)	How are data collected for NHPIs? (Race/ethnic categories)	Reporting data for NHPIs using OMB 15? (Yes/No)	How are data reported for NHPIs? (Race/ethnic categories, aggregated, other race, or NHPI subgroup)	Change in data collection or reporting since Panapasa, Crabbe, and Kaholokula (2011) review
National Survey of Family Growth (NSFG)	Yes	Respondent's race: Native Hawaiian, Guamanian or Chamorro, S. moan, other Pacific Islander. Child & Spouse race: Native Hawaiian or Other Pacific Islander	No	other race	No. Reporting non-compliant.
Behavioral Risk Factor Surveillance System (BRFSS)	Yes	Pacific Islander & subcategories: Native Hawaiian, Guamanian, Chamorro, S. moan, Other Pacific Islander	Yes	NHOPI only, multiracial	Yes, improvement in reporting.
National Hospital Ambulatory Medical Care Survey (NHAMCS)	Yes	Native Hawaiian or Other Pacific Islander	No	Unknown	No. Reporting non-compliant.
National Survey on Drug Use and Health (NSDUH)	Yes	Native Hawaiian, Guamanian or Chamorro, S. moan, other Pacific Islander	Yes	Native Hawaiian or Other Pacific Islander	Yes, improvement in reporting.
Medical Expenditure Panel Survey	Yes	Native Hawaiian, Guamanian or Chamorro, S. moan, other Pacific Islander	No	Asian/Native Hawaiian/other Pacific Islander	No. Reporting non-compliant.
Youth Risk Behavior Surveillance System (YRBSS)	Yes	Native Hawaiian or Other Pacific Islander	Yes	non-Hispanic Native Hawaiian/Other Pacific Islander race only (doesn't include multiracial)	Not included in previous reporting.
Substance Abuse and Mental Health Services Administration - Mental Health Client-Level Data (MH-CLD)	Partial. Depends on State, Yes for some, No for others (does not specify specific states)	Native Hawaiian or Other Pacific Islander (temporary code)			
National HIV Behavioral Surveillance (NHBS)	Yes	Native Hawaiian or Other Pacific Islander	Yes	Native Hawaiian or Other Pacific Islander	Not included in previous reporting.
Web-based Injury Statistics Query and Reporting System (WISQARS)	No	Asian/Pacific Islander	No	Asian/Pacific Islander	Not included in previous reporting.
<b>3. Department of Education</b>					
Early Childhood Longitudinal Survey	Yes	Detailed NHPI race	No	Non-Hispanic Asian, Hawaiian, or Pacific Islander	Not included in previous reporting.
Kindergarten Cohort, Kindergarten Class of 1998-99 (ECLS-K)	Yes	Native Hawaiian or Other Pacific Islander	Yes	non-Hispanic Native Hawaiian/Other Pacific Islander race	Yes, improvement in reporting.
National Household Education Surveys (NHES)	Yes	Native Hawaiian or Other Pacific Islander	Yes	Native Hawaiian or other Pacific Islander	Yes, improvement in reporting.

Federal Agency & Data Source	Collecting data using OMB 15? (Yes/No)	How are data collected for NHHPIs? (Race/ethnic categories)	Reporting data for NHHPIs using OMB 15? (Yes/No)	How are data reported for NHHPIs? (Race/ethnic categories, aggregated, other race, or NHHPI subgroup)	Change in data collection or reporting since Panapasa, Crabbe, and Kaholokula (2011) review
School Survey on Crime and Safety (SSOCS)	No		No		Yes, decrease in reporting. Is no longer collecting or reporting race data.
Civil Rights Data Collection	Yes	Native Hawaiian or Other Pacific Islander	Yes	Native Hawaiian or Other Pacific Islander	Not included in previous reporting.
National Assessment of Educational progress	Yes	Native Hawaiian or Other Pacific Islander	Yes	Native Hawaiian/Other Pacific Islander	Not included in previous reporting.
EDFacts	Yes	Native Hawaiian/Other Pacific Islander or Pacific Islander	No	Asian/Pacific Islander	Not included in previous reporting.
<b>4. Department of Agriculture</b>					
Supplemental Nutrition Assistance Program (SNAP) Quality Control Database	Yes	Native Hawaiian or Other Pacific Islander	Yes	Native Hawaiian or Other Pacific Islander	Yes, improvement in reporting.
Women, Infants, & Children Program (WIC)	Yes	Hawaiian/Pacific Islanders	Yes	Hawaiian/Pacific Islanders	Not included in previous reporting.
<b>5. Department of Housing and Urban Development</b>					
American Housing Survey (AHS)	Yes	Native Hawaiian only, Guamanian or Chamorro only, S moan only, some other Pacific Islander race only, two or more Native Hawaiian or Pacific Islander races, Hawaiian and Pacific Islander only, NHHPI mixed with other races	Yes	Native Hawaiian only, Guamanian or Chamorro only, S moan only, some other Pacific Islander race only, two or more Native Hawaiian or Pacific Islander races, Hawaiian and Pacific Islander only, NHHPI mixed with other races	Yes, improvement in reporting.
<b>6. Department of Justice</b>					
Census of Jails	Yes	Native Hawaiian Pacific Islander (non-Hispanic)	Yes	Native Hawaiian or Pacific Islander	No. Compliant.
National Crime Victimization Survey	Yes	Native Hawaiian or Other Pacific Islander	Yes	Native Hawaiian/Other Pacific Islander alone, NHHPI in combination with one other race	Yes, improvement in reporting.

NOTES:

\* Data for births are more complete than data for deaths. Completeness and validity of death data varies by state. For deaths, Native Hawaiians are disaggregated, but other Asians are aggregated with Pacific Islanders.

\*\* Disaggregated data are available in restricted data.

National Hospital Discharge Survey was originally included and reviewed by Panapasa, Crabbe, and Kaholokula (2011) but is not reviewed here because data collection is no longer ongoing.

**Table 2.** State Reporting Practice of COVID-19 Case and Death Data for NHPI Populations

State	COVID-19 Cases					COVID-19 Deaths					
	Reporting disaggregated NHPI data	Uses obsolete panracial “Asian Pacific Islander” category	Specifies NHPI data under “other” race category	Does not specify NHPI reporting practice	Does not report any race/ethnic data	Reporting disaggregated NHPI data	Uses obsolete panracial “Asian Pacific Islander” category	Specifies NHPI data under “other” race category	Does not specify NHPI reporting practice	Does not report any race/ethnic data	Does not report disaggregated NHPI death data
Alabama				x					x		
Alaska	x					x					
Arizona		x					x				
Arkansas	x					x					
California	x					x					
Colorado	x					x					
Connecticut		x					x				
Delaware		x					x				
Florida			x					x			
Georgia	x					x					
Hawaii	x										
Idaho	x										x
Illinois	x										
Indiana			x					x			
Iowa	x										
Kansas				x					x		
Kentucky	x										x
Louisiana	x										
Maine	x										x
Maryland									x		
Massachusetts									x		
Michigan		x									

State	COVID-19 Cases					COVID-19 Deaths				
	Reporting disaggregated NHPI data	Uses obsolete panracial "Asian Pacific Islander" category	Specifies NHPI data under "other" race category	Does not specify NHPI reporting practice	Does not report any race/ethnic data	Reporting disaggregated NHPI data	Uses obsolete panracial "Asian Pacific Islander" category	Specifies NHPI data under "other" race category	Does not specify NHPI reporting practice	Does not report any race/ethnic data
Minnesota	x					x				
Mississippi				x					x	
Missouri			x							
Montana				x					x	
Nebraska	x					x				
Nevada				x					x	
New Hampshire			x							
New Jersey			x							
New Mexico										x
New York		x								
North Carolina	x					x				
North Dakota										x
Ohio	x					x				
Oklahoma		x								
Oregon	x					x				
Pennsylvania				x					x	
Rhode Island				x					x	
South Carolina				x					x	
South Dakota				x					x	
Tennessee	x					x				
Texas				x					x	
Utah	x					x				
Vermont				x					x	
Virginia		x								
Washington	x					x				





Number and Percent of California Counties with Under-Represented Racial/Ethnic Groups in the 4<sup>th</sup> Quartile of the Healthy Places Index (HPI), N=43 counties

Table 3.

	Number of counties that group is under-represented in the 4 <sup>th</sup> HPI quartile	% of counties with that group is under-represented in the 4 <sup>th</sup> HPI quartile
Hispanic or Latino	3	7%
Not Hispanic White Alone	38	88%
Not Hispanic Black Alone	15	35%
Not Hispanic AIAN Alone	16	37%
Not Hispanic Asian Alone	34	79%
Not Hispanic NHPI Alone	21	49%

Note: AIAN=American Indian or Alaska Native; NHPI=Native Hawaiian or Pacific Islander

**Table 4.** List of California Counties with Underrepresented Racial/Ethnic Communities of Color in the 4<sup>th</sup> Quartile of the Healthy Places Index (HPI) among 29 Continues with Populations Greater Than 150,000

Asian (25 counties)	NHPI (17 counties)	AIAN (12 counties)	Black (10 counties)
Los Angeles	Los Angeles	Los Angeles	Orange
San Diego	San Diego	San Bernardino	Santa Clara
Orange	Riverside	Fresno	Stanislaus
Riverside	Alameda	Kern	Tulare
San Bernardino	Contra Costa	Ventura	Santa Barbara
Santa Clara	Kern	San Joaquin	Monterey
Alameda	Ventura	Tulare	Placer
Contra Costa	San Joaquin	Santa Barbara	Santa Cruz
Fresno	Stanislaus	Placer	Imperial
Kern	Santa Barbara	San Luis Obispo	Kings
Ventura	Solano	Santa Cruz	
San Joaquin	Monterey	Madera	
Stanislaus	Placer		
Tulare	San Luis Obispo		
Santa Barbara	Santa Cruz		
Solano	Butte		
Monterey	Shasta		
Placer			
San Luis Obispo			
Santa Cruz			
Merced			
Yolo			
Imperial			
Madera			
Kings			

Note: AIAN=American Indian or Alaska Native; NHPI=Native Hawaiian or Pacific Islander