CLOSING DATA GAPS

SHIFTING THE PERSPECTIVE ON AA/NHPI
UNIVERSITY OF CALIFORNIA MEDICAL STUDENT REPRESENTATION

JUNE 2010

UNPACKING ASIAN AMERICAN DIVERSITY

LAURIE IGNACIO Health Fellow | NELLY GONZALEZ Academy Intern

THE GREENLINING INSTITUTE

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About the Greenlining Institute

The Greenlining Institute is a national policy, organizing, and leadership institute working for racial and economic justice. We ensure that grassroots leaders are participating in major policy debates by building diverse coalitions of grassroots leaders that work together to advance solutions to our nation's most pressing problems.

Our leadership Academy has become the "farm system" for tomorrow's social justice leaders, training the best and brightest from our community. Our policy experts conduct research and coordinate multi-pronged strategies on major policy issues, including but not limited to the environment, wealth creation (asset building), philanthropy, health, energy, communications, and higher education.

About the Bridges to Health Program

The Bridges to Health Program at the Greenlining Institute works to create and empower healthy communities.

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Foreword

Closing Data Gaps: Shifting the Perspective on AA/NHPI University of California Medical Student Representation, is an excellent resource for those interested in disaggregation of data and the health and healthcare challenges facing Asian American, Native Hawaiian, and Pacific Islander communities.

There are currently about 15 million Asian Americans, Native Hawaiians, and Pacific Islanders in the United States, 33% of which live in California. The Asian American, Native Hawaiian, and Pacific Islander population is very diverse with over 50 different race/ethnicities (such as East Asians, South Asians, Southeast Asians, Native Hawaiians, Micronesians, Polynesians, and so forth) who speak over 100 different languages.

The heterogeneity in languages, cultures, and approaches towards health all contribute to misperceptions about the community and its health and healthcare needs. Such misperceptions may be barriers to the provision of appropriate healthcare services and health education, and lead to the need for more data and research. Which is also why a diverse healthcare workforce is critical to improving access to quality care, access to culturally and linguistically appropriate care, and patient choice and satisfaction for such diverse populations.

Breaking down aggregate (or average) data into specific subgroups is especially needed for communities of color and indigenous people that comprises of multiple race/ethnic groups because issues tend to get lost or lose importance in aggregated data. Some Asian American, Native Hawaiian, and Pacific Islander groups have a high proportion of educated people, while other groups have high school dropout rates. For example, a staggering 39% of Hmong, 38% of Laotian, and 35% of Cambodian populations do not complete high school; as compared to 14% of Asian Americans who do not complete high school.

Disaggregation of data is needed, regardless of area of study:

- To see patterns (similarities, differences);
- To prevent issues from getting lost in aggregate data;
- To confirm or refute perceptions;
- To identify and address specific needs (e.g. education, health, employment);
- To develop, monitor, and improve programs (e.g. quality of services);
- To provide evidence to inform and influence programs and policies;
- To advocate for, and enable appropriate allocation of resources at community, local, state, and federal levels; and
- To ensure equity

Closing Data Gaps provides a much needed analysis of the Asian American, Native Hawaiian, and Pacific Islander medical student population at the University of California medical schools. It fills the information gap on such topics as student application, acceptance, and matriculation. Acquiring such disaggregated data is required to understand how public medical schools recruit, enroll, and train future generations of physicians. Such analysis and disaggregated data are also critical for policy makers and educators to address access and achievement issues among the underserved.

Closing Data Gaps validates common experiences and knowledge of providers, researchers, and advocates already working with Asian Americans, Native Hawaiians, and Pacific Islanders. We hope it will stimulate questions for further and deeper study not just within the Asian American, Native Hawaiian, and Pacific Islander population and California but also in other communities of color and indigenous people as well as other geographic regions.

The Greenlining Institute continues to serve our communities by producing publications such as *Closing Data Gaps,* which will be an important source of reference for researchers, community based organizations, and healthcare professionals and advocates.

It is well-known in public health that knowledge gained from studying one group can benefit others. Therefore, the increased knowledge gained from this research on Asian American, Native Hawaiian, and Pacific Islander medical students, will without doubt result in findings that will contribute to the improvement of efforts for other communities of color and indigenous people. These efforts towards understanding and promoting workforce diversity will ultimately improve the delivery of healthcare services, and improve the health of all Americans.

Ho Luong Tran, MD, MPH
President and CEO
Asian & Pacific Islander American Health Forum

Introduction

This study serves as an addendum to The Greenlining Institute's *Representing the New Majority* series, which examined diversity at the University of California (UC) medical school programs at UC Davis, Irvine, Los Angeles, San Diego, and San Francisco. This report takes a closer look at the student population at these medical schools and analyzes the rates of disaggregated Asian American and Native Hawaiian/Pacific Islander (AA/NHPI) student application, acceptance, and matriculation data while addressing issues around the data collection of AA/NHPI communities. [1] [2]

The first report, published in 2003, focused on career staff diversity, and the second, published in 2007, focused on tenure-track medical faculty to determine how effectively the UC was attracting and retaining faculty members of color. [3] [4] These reports analyzed diversity data, and also argued that diverse faculty and staff often contribute to a supportive learning environment for underrepresented UC medical students, which can include mentor/mentee relationships that have been shown to improve retention.

The third report published in 2008, examined student diversity at the UC medical schools. Greenlining drew attention to trends in UC medical student diversity over the past 7 years and found that Native American, African American and Latina/o students were underrepresented at UC medical schools compared to their populations statewide. [5] These findings highlighted the urgent need to train physicians of color in California in order to treat the state's diverse patient population in a culturally and linguistically appropriate manner. Some of the key findings from the third report were:

- The University of California is failing to train enough physicians of color to meet the present and future health needs of an increasingly diverse state.
- Minority representation in the UC medical school programs differs significantly from school to school. Schools with a strong and demonstrated emphasis on attracting diverse applicants and serving underrepresented populations do have a more diverse matriculant pool.
- The representation of minority groups in the pool of applicants to UC medical school programs is very similar to their representation among the matriculants. This means that schools are accepting students of diverse backgrounds in proportion to the rates at which they apply.

Although Proposition 209 [6] has certainly contributed to depressing underrepresented minority (URM) [7] enrollment at the University of California medical school programs, the UC still has many avenues it can pursue in increasing minority enrollment while still not overstepping the boundaries of the law. [8]

One of Greenlining's policy recommendations in the *Representing the New Majority* Series was to disaggregate Asian American and Native Hawaiian/Pacific Islander (AA/NHPI) medical student demographic data.

With the help of the Association of American Medical Colleges (AAMC) and the University of California Office of the President (UCOP), Greenlining obtained and examined disaggregated AA/NHPI student applicant, acceptance, and enrollment data.

This report analyzes disaggregated Asian American & Native Hawaiian/Pacific Islander diversity figures at the University of California medical schools. Disaggregated data is a critical tool to illustrate commonalities and differences between ethnic groups, allowing policymakers and educators to understand issues of access and achievement among California's underserved. Acquiring disaggregated data is a necessary first step in understanding how California's public medical schools are training recruiting and enrolling the next generation of physicians.

Greenlining examines diversity at California's public medical schools because of the UC's mission to serve all California taxpayers and adhere to their promise to California:

> *"The University shall seek out and enroll, on each of its campuses, a student body that demonstrates high academic achievement or exceptional personal talent, and* ***that encompasses the broad diversity of backgrounds characteristic of California****."* [9]

Executive Summary

Over 34% of Asian Americans and nearly 26% of Pacific Islanders in the United States live in the Golden State. [10] There are nearly 4.8 million Asian Americans and more than 250,000 Pacific Islanders in California, and nine jurisdictions in the state are majority is AA/NHPI. [11] This population has shown strong growth from 1960 to 2006, increasing their representation in the population from 2.1% to 12%, respectively. [12]

With the AA/NHPI population projected to double between 2000 and 2025 it is crucial to focus on addressing the healthcare needs of this population and understand that this community is extremely diverse, encompassing over 50 ethnicities [13]. There are shared values and traditions within many Asian cultures, but even within the twelve ethnicities covered in this report there is a wide variation of languages, levels of educational attainment, and socioeconomic levels.

Twenty-five percent of Asian households live in linguistic isolation, meaning that no member of the household over 14 speaks English "very well." [14] Overall, more than one third of total Asians and more than one fifth of Asian children in California have limited English proficiency. [15] In addition, the educational achievements of people from different Asian ethnicities are masked by grouping together many ethnicites into one racial category.

Southeast Asians, Native Hawaiians, and Pacific Islanders as a group tend to have overall lower high school and college graduation rates than other Asian ethnicities and their White counterparts. [16] Lower educational rates among certain Asian ethnicities are masked by the grouping of Asian data into one monolithic group, forming the basis for the "model minority myth."

In addition, the poverty rate for Asian Indians, Filipinos, and Japanese, was about 10% or less, yet the poverty rate for Chinese, Koreans, and Vietnamese was about 13% or higher. [17] NHPI have higher unemployment rates and worse socioeconomic situations compared to their other Asian counterparts. In Los Angeles County for example, the per capita income was $9,711 for Tongans and $11,106 for Samoans between 2005 and 2007. [18]

A 2008 report on AA/NHPI healthcare showed a wide variety of health coverage among AA/NHPI. [19] For example, employer-sponsored coverage rates range from 49% among Koreans to 77% among Japanese. Southeast Asians have the highest percentage of Medicaid and other public coverage (19%). Among uninsured AA/NHPI, NHPI and Koreans had the highest uninsured rates at 24% and 31% respectively. It is important to note that Asian Americans who are third

KEY FINDINGS

- There is insufficient disaggregated data to make authoritative analyses regarding AA/NHPI medical student matriculation trends at the University of California.
- Students of different Asian ethnic backgrounds are applying at approximately the same rate they are matriculating.
- Filipino American students are underrepresented among UC medical school matriculants
- Native Hawaiians and Pacific Islanders are severely underrepresented among the UC's medical applicants, acceptees, and matriculants.

Figure 1: Racial and Ethnic Representation in California's Population (2006)

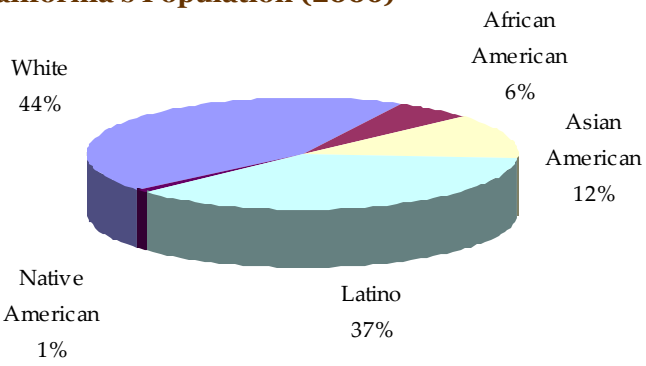


Figure 2: Ethnic Representation within California's Asian American & Native Hawaiian/ Pacific Islander (AA/ NHPI) Population 2004-2007

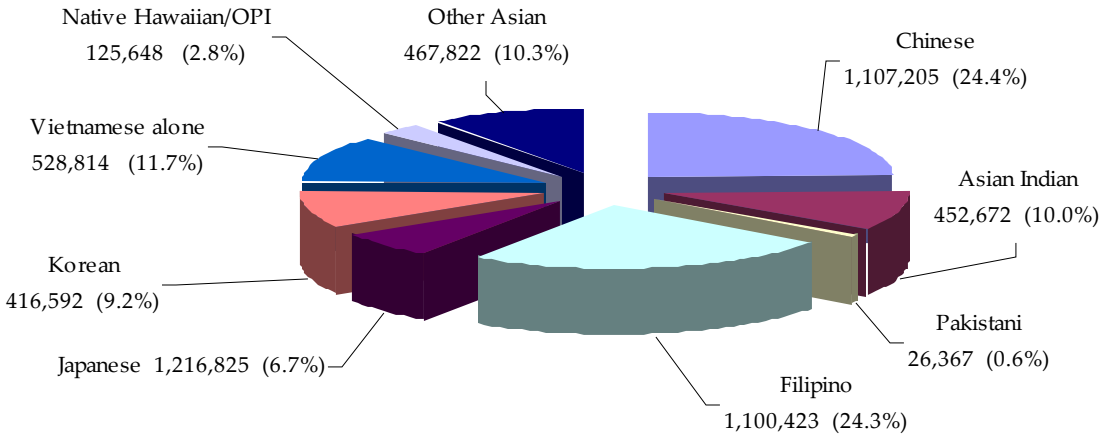


Figure 3: Ethnic Representation within California's Native Hawaiian/Pacific Islander Population, 2004-07

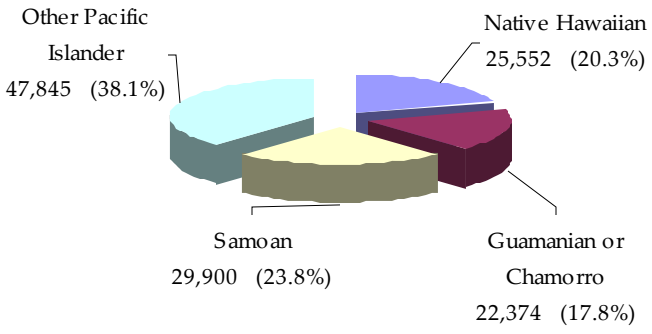
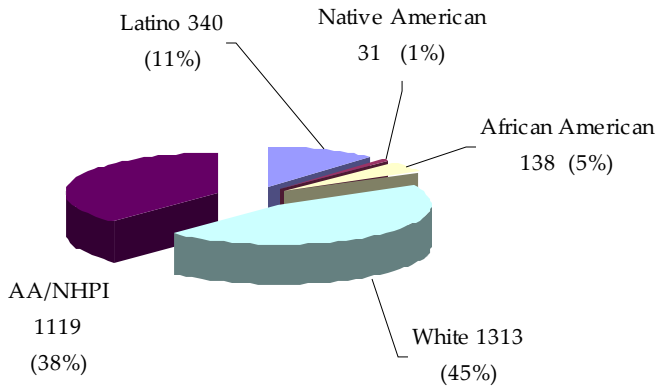


Figure 4: Racial Breakdown of Matriculants to UC Medical Schools: 2004-2007



generation or higher were the most likely to have health insurance compared to first generation and especially recent immigrants. [20]

Lower socioeconomic levels for some Asian subgroups in addition to linguistic barriers are some of the main reasons that account for disparities in health coverage among AA/NHPI. However, there are also cultural competency concerns. Commonwealth Fund's 2001 Health Care Quality Survey found that Asian Americans were "least likely to feel that their doctor understands their background and values, to have confidence in their doctor, and to be as involved in decision-making as they would like to be." [21]

Lack of access to competent healthcare has had its effects on the health of AA/NHPIs. Cancer, which can be delayed with preventative screenings, is the leading cause of death for Asian Americans. [22] NHPIs suffer from some of the highest rates of obesity in comparison to other racial/ethnic groups and in consequence also have some of the highest rates of diabetes. Among adolescents, 30% of Southeast Asians and 28% of NHPIs have asthma. Tuberculosis (TB) and hepatitis B (Hep. B) are major concerns for the AA/NHPI community, where AA/NHPIs account for the majority of all TB and Hep. B cases in California. [23]

As we can see, the diversity and disparities within the AA/NHPI community translate to a similar mosaic of health disparities and needs among AA/NHPI ethnic groups, making culturally and linguistically competent care crucial.

While the healthcare needs of AA/NHPI ethnic groups should be addressed from a variety of different sectors, including education and public health, diversifying the AA/NHPI health workforce is an important component in tackling the unique needs of the underserved within the AA/NHPI community.

Representation in the Health Workforce

AA/NHPI data is often aggregated into one lump category, as shown in Figure 4. [24] This simplified representation is misleading and Asian Americans are often seen as the model minority, with higher rates of education and fair representation among certain health professions like medicine. However, when separated into different ethnicities we find that some AA/NHPI ethnicities are either largely underrepresented at the UC

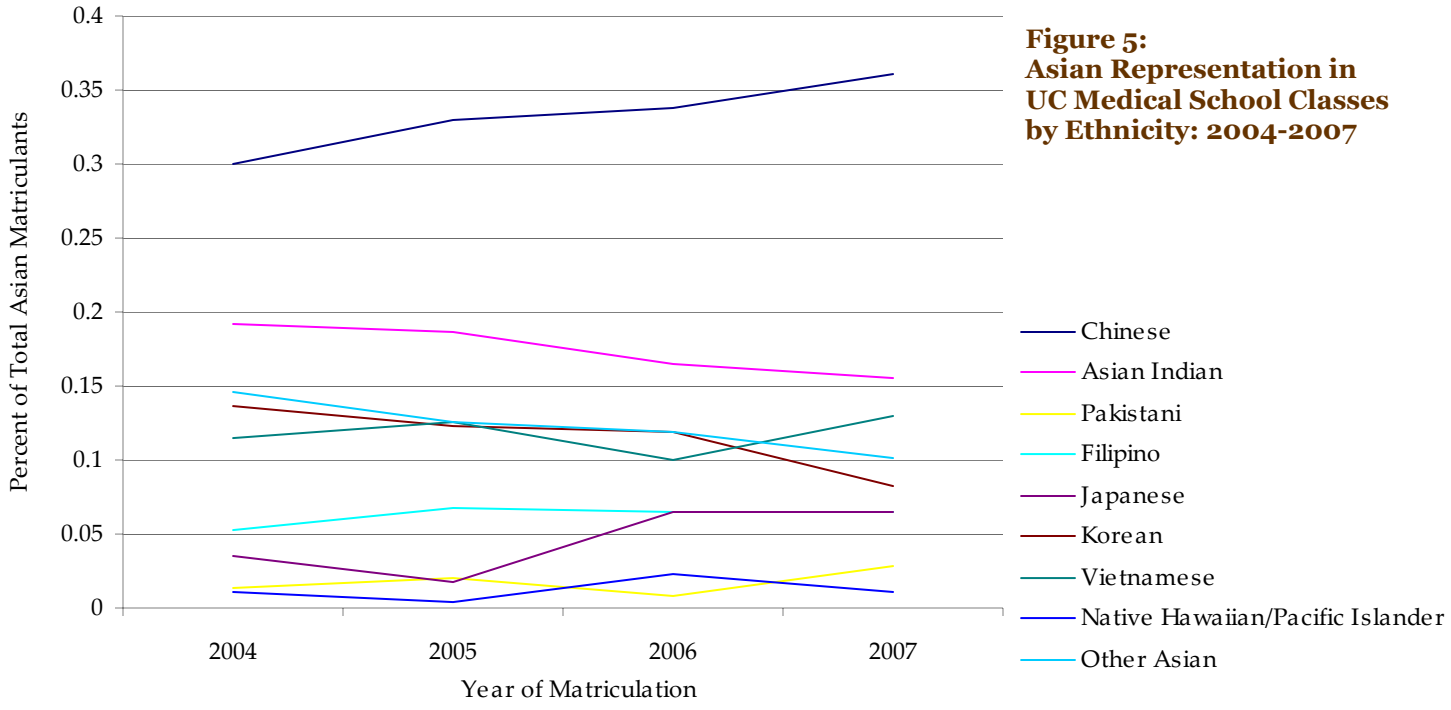


Figure 5:
Asian Representation in UC Medical School Classes by Ethnicity: 2004-2007

medical school level or have declining matriculation trends at the UC medical schools.

In Figure 5, we examine the number of Asian American matriculants by ethnicity to discern patterns from 2004 through 2007. [25] However, this data is not available for disaggregated NHPI data due to minimal representation of NHPI students at UC medical schools.

The chart illustrates stagnant or decreasing matriculation at UC medical Schools for the Other Asian, Filipino, Vietnamese, Japanese, Korean, and Native Hawaiian medical student groups. [26]

The goal of this report is to examine the health and community needs of California's AA/NHPI communities, and to evaluate the University of California's efforts to successfully recruit and enroll underrepresented AA/NHPI students in its medical schools. Greenlining recognizes that the different needs of Asian and Pacific Islander ethnicities are often left misunderstood or ignored because of the lack and misrepresentation of data.

Greenlining found that health and health workforce data on AA/NHPI is not readily available or properly presented. For example, the U.S Census and American Community Survey did not begin to disaggregate AA/NHPI population data up until six years ago in 2004. To get a more complete understanding of the healthcare needs of Asian subgroups, especially those with recent immigrant trends, limited English proficiency, and lower socioeconomic levels, disaggregated data must be collected.

Making the Case for Diversity

A health workforce representative of California's diverse demographics will ensure the delivery of quality healthcare for all Californians and serve the vast needs of the state's communities of color. Physicians in the state must become better equipped to interact with and treat patients from all racial and cultural backgrounds.

California is the most diverse state in the country and roughly one-third of the nation's AA/NHPI population resides in California. The case for a diverse AA/NHPI health workforce rests on three basic pillars:

- The need for increased linguistic and cultural competence in an increasingly diverse state.
- The proportionally greater need for health services among the state's AA and NHPI ethnicities.
- AA/NHPI health practitioners' record of practicing in medically underserved areas and serving underserved populations. [27]

> I participated in a summer of preceptorships in Chinatown hospitals and clinics and saw first hand the dire need for culturally competent and affordable care especially for the largely immigrant, limited English proficient, low-income, aging Asian populations in San Francisco."
>
> *2nd year Chinese Medical Student at UCSF*

Cultural Competency

As stated in Greenlining's report on student diversity in the UC medical schools:

> *Cultural competency and respect for diversity are not innate, they are learned. The work of a doctor in California will increasingly require communication and interaction with people of diverse backgrounds. The training ground for acquiring the soft skills for being an effective practitioner in a diverse society begins not in the clinic, but in the state's medical schools and universities, or earlier. Increased diversity in the faculty and student body of UC medical schools would provide the level of interaction with diversity necessary to create a culturally competent health workforce.* [28]

The goal of cultural competency is to understand and respect patients' values, beliefs, expectations and to understand efficient treatments for specific ethnic groups.

Cultural competency is of utmost importance for the AA/NHPI population, which hails from over 50 countries or ethnic groups. Traditionally Asian Americans are treated as one monolithic "Asian" or "Other" group, but it is important to understand that this population has a wide diversity of experiences and cultural beliefs regarding healthcare and providers. Addressing cultural competency issues within the complex and diverse AA/NHPI group will help better serve the healthcare needs of this population.

Cultural differences and misunderstandings can lead to negative health outcomes for communities of color, in this case, AA/NHPI communities. Some of the unintended negative consequences of cultural incompetence or misunderstanding include patients foregoing health services because of fear and inability to communicate healthcare beliefs, needs, and expectations. Providers may be unfamiliar with prevalent health conditions within AA/NHPI communities, patients may not follow medical advice because they do not understand or do not trust medical professionals, and fewer diagnostic tests may be conducted because of lack of familiarity with symptoms or linguistic differences in describing ailments.

For example, a 2002 study identified the lack of linguistically and culturally competent care as a "major barrier" to AA/NHPI women. The report stated that a South Asian woman's expression of a mental health disorder was most likely not going to correspond to how a medical provider would describe its symptoms. [29]

Greater cultural competence by training a diverse health workforce can improve health outcomes in concrete ways with more successful patient education, increased rates of patients seeking preliminary care and follow-up, fewer diagnostic errors, expanded choices, and access to high-quality clinicians.

Dr. Shobha Srinivasan describes the status quo of grouping AA/NHPIs into one monolithic group and the resulting "invisibility" these communites face. Specifically Srinivasan, et al., describe medical practitioners' lack of awareness of communicating concepts of health and healthcare, diagnosing and detecting diseases, and assigning appropriate treatment and dosage levels. [30] There is an additional ignorance regarding the social histories of various AA/NHPI communities and the ways current immigration laws and practices affect the daily realities of their patient community.

Linguistic Competence

Language competence in healthcare is an important topic in California, where 40% of the population speaks a language besides English and one in four Californians are foreign-born. [31] According to Georgetown University's National Center for Cultural Competence:

> *"Linguistic competency is the capacity of… personnel to communicate effectively, and convey information in a manner that is easily understood by diverse audiences including persons of limited English proficiency, those who have low literacy skills or are not literate, and individuals with disabilities."* [32]

The issue of linguistic competence is especially key for AA/NHPIs in California where 40% of Asians and 15% of NHPIs in California are limited English speakers. [33] Subsequently, many Asian households live in linguistic isolation and rely on children to help translate and interpret in medical situations. This is especially true for the Asian elderly and Asian immigrants, who have the lowest levels of English proficiency and poor health outcomes. [34]

Four out of the top five non-English languages spoken in California are Asian languages, Tagalog, Chinese, Vietnamese, and Korean. [35] However, there are few doctors who are fluent in an Asian language and debate exists over the criteria defining linguistic competence in relation to health terminology.

A 2008 report by Grumbach, et al., demonstrates that 70% of Spanish-speaking physicians are non-Latina/os. This pattern is markedly different for physicians who speak East Asian languages. Of Asian Language-speaking physicians, 97.4% are AA or NHPI. Looking deeper into the data provided by this survey, we find that of California's "active patient-care physicians," 1.7% speak Korean, 2.7% speak Tagalog, 2% speak Vietnamese, and 5.9% speak Chinese dialects. [36]

Since fluency in Asian languages is largely limited to physicians of Asian ethnicity, more physicians who reflect the state's AA/NHPI population are needed.

Jacobs, et al. find that limited English proficiency (LEP) can be significantly correlated to poorer health outcomes. [37] For example, 75% of Chinese women proficient in English report having had a pap test in the past 3 years, compared to only 57% of LEP Chinese women. [38] There are similar screening rates all across AA/NHPI English proficient and LEP groups.

Disproportionately Affected by Poor Health

The California Asian Pacific Islander Joint Legislative Caucus found that:

- The leading cause of death for Asian Americans and NHPIs is cancer. AA's and NHPI's have the highest rate of cancer related deaths among all the racial groups in California, with 27.7% for Asian Americans and 25.4% for NHPIs in 2004.
- AA &NHPIs account for the largest proportion of all tuberculosis and chronic hepatitis B cases in California, with the majority of cases among the foreign-born population.
- There is an alarming epidemic of overweight and obese children in California's NHPI communities.
- Compared to other racial groups, NHPIs have some of the highest rates of diabetes in California. [39]

The number of chronic health conditions and disparities for California's AA/NHPI population is on the rise. There needs to be increased quality and access for the Asian community, specifically immigrants, elderly, and low-income AA/NHPIs. Research shows that the quality and access to healthcare increases when providers share similar cultural or linguistic backgrounds as their patients. [40] It is crucial that there be a healthcare workforce representative of California's AA and NHPI population so California's Asian communities receive competent care.

More likely to serve the underserved

Grumbach, et al. show that 40% of minority physicians work in primary care, and that minority physicians are more likely to practice in areas classified as medically underserved. [41] Specifically, 14% of minority non-URM physicians (mostly Asian) practice in Medically Underserved Areas, compared to 18% of URM and 11% of White physicians. In Grumbach's report Asian Americans are classified under 'minority non-URM' physicians.

A diverse medical student body will help create a health workforce that is knowledgeable about the barriers facing communities of color and more likely to work in Medically Underserved Areas.

Investing in the Pipeline

As mentioned in the *Representing the New Majority Part III: A Status Report on Medical Student Diversity*, the health professions educational pipeline starts at the pre-school/ elementary school level and continues through high school and college to the health professions school. Minority students face challenges ranging from inadequate academic support to financial difficulty, defining "leaks" all along the pipeline. [42]

This is especially true for NHPI students, where socioeconomic status, lack of awareness of NHPI role models, available social support, and educational/ financial support groups greatly impacted academic achievement. Asian American students face their own set of challenges along the educational pipeline as well. However, these challenges are commonly cloaked by the "model minority" myth.

The "Model Minority" Myth

The AA/NHPI community has popularly been referred to as the "model minority," which has become a common perception in American society in which the "good minority seeks advancement through quiet diligence in study and work and not by making waves; the minority that other minorities in America should seek to emulate." [43] Unfortunately, this myth assumes homogeneity among very diverse communities and allows systemic issues-- such as curriculum, resource allocation, and socio-economic, educational, and health disparities-- to become secondary [44].

As we describe in this report, the AA/NHPI community is immensely diverse and each group within this larger category faces its own set of health and educational issues. Under the "model minority" myth, diverse ethnic groups get lumped together as if "they have the same traits: that they are all high-performing achievers." [45] In a recent Pacific Islander pipeline report, many NHPI youth describe being conflicted by their cultural and personal identities and having to combat NHPI stereotypes as barriers to succeed in education. [46] Many NHPI youth drop out of the health workforce pipeline because they feel they need to rely on sports to pursue a higher education. [47]

While there are certainly extremely accomplished AA/NHPIs, these distinguished students are neither typical nor the norm. This perception has meant that histories of these communities and ethnic-specific challenges have been overlooked; and health and educational needs of undeserved communities within the larger AA/NHPI community have not been met.

Education disparities

In 2004, the Asian Pacific American Legal Center (APALC) produced a report that profiles Los Angeles County's AA/NHPI population, which is itself larger than that of any state in the nation outside California. The AA/NHPI education data in this section is cited from APALCs 2004 report.

While Asian Americans are more likely than Whites to have graduated college in California—47% versus 37%, respectively—they are also more likely to have less than high school education (14% versus 8%). As mentioned previously, it appears that Asian Americans have higher educational attainment, but these numbers do not demonstrate educational indicators for the Native Hawaiian Pacific Islander community, where a high school degree is the highest level of education for 50% of Pacific Islanders and 86% of Native Hawaiians [48].

Four Southeast Asian groups have educational levels far below average, some among the lowest in Los Angeles County and California [49]. The four groups with very low levels of high school completion include Cambodian (56%), Hmong (41%), Tongan (41%), and Vietnamese (39%). As for 4-year college completion rates, 10% or less of Cambodians, Hmong, Laotians, Samoans and Tongans do not have a bachelors degree. [50] In regards to college graduation, nine AA/NHPI groups have lower than average rates of attaining a college degree, three groups have rates lower than any other racial group, and all four Pacific Islander groups have below average rates of attaining college degrees. [51]

Research shows that lower levels of education and linguistic barriers can have detrimental effects on the overall health of communities, including the Asian American community. The myriad of socioeconomic situations, English proficiency levels, and cultural beliefs across Asian ethnic groups constrains the access and quality of healthcare that patients receive. For example, recent Asian immigrants constitute a large part of California's Asian population and are most likely to have low-paying jobs, no health insurance, and more health problems than White citizens. Grouping together over fifty nationalities into one racial category masks not only the linguistic, educational and cultural diversity within the AA/NHPI community, but also the healthcare needs of specific Asian ethnicities.

Representation in the Medical Professions

In March 2008, the Center for California Health Workforce Studies, UCSF, released its physician diversity analysis from the California Medical Board Survey (CMBS) which surveyed 61,861 physicians who were active in patient care in California. [52] The survey results show that African-American and Latina/o physicians still remain severely underrepresented in the medical profession, while physicians of color (including AA/NHPIs) are more likely to serve in federally-designated Medically Underserved Areas (MUA) and practice primary care. [53] [54]

Among AA/NHPI physicians, Chinese, Asian Indians, and Filipinos make up the majority of physicians within the Asian ethnicities included in this survey. [55] Among Southeast Asian and Pacific Islander ethnicities

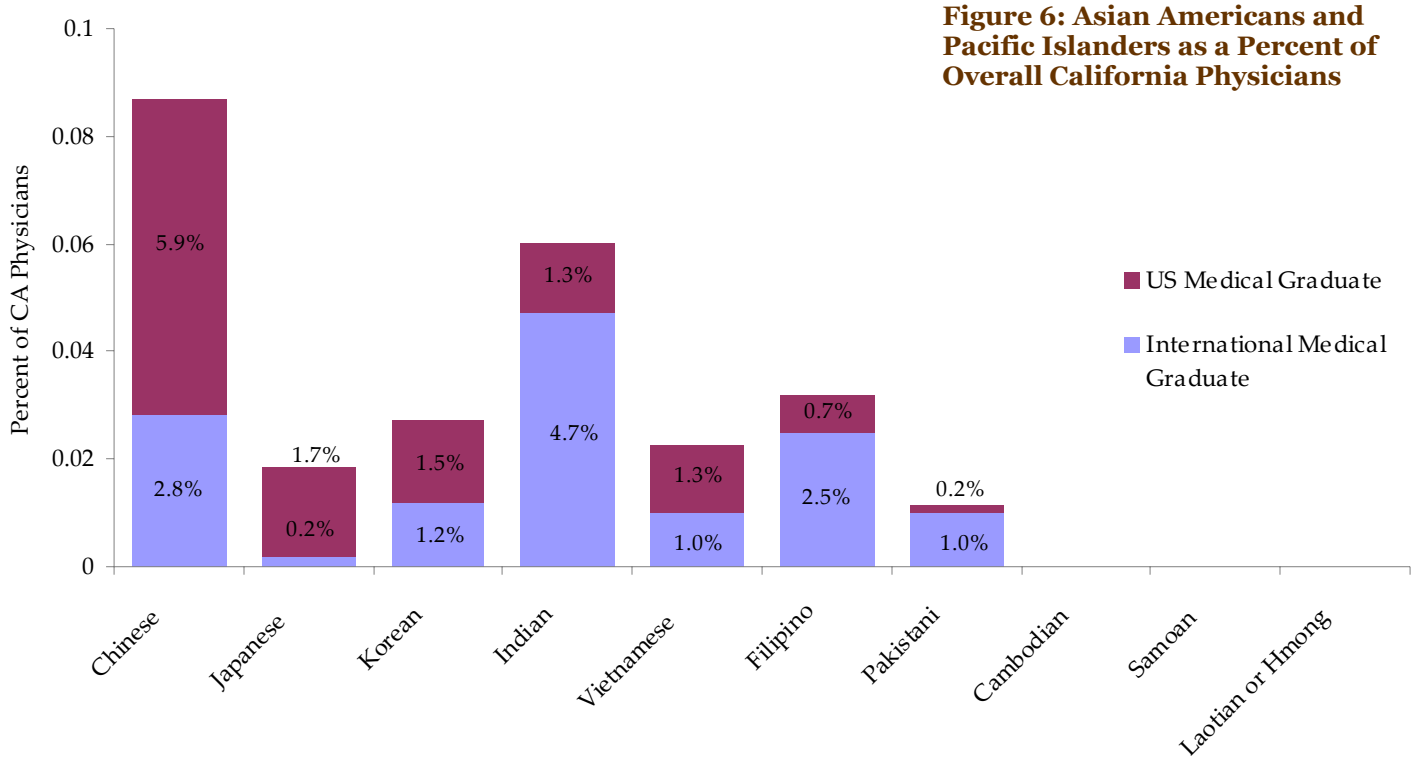
Cambodian, Lao/Hmong, and Samoan physicians are underrepresented among California's doctors, each representing 0.05% of California's physician population. [56] According to UCSF's estimates, only 40 Cambodian, 30 Lao/Hmong, and 20 Samoan physicians are actively practicing in California.

California's Medical Board Survey and this report reveal similar findings, except for one ethnicity. CMBS reports that Filipino physicians are well represented within California's health workforce, whereas we found that Filipino medical students were the least represented when compared to their California population. It seems that this discrepancy is related to the number of AA/NHPI international medical graduates that are practicing in California. For Filipino physicians, about 78% are international medical graduates.

As seen in Figure 6, a majority of Chinese, Korean, Japanese, and Vietnamese ethnic physicians graduated from US medical schools. [57] In contrast, 78% of Indian physicians and 86% of Pakistani physicians graduated from international medical schools. The numbers for Internationally trained Samoan, Cambodian, Laotian/Hmong physicians are near zero—the latter two groups fall within the "Other Asian" category from which we are unable to capture disaggregated UC student data.

It is important to compare the number of US medical graduates and international medical graduates for practicing physicians to get a more accurate perspective of the number of students continuing from the health workforce pipeline to US medical schools and working for California's communities. These figures indicate that there is an early educational underdevelopment of academic achievement for these ethnic groups in the US.

Figure 6: Asian Americans and Pacific Islanders as a Percent of Overall California Physicians



Findings

Finding One: *There is insufficient disaggregated data to make authoritative analyses regarding AA/NHPI medical student matriculation trends at the University of California.*

The UC and AAMC did not collect disaggregated AA/NHPI data until 2002, thus there are only seven years of matriculant data available at the time of publication. In addition, there is still a large and heterogeneous "Other Asian" and "Other Pacific Islander" category that prevents analysis of data for ethnicities with well documented health disparities and marginalizations (e.g., Lao/Hmong, Cambodian, Tongan, Mongolian, etc.,).

The data presented in our findings is an example of the kind of baseline disaggregation needed for effective examination of student and state populations. The key is to maintain data collection over a period of time so that UC admissions patterns can be discerned.

There is hope for effective and sustained disaggregated data collection—current successful models of collecting extensive disaggregated AA/NHPI data come from the National Latino and Asian American Study (NLAAS) and the California Health Interview Survey (CHIS). Both surveys have demonstrated effective and methodologically sound ways to research specific ethnic groups in their own language so that AA/NHPIs could be counted and have their needs assessed.

For this report, Greenlining obtained the applicant, acceptance, and matriculation data for AA/NHPI students from 2002-2008. Unfortunately, at the time of research and publication, there is no disaggregated AA/NHPI state population data before 2004 which has meant that we are limited to four years of analysis. In this report, we only provide analysis for the years 2004 through 2007 in order to directly compare UC numbers to the respective California state population.

> "In my experience, patients have been reluctant to see a doctor or be compliant with treatments either because the doctor's cultural sensitivity or language ability isn't sufficient or because the patient doesn't share a Western biomedical perspective of health and illness. I do believe that this may affect certain subgroups in the AA and NHPI more, especially those with small populations in California."
>
> *2nd year Burmese/Myanmarese Medical Student in the UCB/UCSF Joint Medical Program*

Finding Two: *Students of different Asian ethnic backgrounds are applying at approximately the same rate they are matriculating.*

AA/NHPI students are applying at about the same proportion that they are being accepted and matriculating. Therefore, in order to increase the number of AA/NHPI physicians, the number of AA/NHPI applicants needs to increase.

For example, the percentage of Vietnamese in the pool of applicants to the UC medical schools (11%) is about the same as the percentage in the pool of acceptees (10%) and the pool of matriculants (12%).

The issue that these data do not address, but that nevertheless deserves attention, is the UC medical schools' AA/NHPI recruitment efforts. Non-disaggregated data will mislead institutions to overlook the challenges Asian ethnicities are facing in attaining a career in the health workforce.

Figure 7: Ethnic Representation among AA/NHPI Applicants of UC Medical Schools: 2004-2007

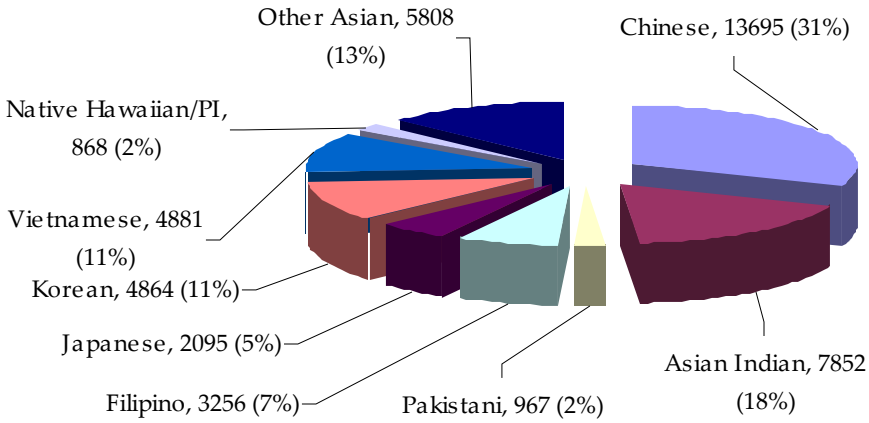


Figure 8: Ethnic Representation among AA/NHPI Acceptees of UC Medical Schools: 2004-2007

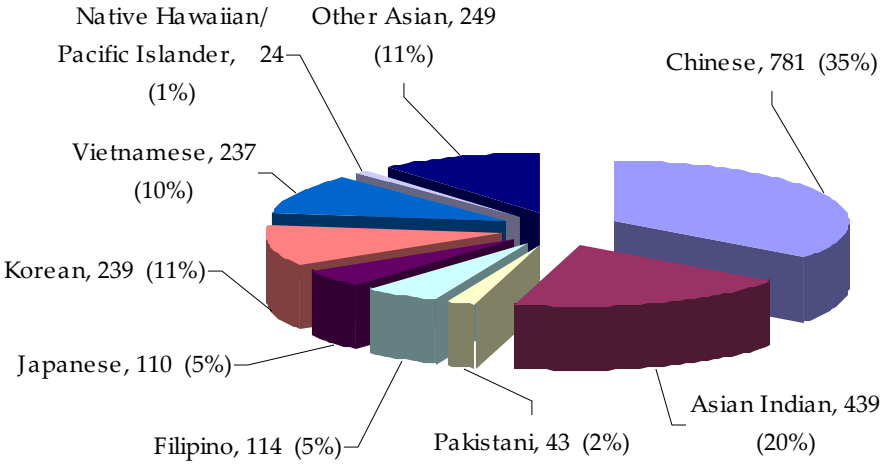
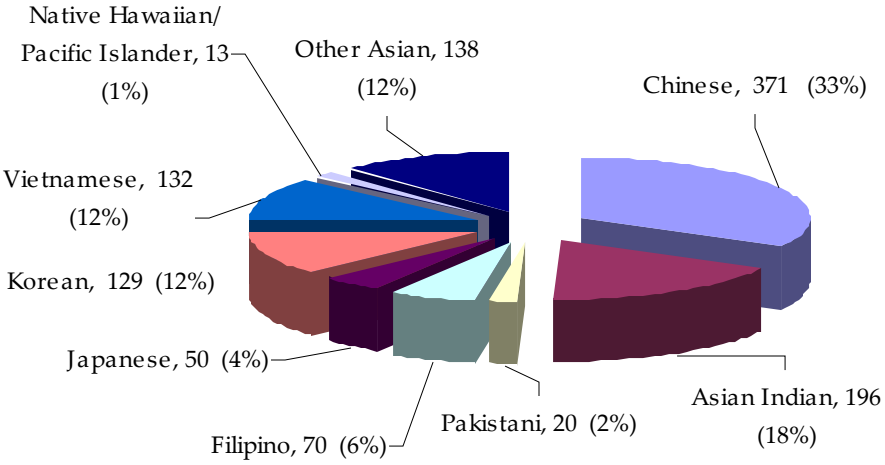


Figure 9: Ethnic Representation Among AA/NHPI Matriculants of UC Medical Schools: 2004-2007



Finding Three: *Filipino American students are underrepresented among UC medical school matriculants*

Filipino Americans make up nearly a quarter of California's Asian American population, but only about 6% of the UC's medical school matriculants.

Figure 10 shows that between 2004 and 2007, the most striking disparity among Asian Americans existed among Filipinos. They comprise 24.3% of California's Asian American population, but only 6.25% of Asian American matriculants at UC medical schools, on average. While the California Medical Board Survey shows a high number of Filipino physicians, Grumbach et al, asserts that the majority of these physicians were trained internationally. [58]

Since the the data shown only represents U.S. citizens or permanent residents, it is clear that Filipino Americans are leaking through the medical professions pipeline. This is perhaps symptomatic of an underinvestment in Filipino youth and health pipeline programs in California and the United States.

Representation of Other AA/NHPI Groups

The charts on the next two pages compare the percent representation of a specific Asian ethnicity within California's Asian population to the percent of the Asian ethnicity's representation among UC medical school matriculants. Data was available for the following ethnicities: Chinese, Vietnamese, Asian Indian, Pakistani, Japanese, Korean, Other Asians, and Filipino.

Chinese

Between 2004 and 2007, Chinese American applicants were admitted at a higher percentage than their proportion within California's Asian American community. While Chinese Americans make up approximately 24.5% of the Asian American population, they consistently comprise over 30 percent of Asian American matriculants, reaching their highest level, 36.1%, in 2007. (Figure 11)

Vietnamese

Between 2004 and 2007 Vietnamese American students matriculated at their proportional representation among California's Asian American population. (Figure 12)

Asian Indian

Between 2004 and 2007, Asian Indians were well-represented compared to their statewide population among Asian Americans. It is worth noting that the Asian Indian population grew 1% in the period shown while the representation of Asian Indian matriculants dropped 3.7% from 2004 to 2007. (Figure 13)

Korean

Figure 14 shows that Korean Americans were well-represented compared to their statewide population between 2004 and 2006. However, the representation of Korean matriculants decreased 5.3% between 2004 and 2007 from 13.6% to 8.3%, respectively.

Japanese

Between 2004 and 2007, there were an inconsistent number of matriculants in any given year making it difficult to analyze or describe any trends. Japanese Americans were underrepresented during 2004 and 2005 and in the final two years the representation increased to parity. A more in-depth analysis of these trends is impossible given the small sample size and number of matriculants during our period of study. (Figure 15)

Pakistani

Between 2004 and 2007, Pakistani-Americans were well-represented relative to their population figures. The number of Pakistani medical school matriculants doubled from 2004 to 2007. (Figure 16)

Figure 10: Representation of Filipinos in California's AA/NHPI Population vs. among UC Medical School Matriculants

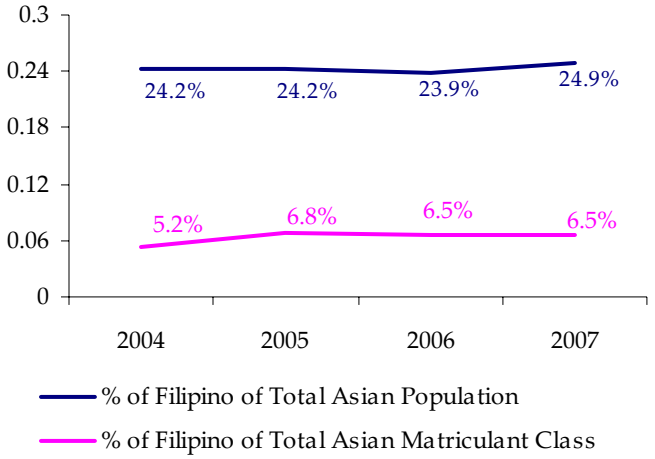


Figure 11: Representation of Chinese in California's Asian population vs. among UC Medical School Matriculants

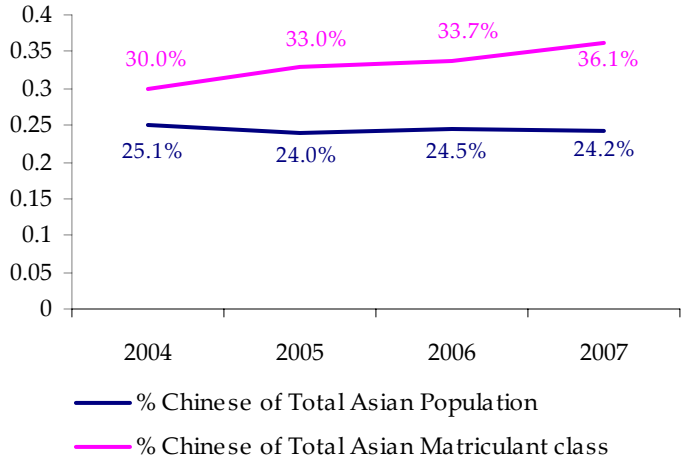


Figure 12: Representation of Vietnamese in California's Asian Population vs. among UC Medical School Matriculants

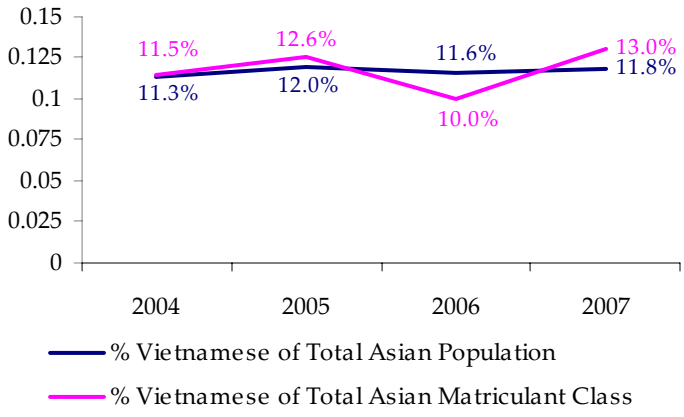
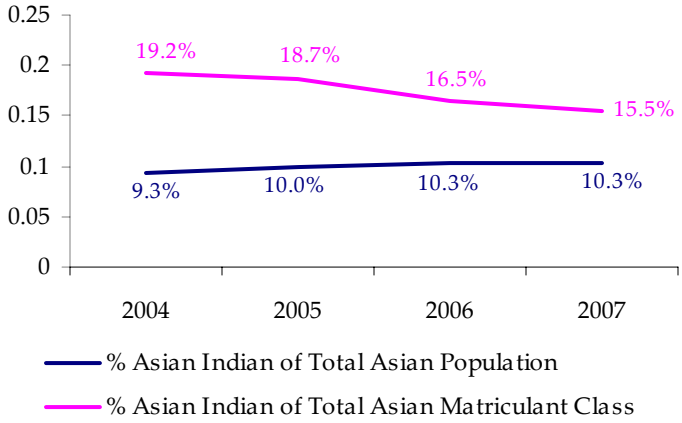


Figure 13: Representation of Asian Indians in California's Asian Population vs. among UC Medical School Matriculants



Other Asian

The "Other Asian" category includes Thai, Cambodian, Hmong, Laotian, Malaysian, Bangladeshi, Sri Lankan, and Indonesian among others. Between 2004 and 2007, we see in Figure 17 that the "Other Asian" population was well-represented with a trend toward parity. However, there is a 4.5% drop between 2004 and 2007 for the ethnicities in this group. Some of the most under-represented ethnicities in the health workforce are within the "Other Asian" category so it is crucial that these numbers increase. This category demonstrates the need for the further disaggregation necessary to accurately analyze matriculant trends among well-known vulnerable communites with South East Asian ancestry-- including Hmong, Cambodian, and others.

Figure 14: Representation of Koreans in California's Asian Population vs. among UC Medical School Matriculants

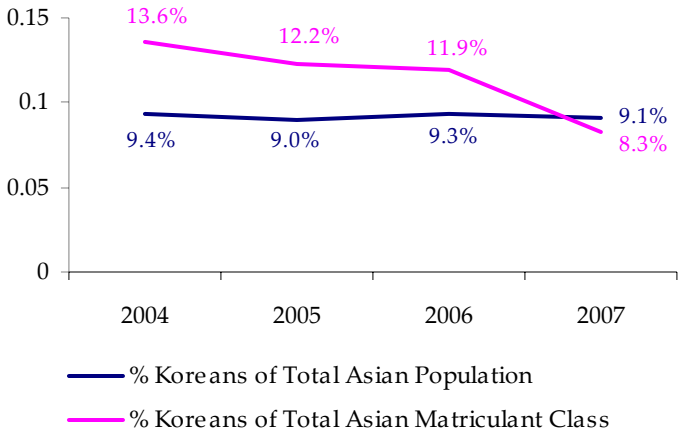


Figure 15: Representation of Japanese in California's Asian Population vs. among UC Medical School Matriculants

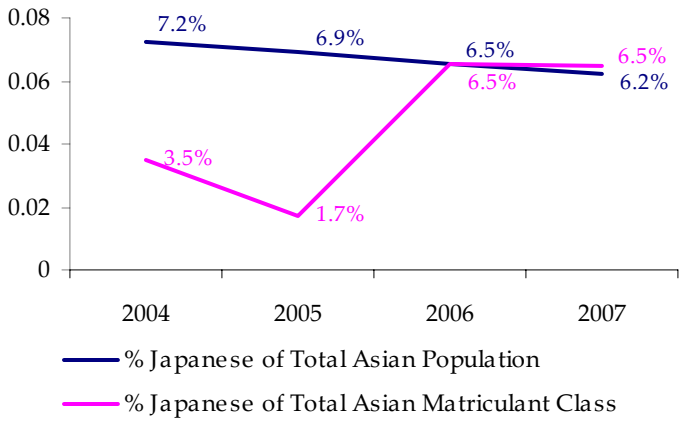


Figure 16: Representation of Pakistanis in California's Asian Population vs. among UC Medical School Matriculants

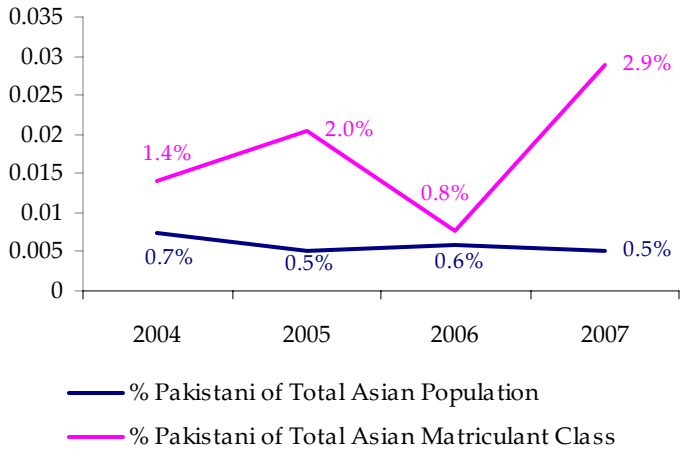
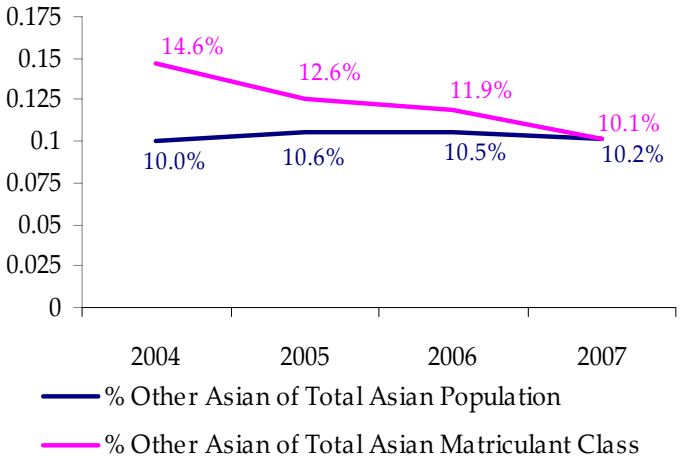


Figure 17: Representation of Other Asians in California's Asian Population vs. among UC Medical School Matriculants



Finding Four: *Native Hawaiians and Pacific Islanders are severely underrepresented among UC medical school applicants, acceptees, and matriculants.*

There were no Native Hawaiian or Samoan acceptees in the 2004-2007 four-year period studied. In addition, there is a severe under-representation among Native Hawaiians and Pacific Islanders among the UC's medical applicants, acceptees, and matriculants.

In an April 21, 2009 address, Dr. Rob Logan, senior staff at the National Library of Medicine, devoted his entire remarks to the health disparities plaguing Native Hawaiians and Pacific islanders. Dr. Logan stated: "the health status of Native Hawaiians and Pacific Islanders is a major challenge for the physicians and traditional healers who serve the indigenous people of Hawaii, Guam, Samoa, and other Pacific Islands... [who] have higher rates of smoking, alcohol consumption, and obesity than other U.S. ethnic groups." [59]

Data collection for Native Hawaiians and Pacific Islanders has presented its own set of difficulties. In the interest of student privacy, the AAMC does not disclose the precise numbers of students in a particular ethnic group if there are less than five individuals. As a result, we have only been able to calculate ranges of students in each ethnic group and among each category of applicant, acceptee, and matriculant.

We arrived at the following ranges by calculating a maximum and minimum number of students. Schools with at least one student, but less than five students who were applying, being accepted, or matriculating have a range of students from one to four.

The lowest number (the minimum) was calculated assuming that each school had at least one student in that ethnic category. The highest number (maximum) was calculated assuming that each school had a maximum of 4 students. Using this methodology, we captured the lowest and highest possible number of acceptees, applicants, and matriculants of Native Hawaiian and Pacific Islander subgroup background.

As illustrated in Figure 18, there were anywhere between 371 to 488 NHPI applicants, 15 to 30 acceptees, and only 4 to 16 NHPI matriculants into the UC medical programs. There were no Native Hawaiians or Samoan matriculants in the four-year period we studied. California is graduating only a handful of physicians from these communities, thus leaving this vulnerable population without the health and medical professionals it needs.

These findings also highlight the need for disaggregated data, as "Other Pacific Islander" was consistantly the most reported ethnicity in the NHPI category. The NHPI community contains multitudes of ethnicities beyond Guamanian/Chamorro, Samoan, and Native Hawaiians. Further disaggregation and data is needed to completely understand the demographics of this student population and why there are not higher numbers among NHPI medical school matriculants.

Figure 18: Total Number of Native Hawaiians and Pacific Islanders, Classes of 2004-2007

	Applicants	Acceptees	Matriculants
Total UC-wide NHPI	371 to 488	15 to 30	4 to 16
Guamanian/Chamorro	19 to 76	1 to 4	1 to 4
Native Hawaiian	26 to 70	0	0
Other Pacific Islander	322 to 328	14 to 26	3 to 12
Samoan	4 to 16	0	0

Recommendations

Our policy recommendations seek to achieve two policy goals:

Ensuring a diverse health workforce that is culturally and linguistically competent. A diverse healthcare workforce is critical to improving access to culturally and linguistically appropriate care for minority, Asian American, Native Hawaiian, and Pacific Islander communities.

> "Our [medical school] population is very small and I have never met a Samoan, Tongan or Pacific Islander student"
>
> 4th year Filipino Medical Student at UCSF

Increasing research and improve data collection of AA/NHPIs, particularly as it relates to health, education, language, immigration status, and socioeconomic class. The lack of widely accessible disaggregated data that reaches far back in time has masked the diversity within the AA/NHPI community.

Strengthen pipeline programs that facilitate the entry of Filipino, Native Hawaiian/Pacific Islander, and other underrepresented AA/NHPI groups into the health workforce.

The data shows that the representation of students of each ethnicity who apply to UC medical schools is about the same representation among those who matriculate. Therefore, the number of diverse applicants must increase.

Include specific Asian American and Pacific Islander groups who are not adequately represented in UC medical schools in a standard definition of "underrepresented minority."

African-American and Latino students are traditionally categorized as under-represented minorities (URM). However, according to the findings of our report and California's Medical Board Survey, Native Hawaiians, other Pacific Islanders, and groups under "Other Asian" should be categorized as URM as well.

Support the collection, analysis, and publication of student data of Asian American and Pacific Islander subgroups.

The University of California and AAMC should publish and make readily accessible their disaggregated collected data on AA/NHPI subgroups including retention efforts.

Support legislation that would require medical and health boards to collect and publish disaggregated AA/NHPI health professions data.

Disseminating current disaggregated data on the diversity of AA/NHPIs within the health workforce to local and state legislators is important to illustrate the detrimental effects of categorizing all AA/NHPI data into one group.

Support and expand the availability of educational resources for AA/NHPI youth from lower socioeconomic levels and immigrant backgrounds.

Socioeconomic status, lack of awareness of resources, and little knowledge of health career opportunities are common barriers that lead to AA/NHPI dropout along the higher education and health workforce pipelines. Collaborative work between academic institutions, funding organizations, and community organizations can help increase the number of under-represented AA/NHPI ethnicities in the health workforce.

The University of California should conduct outreach to develop private/public partnerships with private healthcare companies in an effort to support pipeline programs that support under-represented populations.

Support for pipeline programs from foundations and/or private donors is scarce. However, many private companies do provide some support but more can be done to partner with the private sector to increase their philanthropic contributions.

Conclusion

Asian Americans and Native Hawaiian/Pacific Islanders (AA/NHPI) are frequently portrayed as the "model minority," a label associated with social and economic success. However, this image usually only holds true if AA/NHPIs are regarded as one homogeneous racial group. If we take a closer look, it becomes clear that the "model minority" image is a myth and a calamitous consequence of not disaggregating data.

The severe lack of knowledge and awareness surrounding AA/NHPI health workforce diversity, projections and healthcare needs is another consequence of not collecting or reporting disaggregated data. Aggregating such a large number of diverse ethnicities into two groups and an "other" category disguises the disparities of certain AA/NHPI communities. For example, it is not widely known that Vietnamese women have the highest rate of cervical cancer among women of all racial and ethnic categories or that 78% of practicing Filipino physicians in California graduated from international medical schools. [60]

> "The lumping of all the API students into one category is detrimental because it causes all API students to be lumped into a "majority" category and harder to seek support and community to those who desire it."
>
> *1st year Vietnamese Medical Student at UCSF*

In this report we underline the importance of disaggregating AA/NHPI health workforce data, and highlight the pressing need to report ethnic breakdowns for all studies inclusive of AA/NHPI communities. For the first time ever, this study compared California's AA/NHPI population figures to their respective UC medical school applicant, acceptee, and matriculant numbers. Of the twelve AA/NHPI ethnic groups for which data is currently collected, we found that four groups are severely underrepresented at UC medical schools.

Projections of the AA/NHPI physician supply needed to meet the needs of one of the fastest growing populations were unattainable due to the limited amount of data available. It was very clear however, that not much progress has been made in collecting and *publicly reporting* disaggregated AA/NHPI health workforce data.

Notable efforts have been made by AA/NHPI organizations, like the Asian and Pacific Islander American Health Forum, in releasing guidelines for reporting data. A statewide, comprehensive and ethnic-specific data collection effort must follow in response. Collecting and making public more disaggregated data on all Asian ethnicities, and especially the "Other Asian" category, will provide crucial information for policymakers and community groups.

It is imperative that state and private agencies dealing with health workforce and healthcare adopt AA/NHPI data collection guidelines because studying and understand trends in the health of populations requires many years of data collection. By the time groups collect and report data, AA/NHPI representation among medical school matriculants may be substantially below the proportion in California's population.

Understanding the healthcare and health workforce needs of AA/NHPI populations should be a top priority to shed light on the reality of how they experience health and wellbeing in California.

Methodology

The data analyzed in this report was provided by the Association of American Medical Colleges (AAMC) and the University of California Office of the President (UCOP) upon special request. It was disaggregated to show the number of applicants, acceptees, and matriculants to seven of the public medical programs in California from 2002 to 2008.

These seven programs encompass those at five University of California campuses: UC Irvine (UCI), UC San Francisco (UCSF), UC San Diego (UCSD), UC Davis (UCD), UC Los Angeles (UCLA-Geffen), as well as two joint programs: UC Berkeley/UCSF Joint Program (UCB/UCSF Joint) and the UCLA/Charles R. Drew University of Medicine and Science program (UCLA Drew).

In this report, "applicants" refers to prospective students who applied to each medical school program. "Acceptees" are applicants who were accepted for admission into a medical school program. "Matriculants" are acceptees who enrolled in a specific medical school program.

Assuming that applicants are applying to and being accepted into more than one UC medical program, we use the "matriculant" population as the best indicator of medical school diversity because it is the only one of the three groups that is comprised of discrete individuals.

The AAMC disaggregated Asian American medical student data into the following Asian ethnic categories: Chinese, Asian Indian, Korean, Japanese, Vietnamese, Filipino, Pakistani, Other Asian, and Native Hawaiian/Other Pacific Islander. In addition, there were total figures for White, African-American, Hispanic/Latino, Native American, and Other races.

The AAMC also provided disaggregated data for Native Hawaiian/Other Pacific Islanders from 2002 to 2008 in the following ethnic categories: Native Hawaiian only, Guamanian/Chamorro only, Samoan only, and Other Pacific Islander.

For privacy reasons, the AAMC does not disclose precise sample sizes for years with five or less students. We therefore present numbers of ethnic groups for which data was not disclosed in ranges. For example, the lowest number in the range was calculated assuming that each UC medical school had at least one student in that ethnic category, and the highest number was calculated assuming that each school had a maximum of four students in that ethnic category.

Another component of this report is the student narratives, which are found throughout the report. An electronic survey was sent out to Asian American medical student organizations at five campuses. In the case of UCSF, which doesn't have an API medical student association, the survey was distributed via class listservs. Survey responses were anonymous.

Race count totals in the Asian American medical school data provided for this report included unduplicated race counts for those students identifying themselves as two or more ethnicities. This was a conflict when trying to extract ethnic count totals from the data since there was no way to distinguish students who identified themselves as two or more ethnicities. For example, a student who indicated that they were Chinese and Thai would be counted as one Asian person, but also as one person in both the Chinese and Other Asian categories—thus, this report used duplicated race and ethnic counts. Actual medical student representation of specific ethnicities may therefore be lower than presented in this report. Race counts included US citizens and permanent residents only.

The disaggregated California AA/NHPI population data for 2004-2007 was sourced from the American Community Survey. At the time of publication, there was no disaggregated data for California's AA/NHPI ethnicities available before 2004. As a result, we only provide analysis for the years 2004 through 2007 in order to directly compare UC numbers to the respective California state population.

References and Endnotes

[1] Aggregated data combines multiple ethnic groups into one generalized racial category. Disaggregated data is organized into different and more specific ethnic categories.

[2] There are many labels to describe the Asian American, Native Hawaiian, and Pacific Islander community, including simply "Asian" or "Other". Many organizations that represent these constituencies have adopted Asian American and Native Hawaiian Pacific Islander (AA& NHPI) to more accurately describe this constituency. Greenlining has decided to adopt this abbreviation for this report.

[3] Greenlining Institute, *Representing the New Majority Part I: A Status Report on the University of California Medical School Career Staff Diversity* (RTNM I). Tiffany Green, Spring 2008.

[4] Greenlining Institute, *Representing the New Majority Part II: A Status Report on the Diversity of the University of California Medical School Faculty* (RTNM II). Angela Echiverri, Hilary Joy, and Abu Kanu, Spring 2008.

[5] Greenlining Institute, *Representing the New Majority Part III: A Status Report on the Diversity of the University of California Medical Student Body* (RTNM III). christian gonzález-rivera and Kellie Middleton, Spring 2008.

[6] California Proposition 209 was a 1996 ballot initiative that changed the California State Constitution and prohibited public institutions from considering race, sex, or ethnicity in admissions and hiring processes.

[7] In previous reports regarding UC medical school diversity, URM included African-American, Latina/o, and Native American students.

[8] RTNMIII. See *supra* note 5.

[9] University of California Office of the President. "Resolution 28 (RE-28)." Available at: http://www.ucop.edu/news/access/propres.htm. Emphasis added.

[10] Asian Pacific American Legal Center of Southern California (APALC), Asian Law Caucus, & National Asian Pacific American Legal Consortium, *The Diverse Face of Asian and Pacific Islanders in California: Asian & Pacific Islander Demographic Profile.* 2005.

[11] (Place & percent AA/NHPI) Monterey Park City 64%, Cerritos City 61%, Walnut City 58%, Milpitas City 54%, Daly City 54%, Rowland Heights CDP 52%, San Gabriel City 50%, San Marino City 50%, Rosemead City 50%.

[12] APALC. See *supra* note 10.

[13] RTNMIII. See *supra* note 5.

[14] Author's calculations from California Department of Finance figures.

[15] The Asian Pacific American Legal Center (APALC), *California Speaks: Language Diversity and English Proficiency by Legislative District.* February 2006.

[16] APALC. See *supra* note 10.

[17] APALC. See *supra* note 10.

[18] US Census, American Community Survey. *The American Community – Asians: 2004*. February 2007.

[19] US Census 2000 and American Community Survey 2005-2007.

[20] The Henry J. Kaiser Family Foundation and APIAHF, *Race, Ethnicity, & Healthcare Fact Sheet.* April 2008.

[21] The Henry J. Kaiser Family Foundation and APIAHF. See *supra* note 20.

[22] The Commonwealth Fund and Princeton Survey Research Associates, *Health Care Quality Survey.* 2001.

[23] National Center of Health Statistics, 2003.

[24] UCLA Center for Health Policy Research, *The State of Asian American, Native Hawaiian and Pacific Islander Health in California Report*. Ninez A. Ponce, Winston Tseng, Paul Ong, Yen Ling Shek, Selena Ortiz, and Melissa Gatchell, 2009. Available at http://escholarship.org/uc/item/3s89c1cm.

[25] Author's Calculations from AAMC Data 2004 -2007.

[26] *Ibid*.

[27] Data can be found in Appendix Chart C.

[28] US Census.

[29] RTNMIII. See *supra* note 5.

[30] Ibid.

[31] Marguerite Ro, DrPH, "Moving Forward: Addressing the Health of Asian American and Pacific Islander Women," *Journal of Public Health*, 516-519, April 2002.

[32] Srinivasan, S., and Guillermo, T., "Toward Improved Health: Disaggregating Asian American and Native Hawaiian/Pacific Islander Data," *American Journal of Public Health*, 1731-1734, 2000.

[33] APALC. See *supra* note 10.

[34] National Center for Cultural Competence, Georgetown University Center for Child & Human Development. Goode & Jones, 2009. Available at http://www11.georgetown.edu/research/gucchd/nccc/foundations/frameworks.html.

[35] APALC. See *supra* note 10.

[36] APALC. See *supra* note 10.

[37] California Health Interview Survey (CHIS), 2001.

[38] Grumbach, K., *Physician Diversity in California: New Findings from the California Medical Board Survey*. University of California, San Francisco Center for California Health Workforce Studies, 2008.

[39] Jacobs E.A., Agger-Gupta N., Chen A.H.M., Piotrowski A., Hardt E.J., *Language Barriers in Healthcare Settings: An Annotated Bibliography of the Research Literature*. The California Endowment, 2003.

[40] CHIS, 2001.

[41] Ponce, Ninez A., Tseng, et. Al. See *supra* note 24.

[42] Saha S., Arbelaez J.J., Cooper L.A., "Patient-physician relationships and racial disparities in the quality of healthcare," *American Journal of Public Health*, 1713-1719, 2003.

[43] Grumbach. See *supra* note 38.

[44] Orange County Asian and Pacific Islander Community Alliance, Inc., *The Pacific Islander Health Careers Pipeline Program Report on Educational Barriers, Needs, and Recommendations*. J. Tran, M. Wright, E. Wong, et. al., 2009.

[45] The College Board, Asian/Pacific/American Institute, and The Steignhardt Institute for Higher Education Policy at New York University/National Commission on Asian American and Pacific Islander Research in Education (CARE), *Asian Americans and Pacific Islanders, Facts not Fiction: Setting the Record Straight.* R. Teranishi, Wei Tchen, J. Kuo, H. Zia, et. al., 2008. Available at http://professionals.collegeboard.com/profdownload/08-0608-AAPI.pdf.

[46] Teranishi R., Tchen Wei Kuo J., Zia H., et al. See *supra* note 45.

[47] Asian-Nation.org.

[48] Tran J., Wright M., Wong E., et al. See *supra* note 44.

[49] *Ibid*.

[50] APALC. See *supra* note 10.

[51] *Ibid*.

[52] *Ibid*.

[53] *Ibid*.

[54] Tran J., Wright M., Wong E., et al. See *supra* note 44.

[55] "The California Medical Board collects comprehensive and disaggregated racial and ethnic data which provides an "unprecidented ability to examine variations within major ethnic groups."

[56] Grumbach. See *supra* note 38.

[57] The U.S. Health Resources and Services Administration define Medically Underserved Areas/Populations (MUA) as having: too few primary care providers, high infant mortality, high poverty and/or high elderly population.

[58] Grumbach. See *supra* note 38.

[59] *Ibid*.

[60] *Ibid*.

[61] Findings from the California Medical Board Re-Licensure Survey

[62] Grumbach. See *supra* note 38.

[63] Logan, Rob Ph.D., *Director's Comments Transcripts: Native Hawaiian Health,* Medline Plus: A Service of the U.S. National Library of Medicine and the National Institutes of Health. 2009. Available at http://www.nlm.nih.gov/medlineplus/podcast/transcript042109.html.

[64] Parker S.L., Davis K.J., Wingo P.A, Ries L.A., Heath C.W. Jr. "Cancer statistics by race and ethnicity," *Journal of Clinical Investigation*. 1998 Jan-Feb; 48(1):31-48.

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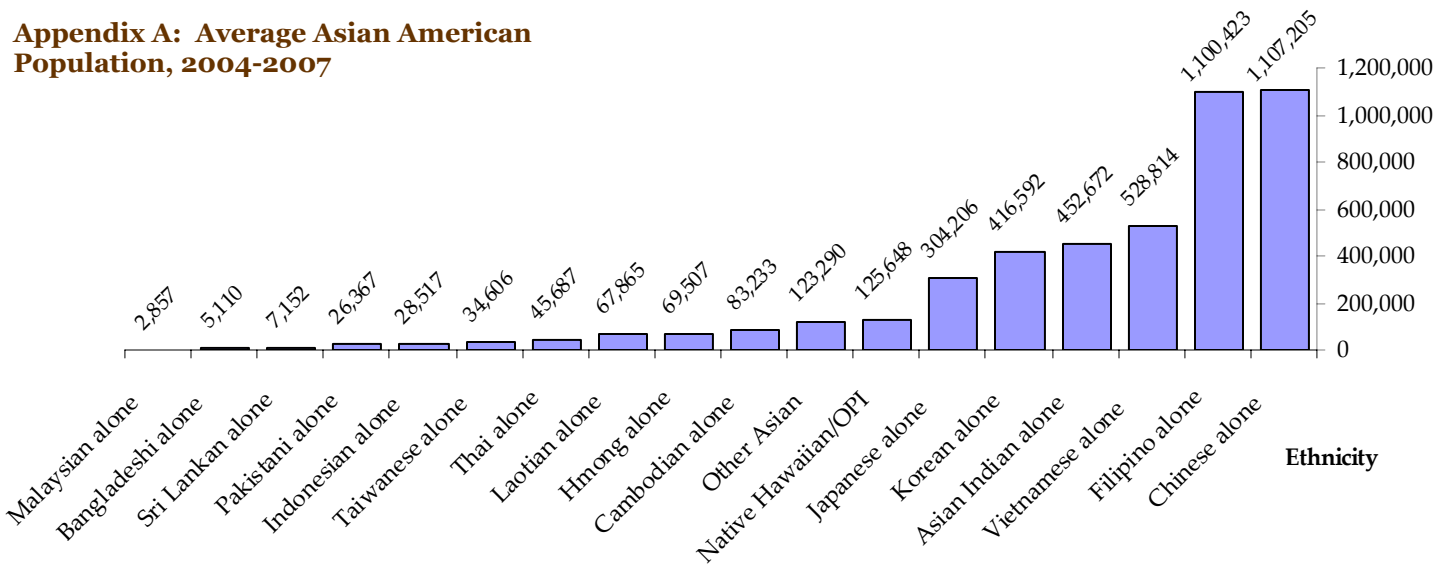
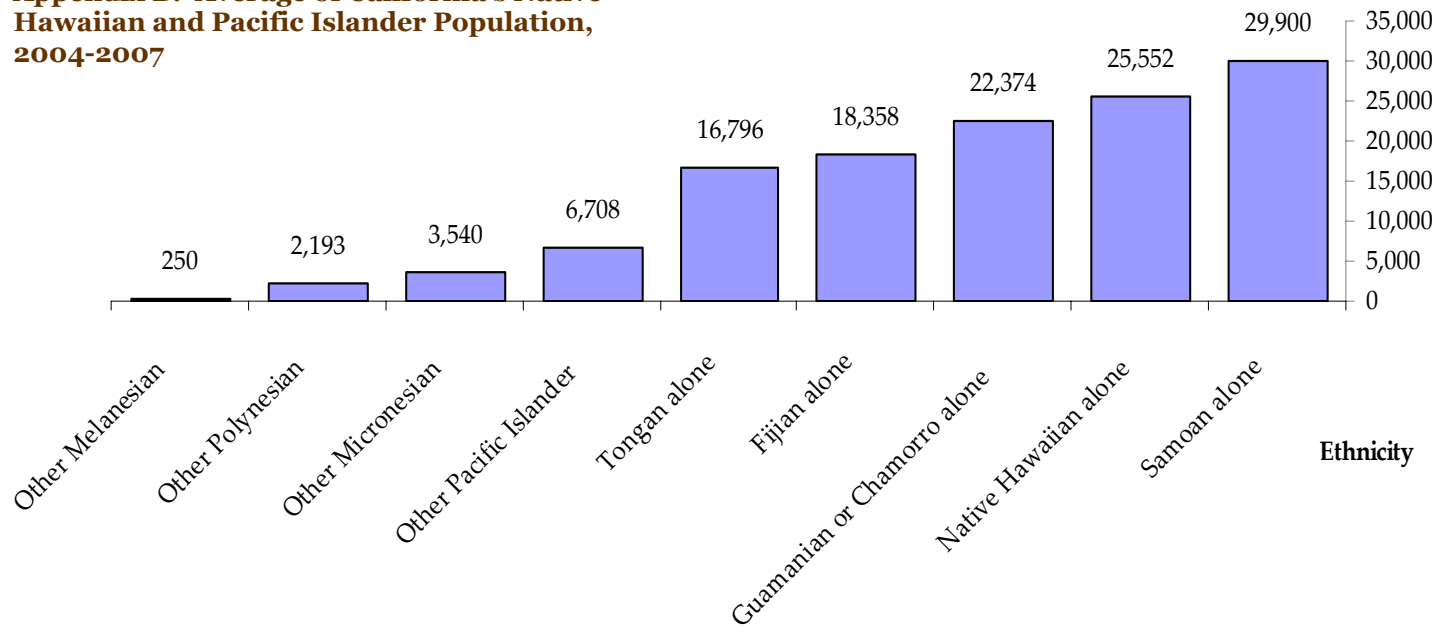
Appendix

Appendix A: Average Asian American Population, 2004-2007



Appendix B: Average of California's Native Hawaiian and Pacific Islander Population, 2004-2007



Appendix C: Number of AA&NHPI Students in UC Medical Schools, 2004-2007

	2004	2005	2006	2007
Total Asian Matriculants/Yr	287	294	261	277
Chinese	86	97	88	100
Asian Indian	55	55	43	43
Pakistani	4	6	2	8
Filipino	15	20	17	18
Japanese	10	5	17	18
Korean	39	36	31	23
Vietnamese	33	37	26	36
Native Hawaiian/ Pacific Islander	3	1	6	3
Other Asian	42	37	31	28

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