ASSESSMENT AND PRIORITIES FOR HEALTH & WELL-BEING IN NATIVE HAWAIIANS & OTHER PACIFIC PEOPLES

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Ulu Hina,
Kū Papa

-Thriving & Enduring

INTRODUCTION

The assessment of needs, priorities, accomplishments, and shortfalls is a fundamental step before undertaking important strategic action. Over the past 10 years, the Department of Native Hawaiian Health and its Center for Native and Pacific Health Disparities Research at the John A. Burns School of Medicine (JABSOM) of the University of Hawai‘i at Mānoa has been working with communities throughout Hawai‘i, and recently in the Continental U.S., to understand and find ways to address the inequities in health status across populations. The focus of our efforts is inclusive of not only Native Hawaiians but also other Pacific Islanders (e.g. Samoan, Marshallese, Guamanian, Chuukese), and Filipinos. Collectively, we identify these ethnic groups as Native Hawaiians and other Pacific Peoples (NHPP). The purpose of this report is to provide a broad summary of the health and well-being of NHPP to enable community leaders, policy makers, academic institutions, research centers, and others to make meaningful decisions and take informed actions.

The disparity in the health status of NHPP, when compared to other ethnic populations in Hawai‘i and across the Continental U.S., continues to be considerable and disturbing. In the past several decades, increasing effort has been made to address their health inequities. This report made a specific effort to highlight areas that show improvement as to recognize the gains made through the dedicated work of many. While disparities continue to persist, progress in several areas demonstrates that

improvement in health and wellness is achievable. It also illustrates the challenges faced in eliminating health inequities and the importance of needed resources, novel strategies, and collaborative efforts for future success.

The first three sections of this report summarize data and findings from scientific literature, government reports, and academic assessments on the physical, mental, and social health and well-being of NHPP. Across each section there are sidebars highlighting “key findings” and “promising trends” for all the main topic areas. The fourth section, “Community Speaks of Health Needs” is a pivotal summary of the needs and priorities gathered from interviews conducted with the leaders of 30 organizations across Hawai‘i and California that serve NHPP. The opinions and ideas of these community leaders give voice to the data presented in prior sections and give a practical direction to future efforts.

It is our hope that this report will provide valuable information for strategic and synergistic efforts to achieve health equity for NHPP. This report could not have been accomplished without the support, encouragement, and assistance of many individuals and several entities including the Hawai‘i Alliance for Community-Based Economic Development (HACBED), The Queen’s Health Systems, and the RCMI Multidisciplinary And Translational Research Infrastructure eXpansion (RMATRIX) at JABSOM.

DEMOGRAPHIC PROFILE OF NATIVE HAWAIIANS & OTHER PACIFIC PEOPLES

POPULATION

Key Finding:

There were remarkable increases in the Native Hawaiian, Pacific Islander, and Filipino populations between 2000 and 2010.

Promising Trends:

Pacific Islanders are one of the fastest growing groups in the state and the nation.

"We are all sort of the same but we must customize [programs & services] according to the culture."

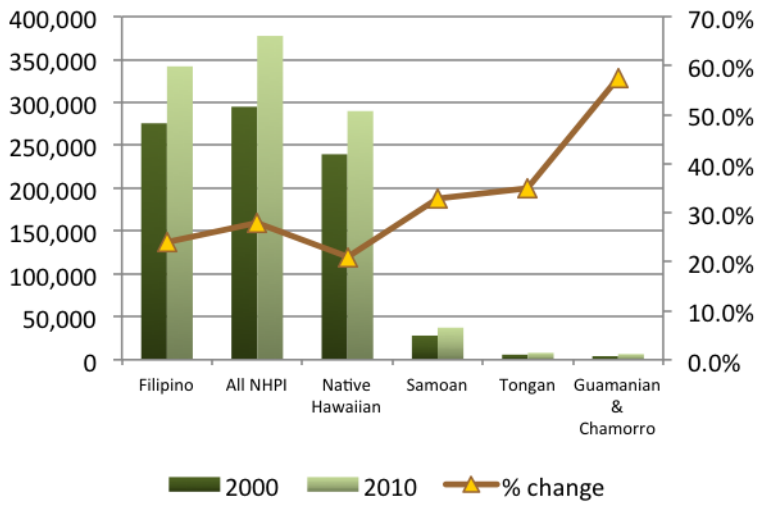
-Urban Community Health Center

Native Hawaiian and Pacific Islanders (NHPI) is a population classification frequently used in federal reports. This group includes Native Hawaiians, Samoans, Tongans, Guamanian/Chamorro, Micronesians (people of the Federated States of Micronesia, Palau, Marshall Islands, and the Commonwealth of the Northern Mariana), and Fijians. According to the U.S. Census Bureau, the NHPI population grew in Hawai'i from 295,030 in 2000, to 377,587 in 2010, a 28% increase (Essoyan, 2012; Hawai'i State Data Center, 2012b). Specifically, the increase was 21% for Native Hawaiians, 33% for Samoans, 35% for Tongans, and 58% for Guamanians and Chamorros.

This growth in the NHPI population can be attributed to a range of factors, including greater NHPI self-identification, increased intermarriage and mixed-ethnic births, and a relatively young population with higher birthrates. A key factor in the growth of the NHPI population is the increasing rate of Pacific Islander immigration to Hawai'i. For example, Hawai'i's Marshallese population has risen to be the tenth largest ethnic group in the State and is the newest and fastest growing immigrant population.

For Filipino in Hawai'i, the population grew by 24% to 342,095 between 2000 and 2010. Filipino is the second largest ethnic group in the State, making up more than 25% of the State's population, with 70% living on the island of O'ahu (Hawaii State Data Center, 2012a). The Filipino population in the U.S. is 3.4 million.

Figure 1. NHPI & Filipino Populations with Percent Change, Hawai'i, 2000 & 2010



Source: (Essoyan, 2012)

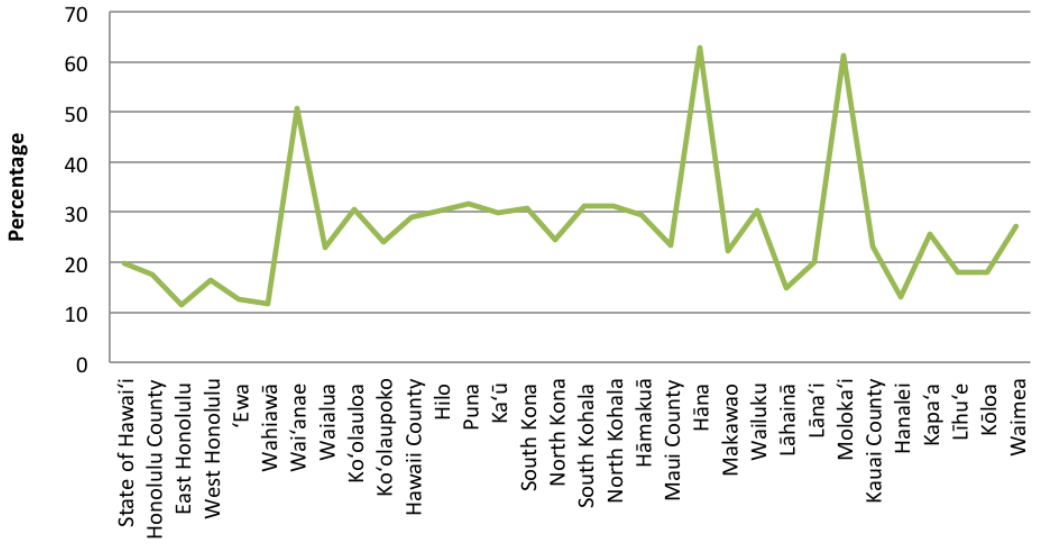
"[Through] community health navigation our work with [NHPP serving organizations] enables us to expand efforts to individual groups like hālau hula in California. The work with academics in the area of health has helped the whole Pacific Islander community work together."

-Native Hawaiian Organization of California

In terms of the geographic distribution of the Native Hawaiian population in Hawai'i, a decade ago, 64% of Native Hawaiians in the State lived on O'ahu, 18% on Hawai'i Island, 6% in Kaua'i County and 12% in Maui County. Since then, neighbor island populations have risen at a slightly faster rate. Currently, 63% of Native Hawaiians are living in the City & County of Honolulu, 19% in Hawai'i County, 5% in Kaua'i County, and 13% in Maui County.

While the City & County of Honolulu leads the nation with the largest NHPI population at 233,637, Hawai'i County has the highest percentage (34%) among its total population. Areas where there is a predominance of Native Hawaiians include the island of Moloka'i, Hāna, Maui, and the Leeward District of O'ahu (Wai'anae) where one-in-five Native Hawaiians in the State reside (Figure 2).

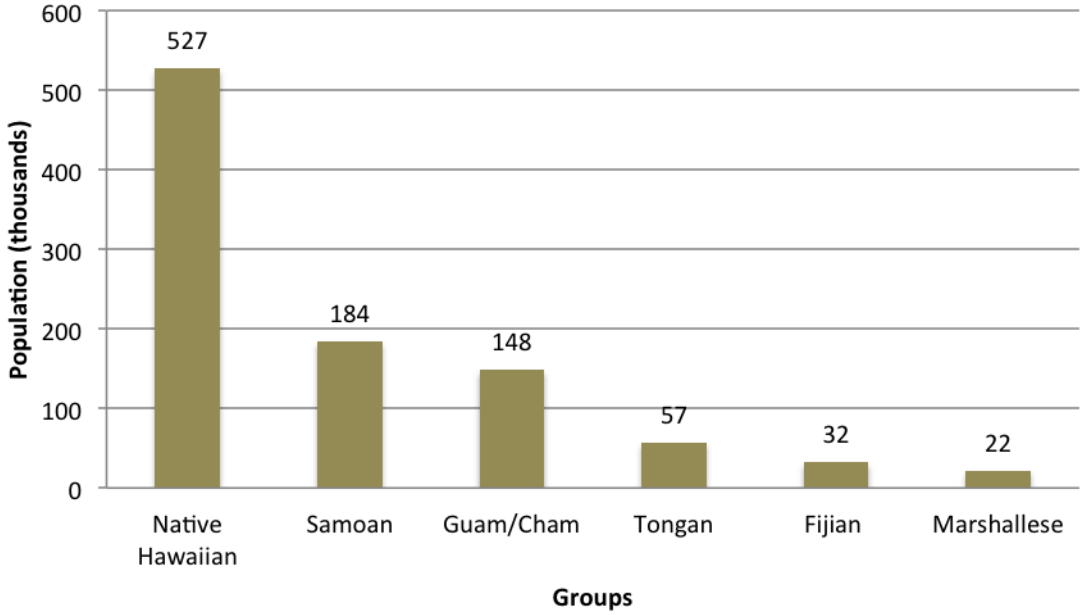
Figure 2. Native Hawaiian as Percent of Total Population by Sub-Region, 2000



Source: (Malone, 2005) Note: Sub-regions are school districts

In terms of the overall NHPI population in the U.S., there were 1.2 million NHPI in 2010, accounting for 0.4% of the total U.S. population. This count represents a 40% increase in the NHPI population in the U.S. between the 2000 and 2010 censuses, while the rest of the country grew by 9.7%. By 2050, it is projected that 2.6 million Americans will identify themselves as NHPI, a 1.2 times increase over 2010. This compares with a 44% projected increase in the U.S. population as a whole over the same time period. According to the 2010 U.S. Census, of the total NHPI population, 43% were Native Hawaiian, 15% Samoan, and 12% Guamanian/Chamorro (Figure 3). Over half (56%) of people who identified themselves as NHPI reported being of multiple races/ethnicities.

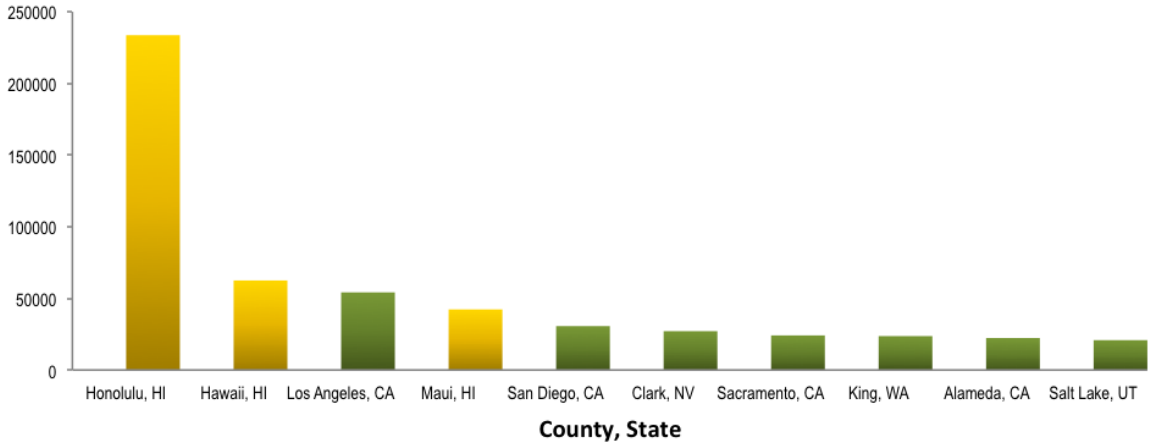
Figure 3. Population of Groups that Comprise Native Hawaiian and Pacific Islander Populations in U.S., 2010



Source: (Hixson, Hepler, & Kim, 2012)

Just over half of the NHPI population (52%) resides in Hawai'i and California. Washington State, Texas, and Florida have the next largest NHPI population. Figure 4 illustrates the top ten counties in the U.S. with NHPI populations. Los Angeles County placed third over Maui County and illustrates the trend of increasing growth of the NHPI population in continental U.S. cities and counties.

Figure 4. Top Ten NHPI Populations in the U.S. (by County), 2012

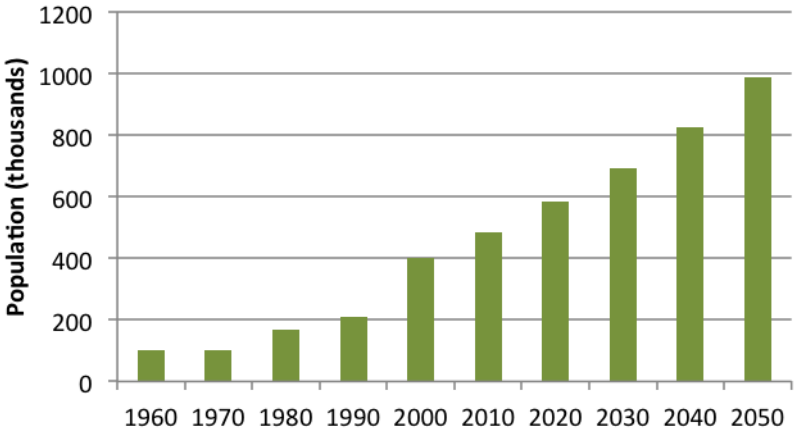


Source: (Hixson, Hepler, & Kim, 2012)

According to the 2010 U.S. Census, the population of Native Hawaiians was 527,077, a 24% change from 2000. It is projected that the Native Hawaiian population will grow to almost a million by 2050, a projected 47% change in growth (Figure 5). Within the State of Hawai‘i, the Native Hawaiian population is expected to increase by nearly 300,000 in the same period to more than half a million. In the continental U.S., the number of Native Hawaiians will triple to about 450,000.

The fastest growing age group in this projected growth will be among young children, ages four and younger. A 1.7 times increase is expected by 2050 bringing the population in this age group to more than 65,000. In Hawai‘i, the number of school-aged Native Hawaiians (5 to 19 year olds) is expected to increase to more than 165,000, a 117% increase between 2000 and 2050.

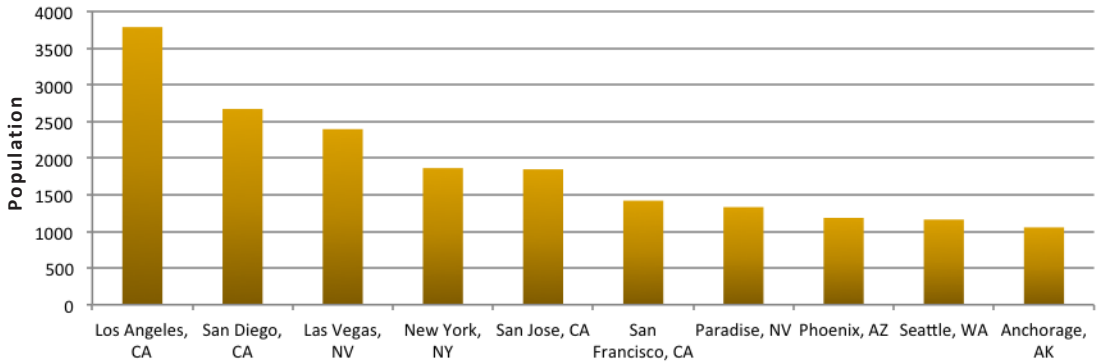
Figure 5. Trends in Native Hawaiian Population Count



Source: 1960 to 2000 from (Kana‘iaupuni, Malone, & Ishibashi, Ka huaka‘i: 2005 Native Hawaiian educational assessment, 2005); 2010 to 2050 from (Malone, 2005)

Figure 6 identifies municipalities on the U.S. continent with the highest concentration of Native Hawaiians. While Los Angeles and San Diego have the greatest numbers of Native Hawaiians, Las Vegas (0.50%) and Paradise (0.72%) in Nevada have the highest proportion of Native Hawaiians relative to their total population. Anchorage, Alaska ranks next with 0.41% of its population being Native Hawaiian.

Figure 6. Native Hawaiian Population in Continental U.S. (Top 10 Cities)



Source: (Hixson, Hepler, & Kim, 2012)

LIFE EXPECTANCY

Key Finding:

Life expectancy for Native Hawaiians is 6.2 years lower than the life expectancy for the State, even though Native Hawaiian life expectancy has increased by 11.8 years since 1950.

Promising Trends:

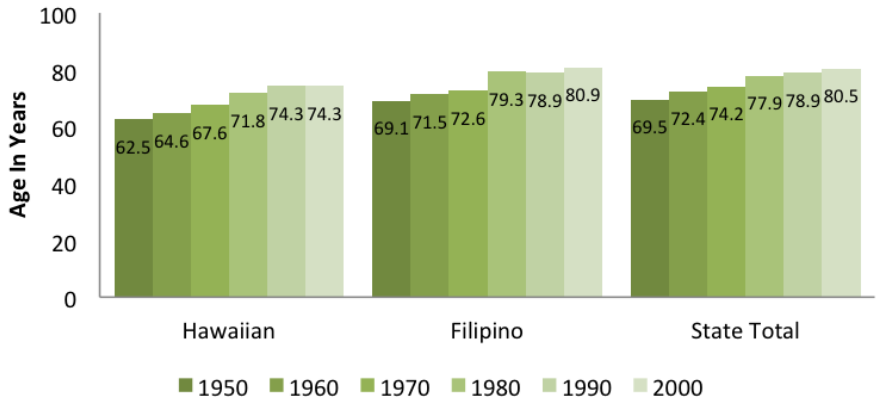
The infant mortality rates for the Native Hawaiians and Filipinos in Hawai'i have shown clear improvement over the past 25 years.

"Some OB are not willling to accept patients for deliveries if they did not follow the patient for prenatal care. This is problematic for [our] mothers, because it means they will need to drive out of [our community] for all the prenatal visits. That can be expensive if you have a car, or if you don't it's even more difficult. Of course this has a negative impact on the mom and baby."

-Neighbor Island Rural Community Health Clinic

While life expectancy for Native Hawaiians, in comparison to other ethnicities, has remained consistently lower than the State total, at 74.3 years of age, there has been steady improvement over 50 years (1950 to 2000). Life expectancy for Filipinos has also improved over that same period to 80.9 years, slightly higher than the life expectancy for the overall population in Hawai'i (Figure 7).

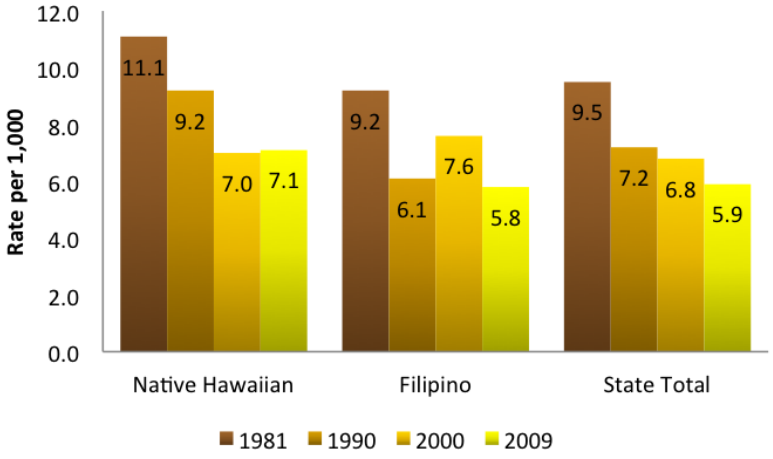
Figure 7. Life Expectancy at Birth by Ethnicity, Hawai'i



Source: (Park et al., 2009)

Hawai'i state data indicate that Native Hawaiians have higher rates of death in comparison to all other ethnicities in Hawai'i. Recently, using national data, Panapasa & Mau et al. have also reported on higher mortality across the life span for Native Hawaiians with rates 40% higher when compared to Whites. Similar to Blacks across the nation, Hawaiians are dying at younger ages, with dramatic differences starting in the mid-life age range (Panapasa et al., 2010; Ka'opua et al., 2011).

Figure 8. Trends in Infant Mortality Rates by Ethnicity, 1981-2009



Source: 1981-2000 data from (Kana'iaupuni, Malone, & Ishibashi, Ka huaka'i: 2005 Native Hawaiian educational assessment, 2005); 2009 data from (Office of Hawaiian Affairs, 2012)

Consistent with national trends in infant mortality, the infant mortality rates for Native Hawaiians have decreased in recent decades, dropping by 4 deaths per 1,000 between 1981 and 2009. The rate for the Filipino population also showed a decreasing trend, dropping by 3.4 deaths per 1,000, a rate slightly better than that for the State as a whole.

NHPP collectively represent a significant proportion of Hawai'i's population. The growing size of this population reflects high rates of immigration, increase ethnic self-identification, and a young population with high birth rates. In comparison, the NHPI population represents less than one percent of total U.S. population, even though they are one of the fastest growing ethnic populations.

Trends show NHPP life expectancy rates have consistently improved over the past several decades. While these improvements have enabled Filipinos to reach a level of health equity with the overall State of Hawai'i, Native Hawaiians continue to experience a distinct health inequity.

HEALTH DISPARITIES & HEALTH CARE SERVICES

CHRONIC CONDITIONS

Key Finding:

Native Hawaiians and Pacific Islanders have among the highest rates of cardiometabolic disorders, which include obesity, diabetes, and cardiovascular disease.

Promising Trends:

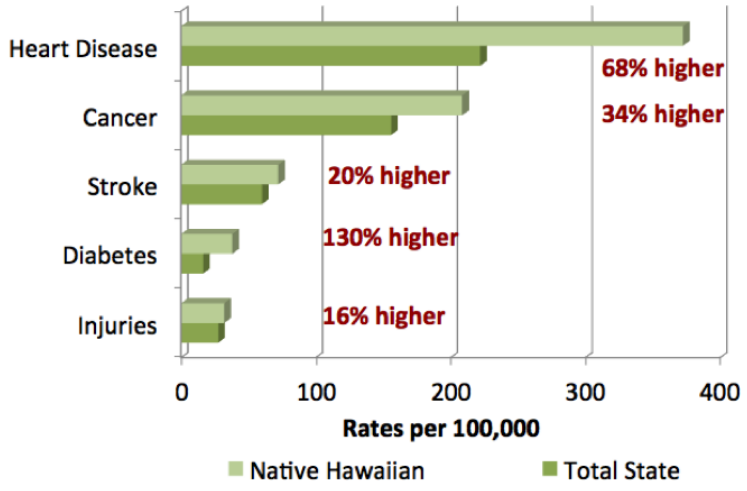
Over the past decade, Native Hawaiians have reported greater participation in diabetes self-management activities.

"[We want] interventions that work for heart disease, diabetes, and obesity. Those disease priorities have not changed from the previous needs assessment...but our preference is that it is culturally tailored, and is peer-led NOT clinician led. It has been our experience that there is disbelief or resistance in achieving change when led by a physician. There is more credibility in a peer-led or community health worker led intervention,"

-Native Hawaiian Healthcare System Leader

In general, Native Hawaiians and Pacific Islanders (NHPI) bear a disproportionately higher prevalence of many chronic medical conditions, such as obesity, diabetes, and cardiovascular disease, collectively known as cardiometabolic disorders (Mau et al., 2009). As shown in Figure 9, Native Hawaiians not only have higher rates of death for diabetes and heart disease but also for cancer and other leading causes of death as compared to the overall State's population.

Figure 9. Mortality Rates for Leading Causes of Death in Native Hawaiian and All Ethnicities, Hawai'i, 2000

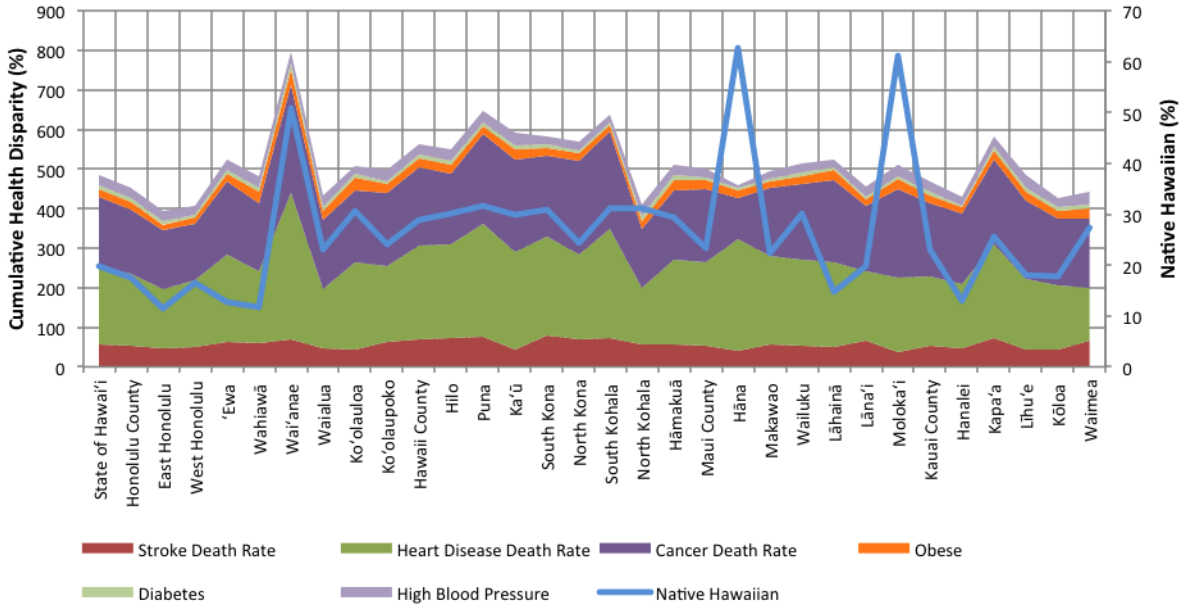


Source: (Johnson, Oyama, and Marchand, 2004)

Figure 10 profiles the health disparities among Native Hawaiians by showing the occurrence of a range of morbidity and mortality risk factors by sub-region and identifying sub-regions with a high proportion of Native Hawaiians among its total population.

Waiʻanae, with one of the highest concentration of Native Hawaiians in the State, has the highest rates of death from heart disease and cancer, and a higher occurrence of obesity, diabetes, and high blood pressure. On Hawaiʻi Island in Puna and South Kohala, where greater than 30% of their populations are Native Hawaiian, have the next highest rates in these cardiometabolic disorders. Interestingly, North Kohala, which has a similar percentage of Native Hawaiians, has one of the lowest rates in the State for these same risks.

Figure 10. Morbidity and Mortality Risks & Percent of Native Hawaiians by Sub-Region



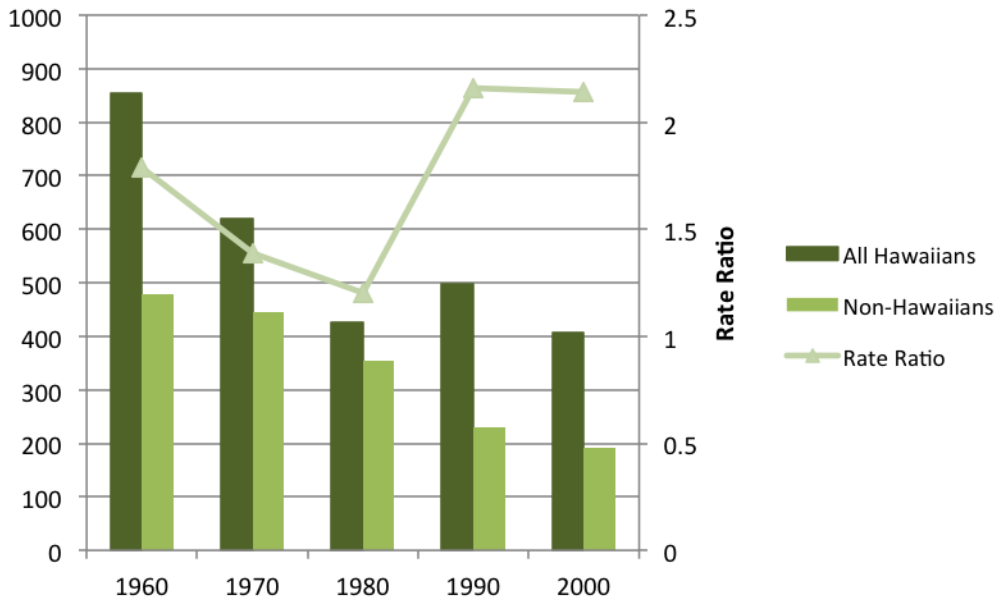
Source: (Malone, 2005) and (State of Hawaii Primary Care Needs Assessment Data Book, 2009)
Notes: Sub-regions are school districts, Mortality rates are per 100,000 population, "Cumulative Health Disparity" is the combined rates for morbidity and mortality.

CARDIOVASCULAR DISEASES (CVD)

Cardiovascular disease (CVD), which includes coronary heart disease (CHD) and stroke, is the leading cause of death and disability in the world (WHO, 2012). This holds true in the State of Hawai'i with over a third of all deaths being due to CVD. The rate of death from CVD for Filipinos and Native Hawaiians is significantly higher than the rate for the entire state. Furthermore, Native Hawaiians die at a younger average age from CVD compared to other ethnic groups, 65.2 for males and 72.3 for females compared to 73.1 and 79.6 statewide (Balabis et al., 2007). While the CVD-related death rates have declined over the last several decades, the CVD disparity between Hawaiians and non-Hawaiians has increased (Look, 2005). Native Hawaiians also have a higher age-adjusted mortality rate for CHD than other major ethnic groups in Hawai'i. With the exception of Filipinos, NHPIs had the highest stroke mortality rate among all major racial groups in Hawai'i (Cook et al., 2010).

This is consistent with Native Hawaiians having a higher prevalence in different types of CVD and its various risk factors. For example, 4.7% of Native Hawaiians have been told that they had a heart attack, compared to 3.6% of Japanese and 4.1% of Caucasians. For CHD, 3.8% of Native Hawaiians have been told that they have this condition, compared to 3.6% and 3.2% of Caucasians and Japanese, respectively (Salvail et al., 2007). Furthermore, in a cohort of Native Hawaiian adults residing on Moloka'i, it was found that those with diabetes mellitus had a higher proportion of CVD risk factors, such as smoking and hypertension (Aluli et al., 2009).

Figure 11. All Heart Disease Mortality Rates per 100,000 population, 1960-2000



Source: (Look, 2005)

HYPERTENSION

Among CVD risk factors, hypertension is the most common (Kaplan & Opie, 2006; Pieske & Wachter, 2008). In an analysis of Hawai'i health insurance data, researchers found that Filipinos had the highest prevalence of hypertension, particularly between the ages of 40 and 60, while Native Hawaiians had the second highest prevalence. At age 40, the prevalence for Filipinos was 40% in comparison to 15% for Caucasians (Juarez et al., 2012). Among adult Chamorros, 43% have been told by a health professional they had hypertension (Chiem et al., 2006).

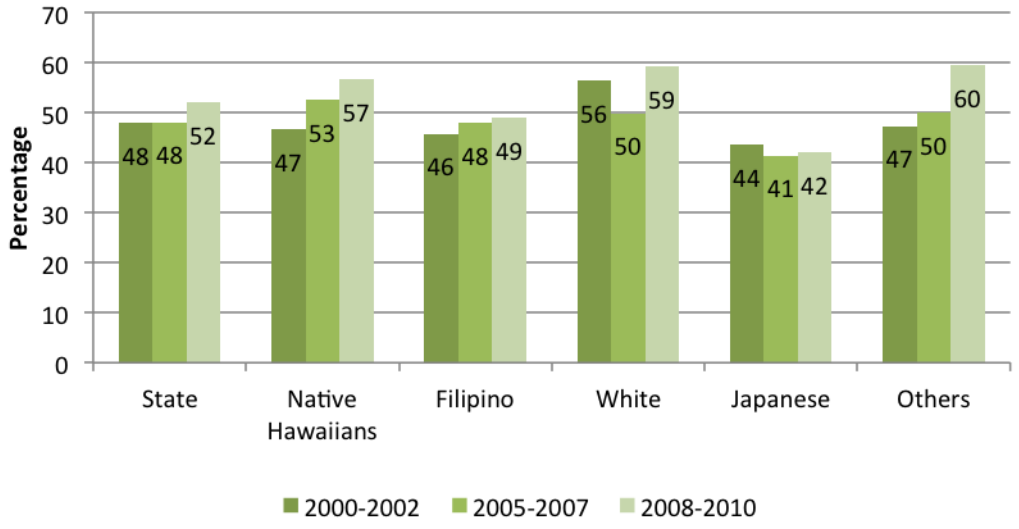
The high rate of hypertension among NHPP may be explained in part by the high rate of obesity and other factors that affect blood pressure. An association has been found between hypertension and psychosocial stressors, such as work strain, social status, and emotional stress, for which many NHPP of lower incomes and in certain occupations may experience more persistently (Kulkarni et al., 1998). Racism, as a social stressor, has been linked to hypertension in many ethnic/racial minorities (Davis et al., 2005; Steffen et al., 2003) including Native Hawaiians (Kaholokula, Iwane, & Nacapoy, 2010). Findings suggest that Native Hawaiians who perceived greater racism and who also strongly identified with American mainstream culture and lifestyle were more likely to report having hypertension (Kaholokula et al., 2010).

DIABETES

Recent studies have found that 1 in 3 Native Hawaiian adults have or are at-risk for diabetes or pre-diabetes (Aluli et al., 2009; Grandinetti et al., 1998). The Hawai'i State Department of Health reported in 2007 that NHPIs in Hawai'i had the highest age-adjusted percentage of people with diabetes (20.6%) among all racial groups, more than three times higher than Whites (6.8%) and twice as high as Hispanics/Latinos (11.1%) and Asians (8.9%). Among older Native Hawaiian adults, 19.6% have diabetes, which is two times higher than older Caucasian adults who are at 9.4% (Salvail et al., 2007). Diabetes is rising among Polynesians, Micronesians, and Melanesians who have prolonged exposure to more Westernized lifestyles (e.g. access to calorie dense, high fat foods and less physical activity) compared to more traditional subsistence-based lifestyles (Okihiro & Harrigan, 2005; Papoz et al.,1996).

With increased attention to diabetes management efforts on the part of community health clinics (CHC), the Native Hawaiian Health Care Systems (NHHCS), and private physicians, a growing number of Native Hawaiians are reporting increased diabetes awareness and access to diabetes management education. Between 2000 and 2010, the number of Native Hawaiians who reported receiving diabetes management education increased from 47% to 57%. The increase efforts to provide diabetes self-management education has not necessarily led to improved diabetes outcomes, which suggest that different approaches and/or strategies may be needed. A recent analysis of health insurance data in Hawai'i found that Native Hawaiians and Filipinos are at greatest risk for poorly controlled diabetes, and these patients seem to be the least likely to achieve appropriate long-term self-management of their disease (Juarez et al., 2012).

Figure 12. Percent of Adults with Diabetes Receiving Diabetes Management Education by Ethnicity, Hawai'i, 2011

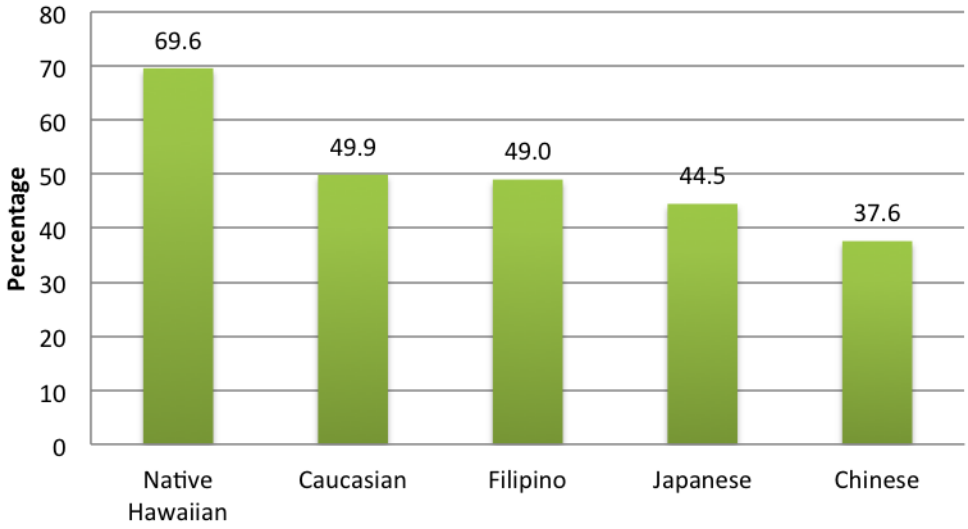


Source: (Hawaii State Department of Health, 2011)
Note: All rates are 3-year averages

OBESITY

The prevalence of having two or more chronic conditions increases with obesity (Must et al., 1999). In the U.S., more than half of NHPI are either overweight (31.7%) or obese (31.0%) (Asian and Pacific Islander American Health Forum, 2010). This rate is higher than most other racial groups. Several factors for the higher prevalence of overweight and obesity among NHPI are identified in existing literature. These include biological and cultural factors (Grandinetti et al., 1999); increasing adoption of Western lifestyles (McGarvey, 1991); and a high consumption of fatty foods (Blaisdell, 1993). A recent Hawai'i study about childhood obesity shows that the prevalence of overweight and obese children at 32.6%, with children of NHPP ethnic backgrounds having distinctly higher levels than Whites or Asians (Novontny et al., 2013).

Figure 13. Percentage of Adults Overweight by Ethnicity, 2008



Source: (Hawaii State Department of Health, 2009)

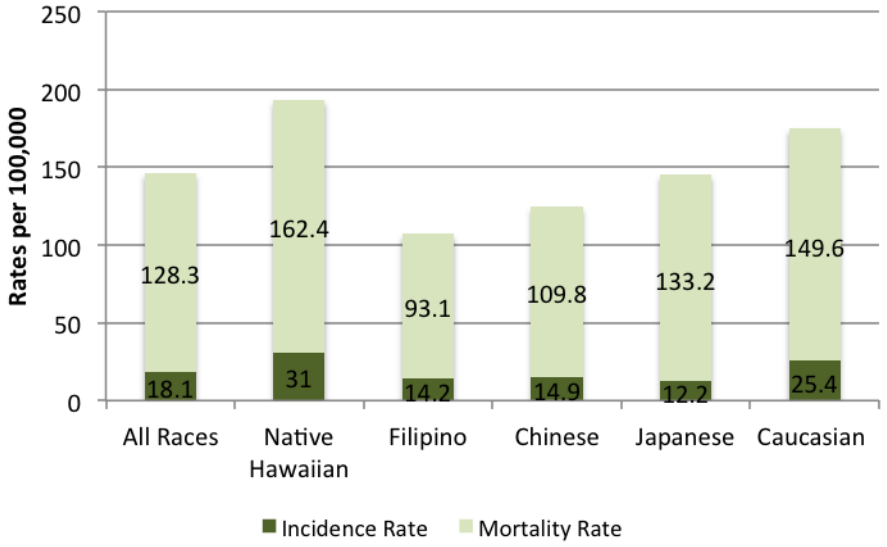
CANCER

Cancer is the second leading cause of death in the state of Hawai'i and while rates vary by ethnic groups, the four most common types of cancer in Hawai'i are: breast (female), colorectal, lung and prostate cancers (Green, 2010). In general, Native Hawaiians tend to be diagnosed with cancer at a younger age and experience lower survival rates compared to other racial groups (Mau, 2010). The recently reported incidence and mortality rates for both Native Hawaiian men and women were the highest of all ethnicities in Hawai'i (Green, 2010). For Native Hawaiian males, the cancer incidence rate was comparable to all races, but a difference was found in the death rate. Native Hawaiian male death rate for cancer, per 100,000 population, was 231.7 compared to 192.0 for all races. For Native Hawaiian females, incidence rates per 100,000 population was 447.8, compared to 382.2 for all races, and cancer mortality rates of 171.0 compared to 124.7 for all races.

Patterns of cancer occurrence also differ between ethnic and racial groups in the Pacific region (Mishra et al., 1996). For example, Samoan males residing in Hawai'i have a relatively higher frequency of lung, prostate, thyroid, and liver cancers but a lower frequency of colon and rectum cancers compared to other Polynesians, such as Western Samoans and Native Hawaiians. Moreover, Samoan women have a higher frequency of leukemia corpus uteri, thyroid, and pancreatic cancers than other Polynesian women (Mau, 2010). Throughout Micronesia, the Marshallese have the highest prevalence of breast, cervical, other/genitourinary and thyroid cancers compared to other Pacific Islanders, which may be due to effects of U.S. nuclear testing in the region between 1946-1958 (Palafox et. al., 2004).

In comparison to their U.S. counterparts, Samoan and Native Hawaiian women have the highest overall cancer death rates – higher than the rates for non-Hispanic White women and all Asian women. This is accounted for in large part by the high lung cancer and breast cancer death rates for Native Hawaiian and Samoan women (Cook et al., 2010). Higher mortality rates among Native Hawaiian and other indigenous or minority Americans are partially attributed to barriers to accessing good cancer care and timely diagnosis and treatment (Green, 2010). These affects may be compounded by higher prevalence of poor diet and tobacco use among Native Hawaiians, the two leading causes of cancer (Green, 2010).

Figure 14. Female Breast Cancer Incidence & Mortality by Race/Ethnicity, Hawai'i 1995-2000



Source: (American Cancer Society, 2004).

HEALTH BEHAVIOR

Key Finding:

Native Hawaiians have a higher chronic disease risk in comparison to other groups resulting from higher prevalence of obesity, smoking, and chronic alcohol use.

Promising Trends:

Innovative programs have demonstrated the effectiveness of community-based and culturally adapted interventions in helping Native Hawaiians and Pacific Islanders to better manage their personal health and adopt healthier lifestyles.

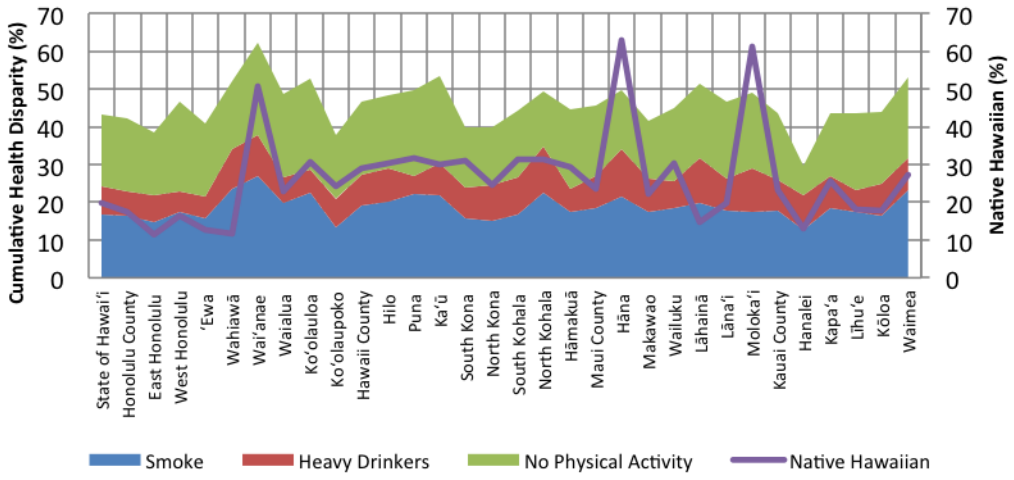
Behaviors, such as tobacco use, eating habits, and physical activity have been strongly linked to chronic diseases. For the NHPI population, numerous reports identify the following health risks: low levels of physical activity, poor diets, high tobacco use, high rates of overweight and obesity (Moy et al., 2009).

Figure 15 profiles key behavioral risks among Native Hawaiians by showing the communities with a high proportion of Native Hawaiian populations and the occurrence of a range of behavioral risk factors. Waiʻanae, with one of the highest proportion of Native Hawaiians in its total population, also has the highest rates in the State for smoking, heavy drinking, and low physical activity. Other communities of Native Hawaiians with high behavioral health risks include Kaʻū and North Kohala on Hawaiʻi Island, Molokaʻi, Hāna on Maui, and Kapaʻa on Kauaʻi.

ALCOHOL USE

From 2005 to 2007, the percentage of alcohol use for NHPIs (46.4%) was lower than for Whites (64.2%) and similar to other racial groups. However, NHPI men had one of the highest percentages of heavy drinking among men of all other racial groups. Among high school students, NHPI alcohol use prevalence is among the lowest along with Asians (Cook et al., 2010).

Figure 15. Behavioral Risks & Percent of Native Hawaiians By Sub-Region, 2005

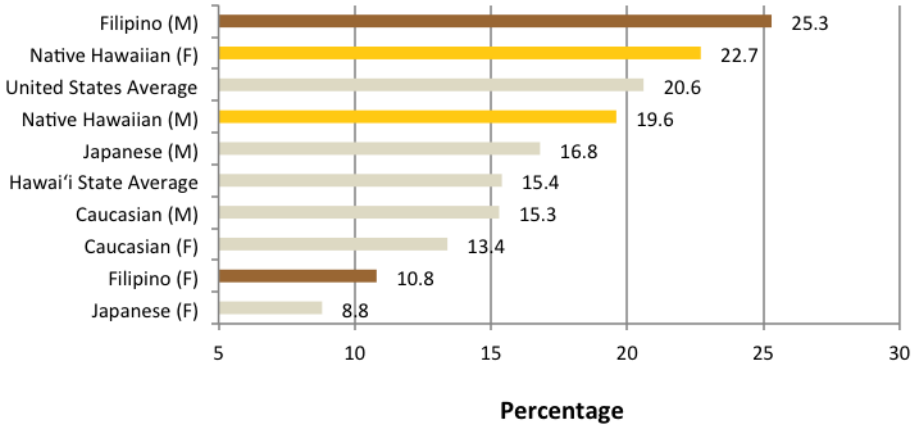


Source: (Malone, 2005) and (State of Hawaii Primary Care Needs Assessment Data Book, 2009)
Note: Sub-regions are school districts

CIGARETTE USE

Smoking and tobacco use are the leading cause of preventable illness and death in Hawai‘i and the nation. In Hawai‘i, smoking is associated with socioeconomic factors and overlaps with regional health issues. More than half (52%) of Native Hawaiians earning under $15,000/year are smokers. Native Hawaiians are more likely to smoke than any other ethnic group and is the only group with more female smokers than male smokers (Kaholokula et al., 2006). Native Hawaiian women in Hawai‘i County are more likely to smoke before, during, and after pregnancy and at a higher rate than women of other ethnic groups and counties.

Figure 16. Smoking Prevalence by Ethnicity, Hawai‘i, 2008



Source: (Hawaii State Department of Health, July 2010)

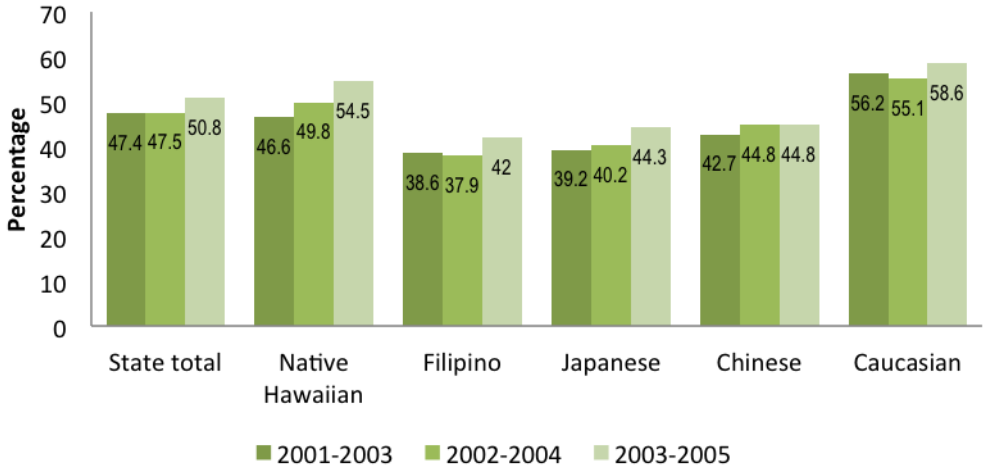
The highest smoking rates occur among the unemployed (48%), followed by Filipino males (25.3%), and Hawaiian women (23%). The highest rate increase in smoking occurred among Filipinos.

PHYSICAL ACTIVITY

Two in five NHPI adults (42%) in the U.S. were physically inactive, with others getting at least some exercise or regular exercise. This estimate is similar to other ethnic groups. However, given the burden of chronic diseases already present in many NHPIs, interventions to increase physical activity would prove to be especially beneficial to NHPIs due to the health benefits of physical activity, such as lowering blood pressure and blood glucose and improving insulin-sensitivity (Cook et al., 2010).

Figure 17 shows the trend in Hawai‘i for physical activity levels from 2001 to 2005 by race-ethnicity. The proportion of Native Hawaiians meeting recommended physical levels increased by almost 8% between 2001 and 2005 – the highest increase among all groups examined.

Figure 17. Percent Achieving Recommended Physical Activity Levels by Ethnicity, 2009

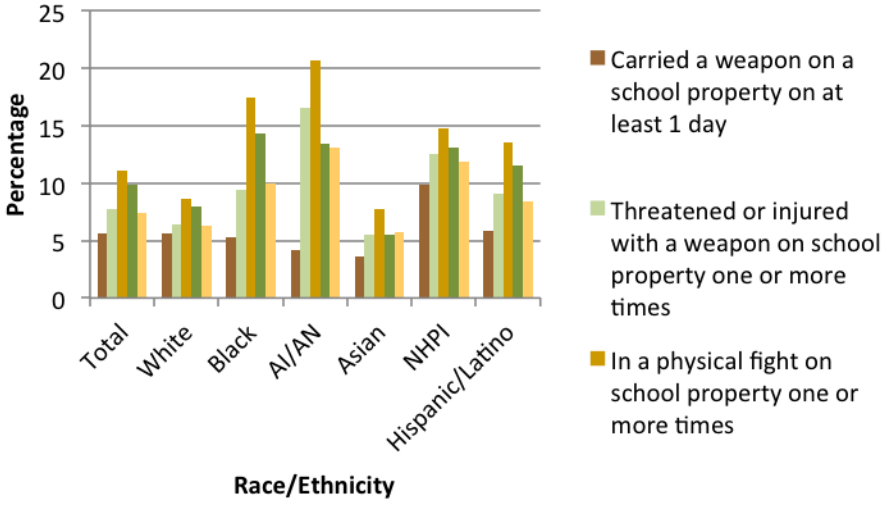


Source: (Hawaii State Department of Health, 2009)

VIOLENCE & VICTIMIZATION

NHPI adolescents in the U.S. live in environments more prone to violence. Both violence and victimization prevalence is high. Almost one out of ten NHPI high school students (9.8%) carried a weapon on school property, this proportion being the highest among all racial groups in the U.S. Moreover, similar rates of NHPI adolescents had been threatened or injured with a weapon on school property, again the highest proportion among all racial groups.

Figure 18. Percentage of Violence & Victimization among High School Students, U.S., 2009.



Source: (Centers for Disease Control and Prevention, 2011)

PROMISING PRACTICES

A range of innovative practices continue to be developed to help NHPI adopt healthier lifestyles and to better manage their chronic medical conditions. A number of these initiatives focus on community-based and culturally-relevant interventions.

An example of this is the PILI (Partnerships for Improving Lifestyle Intervention) ‘Ohana program for weight-loss and weight-loss maintenance. Using a community-based participatory research approach, the community and academic partners of the PILI ‘Ohana did the following:

- Community investigators collected and analyzed qualitative data that informed the cultural and community adaptation and development of a lifestyle and diabetes self-management intervention for NHPP communities.
- Implemented these culturally adapted interventions via peer educators in various community settings.
- Partnered with the Native Hawaiian Cancer Network ‘Imi Hale, a NCI-funded Community Network Program Center, to provide work-site programs.
- Found significant improvements in weight loss maintenance, physical functioning, and blood pressure for the lifestyle intervention and glycemic control for the diabetes intervention (Mau et al., 2010; Kaholokula et al., 2012; Sinclair et al., 2012).

The integration of NHPP cultural practices into health interventions is innovative and an important promising practice. The Ola Hou i ka Hula: Hypertension & Hula pilot study found that a traditional hula class that incorporated heart health education and conducted twice a week, significantly improved the blood pressure of NHPP adults with poorly managed hypertension.

> *“We are interested in overall health and the value of the cultural side of health practices so we can view the health of the whole person. For example, we would like to have access to lomi via insurance...[using] insurance as a vehicle of payment.”*
>
> -Executive Director
> Non-Profit Organization

Another promising effort is the growing school and community garden movement in Hawai‘i. These gardens are not only a new source of fresh vegetables, fruits, and herbs, but also provide a means to reconnect individuals to the practice of growing and eating healthy foods. At the root of many of these efforts is a cultural and spiritual grounding in the deep relationship that Pacific Peoples have with *‘āina* (land) – that which feeds. There is now a statewide network of school gardens. For example, on Hawai‘i Island alone, 63 school and community gardens have been established, more than 700,000 square feet planted, and 15 tons of produce harvested annually.

Promising Practices In the Community

•PILI 'OHANA PARTNERSHIP PROGRAMS: Culturally and community tailored weight loss and weight maintanance programs that have been scientifically tested through a research team comprised of individuals from the community and medical school.

•KKV HO'OULU 'ĀINA: Innovative effort by KKV to provide a community park and land-base to address social and health determinants of the community.

•COMMUNITY-BASED GARDENS: The explosion of school and community gardens in Hawai'i developed to increase food security, physical activity, and nutritional benefits which often engages the spiritual, emotional, and cultural connection Pacific Peoples have to the land.

•THE NATIVE HAWAIIAN TRADITIONAL HEALING CENTER AT WCCHC: A pioneering approach by a community health center to intergrate Native Hawaiian traditional healing and cultural education to the primary care setting.

PRIMARY CARE & ENABLING SERVICES

HEALTH INSURANCE COVERAGE

Key Finding:

There is a 25% shortage of primary care physicians in Hawai'i.

Promising Trends:

Collectively, federally qualified community health centers provide primary care to 10% of Hawai'i's population – half of which are Medicaid patients and 25% of which are uninsured. The number of patients they serve has increased 110% over the past 10 years.

Research consistently demonstrates that health insurance coverage has substantial positive effects on the use of ambulatory and therapeutic care, preventive and diagnostic services, early detection of illnesses, self-reported health status and mortality due to injury and disease. Across the U.S., the health insurance coverage rate for Native Hawaiians and Pacific Islanders is lower than most other racial groups. One in four NHPI under 65 years old do not have health insurance.

In Hawai'i, of those reporting that they did not have health insurance, 9.5% were Hawaiian, 7.2 % White, 6.6% Filipino, and 4.5% Japanese. The only locations in Hawai'i that exceed the 2008 U.S. average of 15.4% uninsured include Puna Hawai'i Island and Hāna, Maui, with their relatively high percentages of Native Hawaiians in their populations. Hāna is the only place in the State where over 20% of the populace is uninsured (Family Health Services Division, 2009).

Table 1. Age-Adjusted Percent Distributions of Insurance Coverage in United States, 2010

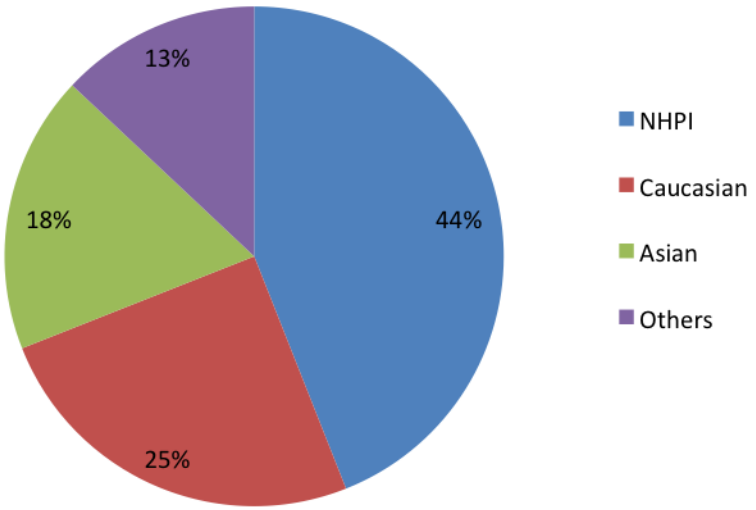
Race/Ethnicity	Under 65 years								65 years of age and over	
	Private		Medicaid		Other		Uninsured		Medicare only	
	%	SE	%	SE	%	SE	%	SE	%	SE
White	64.1	0.52	14.7	0.32	3.3	0.15	17.9	0.30	31.6	0.76
Black	44.9	0.82	29.3	0.67	4.7	0.28	21.1	0.53	40.4	1.65
AI/AN	31.5	5.93	21.5	2.51	2.7*	0.82	44.2	7.80	60.5	8.74
Asian	67.8	1.28	12.4	0.81	3.1	0.38	16.7	0.81	40.5	2.91
NHPI	47.6	6.32	27.2	6.41	-	-	24.8	6.75	78.9	13.10
Hispanic/Latino	38.5	0.76	24.7	0.50	3.0	0.20	33.7	0.61	45.3	1.99

Source: (Adams et al., 2011)
*Relative standard error of greater than 30% and less than or equal to 50% and should be used with caution as they do not represent the standard of reliability or precision.

HEALTH CARE SERVICES

There are 19 federally qualified community health centers in Hawai‘i. While they are diverse in many ways, they are all independent community-run, non-profit health organizations with the commitment to serving the health needs of their respective communities, regardless of an individual's ability to pay. These rural and urban clinics are purposefully located in areas with limited access to medical services and thus, receive annual supplemental federal funds for clinical service support. Collectively, these clinics provide primary care to 10% of Hawai‘i's population – 50% of which are Medicaid patients and 25% of which are uninsured. More than 44% of their patients are NHPI (Figure 19). Most have diversified their health service provisions to include behavioral health, dental, and vision care. The number of patients they serve has more than doubled over the past 10 years (Hawaii Primary Care Association, 2011).

Figure 19. Ethnicity of the Patients Served by Community Health Centers, Hawai‘i, 2010



Source: (Hawaii Primary Care Association, 2010)

The Native Hawaiian Health Care Systems (NHHCS) are primarily funded by federal appropriation through the U.S. Department of Health and Human Services Health Resources and Services Administration (HRSA). The NHHCS works to improve the health status of Native Hawaiians. They use a combination of outreach, referral, and linkage mechanisms to provide a range of services that include: nutrition programs, enabling services, screening and control of hypertension and diabetes, immunizations, and basic primary care services. They are composed of five non-profit organizations created under the Native Hawaiian Health Care Act of 1988 and recently reauthorized under the Patient Protection and Affordability Care Act of 2010. They include Hō‘ola Lāhui Hawai‘i on Kaua‘i, Ke Ola Mamo on O‘ahu, Nā Pu‘uwai on Moloka‘i, Hui No Ke Ola Pono on Maui, and Hui Mālama Ola Nā ‘Ōiwi on Hawai‘i Island.

While the network of community health centers has helped to improve access to health services, the shortage of health professionals continues to be a primary challenge for many communities across the State. According to the State Of Hawai‘i Primary Care Needs Assessment Data Book 2009, all of the islands except for some portions of O‘ahu are federally designated as medically underserved

areas (MUA), indicating that the population has a shortage of primary care health services (2010). In addition, there is a shortage of mental health professionals on Molokaʻi and in some areas on the other islands including West Kauaʻi, North Shore of Oʻahu, East Maui, and in the Hāmākua, Puna, and Kaʻu communities of Hawaiʻi Island.

Of active Hawaiʻi physicians, 41% are primary care practitioners – slightly higher than the national average of 36%. Hawaiʻi's 3.2 physicians per 1,000 population exceeds the national average of 2.8 per 1,000. However, Hawaiʻi's physicians are highly concentrated on Oʻahu, where 80% practice. Resulting in Oʻahu having 3.6 physicians per 1,000 population, while the counties of Hawaiʻi, Maui, and Kauaʻi average 2.1 per 1,000. These counties also lack specialist practitioners, such as cardiologists, oncologists, and endocrinologists. They also average only 60 dentists per 100,000 population – comparable to the national average of 64 but well below Oʻahu's average of 88 (Hawaiʻi Health Information Corporation, 2011).

Innovative solutions to the increasing physician shortage have included adoption of a comprehensive team approach to health care, leveraging the skills and knowledge of other health professionals including nurse practitioners and physician assistants (John A. Burns School of Medicine, 2010). Unfortunately, Hawaiʻi as a whole also ranks 41 among all 50 states in the number of nurses, with only 75 nurses per 10,000 residents – below the national average of 82 per 10,000. Only 81% of Hawaiʻi's registered nurses (RN) are actually employed in nursing. Maui County is the county most lacking in RNs. In addition, 79% of Hawaiʻi's RNs were over the age of 40 in 2001, compared to a 68% national average, and only 6% were under the age of 30, relative to 9% under age 30, nationally. Thus, Hawaiʻi's nursing population and other allied health professionals appear to be aging without adequate replacements in the pipeline (Hawaiʻi Health Information Corporation, 2011).

FINDING SOLUTIONS

Current research shows that instilling lasting behavioral changes, which will establish healthy lifestyles is a complex and difficult undertaking. We need to better understand how to support the healthy lifestyle changes people initially make so that they become sustainable over time. We do know broad societal commitment is needed to improve lifestyle patterns. Policy decisions that encourage physical activity (e.g. parks, physical activity programs, community gardens) or deter unhealthy behavior (e.g. soda tax, smoke-free areas) and educational efforts will build on each other. Additionally, special efforts are needed for the populations most at risk, such as NHPP. These efforts must be in-line with the values, beliefs, and practices of these groups. Prevention is the most powerful prescription; barriers to prevention efforts must be dismantled. Resources are needed to provide early intervention programs that will facilitate improvements in family and individual lifestyle choices.

OTHER DETERMINANTS OF HEALTH

Key Finding:

The Native Hawaiian labor force has less people with college degrees and graduates in higher wage fields, such as technology, science, and business.

Promising Trends:

The number of Native Hawaiians enrolled in UH community colleges jumped 53% between 1992 and 2010 going from 13.6% to 28.8%. With investments and innovations being spurred by federal initiatives, community colleges are providing important pathways to advanced education and economic opportunities.

"The burdens of [health] issues are carried by the community... it is [our] belief that the community must share in the solutions...which can include addressing the social determinants of health."

-Rural Community Health Center

Where we live, learn, work, and play has an enormous impact on our ability to maintain our health. Interactions with family, friends, co-workers, and others shape everyday experiences and decisions in neighborhoods, communities, and institutions. Everyone should have the opportunity to make the choices that allow them to live a long and healthy life regardless of their income, education, or ethnic background. Thus, to understand the opportunity to improve the health and well-being of Native Hawaiians and other Pacific Peoples, it is critical that we understand their history, values, beliefs, practices, and aspirations; and the relationship between these factors and the potential strategies for health promotion.

ECONOMIC WELL-BEING

Poverty, either alone or in combination with other factors, can contribute to inequitable health outcomes. For example, research suggests that living two times below the federal poverty level imposes a greater societal health burden than either smoking or obesity (Hawaii State Department of Health, 2011).

According to the 2010 U.S. Census, 9.6% of people in Hawai'i are below the poverty level, with 13.8 % of Hawai'i's children living in poverty (U.S. Census Bureau, 2012). NHPI are the poorest among ethnic groups with almost 20% living in poverty and 18% living below the poverty rate. Poverty rates are particularly higher among Pacific Islanders who have a per capita income 27% below the national average.

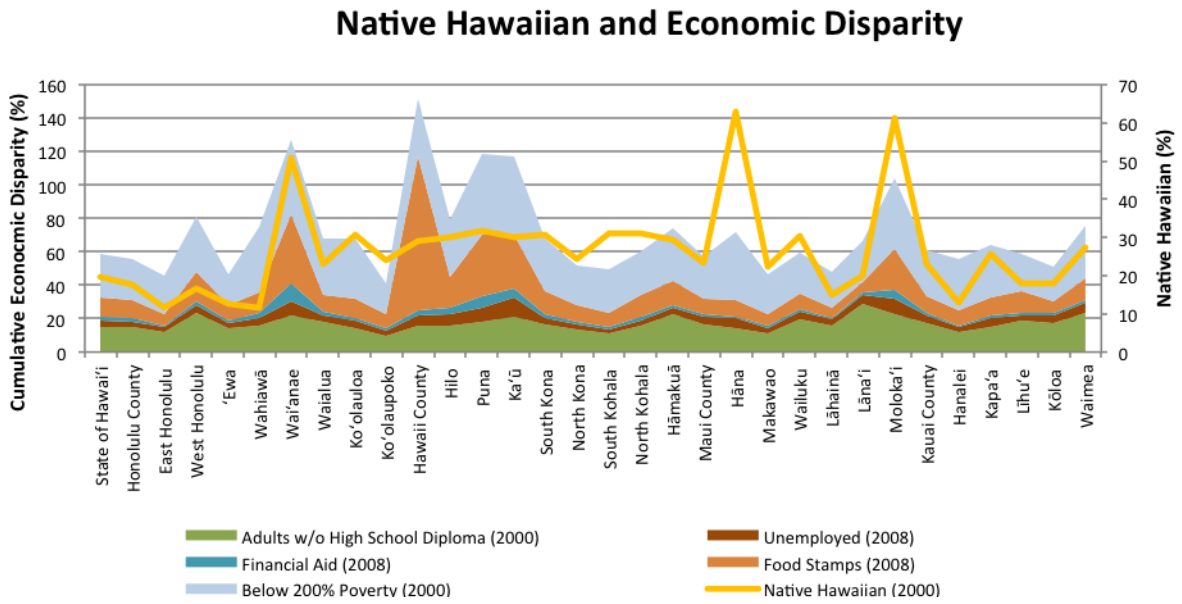
Among Pacific Islanders, Micronesian immigrants are one of the hardest hit by poverty. Nearly 18% of Micronesians in the U.S. live in poverty as compared to just over 13% for the general population. In Hawai'i, however, Micronesians have nearly three times the poverty rates of the general population across all categories except the elderly. Recent attempts to cut off the Compacts of Free Association (COFA) health benefits from the Micronesian population could potentially place this population at an even greater risk.

Across Hawai'i, communities with higher concentrations of Native Hawaiians face significant socio-economic challenges (Figure 20). These areas include:

- *Wai'anae* – where 21.9% of residents live below the poverty level and 44.1% live 200% below the poverty line.
- *Moloka'i* – where 21% of residents live below the poverty line and 42.3% live 200% the poverty line.
- *Hāna* – where 17.4% of residents live below the poverty line and 40.7% live 200% below the poverty line.

Nationally, the median income of households headed by Native Hawaiians and other Pacific Islanders was $53,620 in comparison to $56,229 for White families (U.S. Census Bureau, 2012). Of NHPI who are 16 years and older, 24% generated incomes from management, professional, and other related occupations. However, one in four of this population worked in service occupations, 28% in sales and office occupations, and 14% in production, transportation, and material moving occupations.

Figure 20. Age-Adjusted Percent Distributions of Health-Related Conditions in U.S. 2010

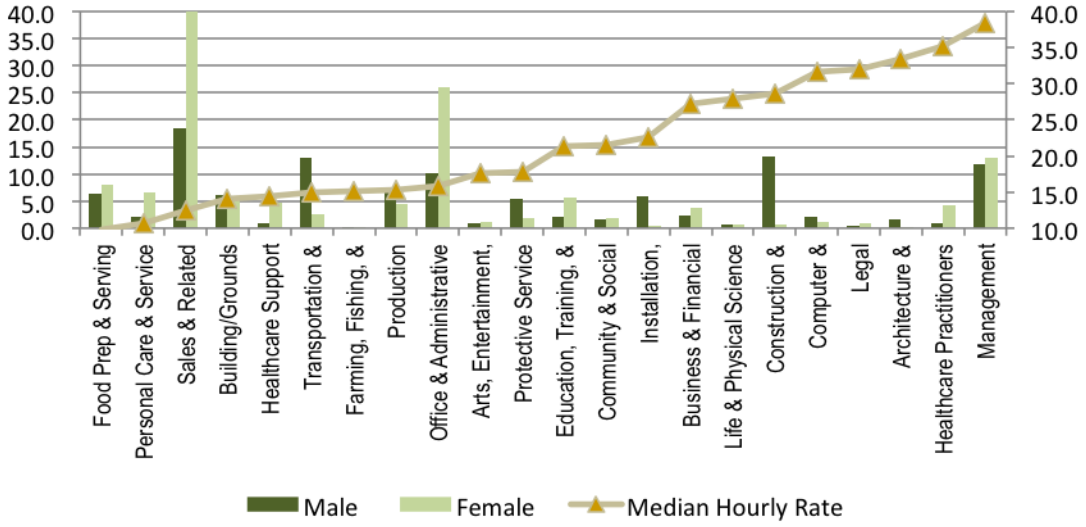


Source: (Malone, 2005) and (State of Hawaii Primary Care Needs Assessment Data Book, 2009)
Note: Sub-regions are school districts

Among the NHPI working in civilian occupations, more females were employed in lower paying jobs like sales-related services. Figure 21 illustrates the different types of occupations by their increasing hourly rates – with management occupations paying the most and where slightly less than 20% of Native Hawaiian, both male and female, are engaged.

Native Hawaiian occupational achievement in management and professional positions is strongest in the Continental U.S. The number of NHPI owned businesses in 2007 was 37,809, up 30.6% from 2002, with total receipts of $6.3 billion, up 48% from 2002. In Hawai'i, 9.5% of businesses are NHPI owned. Construction and retail trade accounted for 44% of the revenue generated by these businesses.

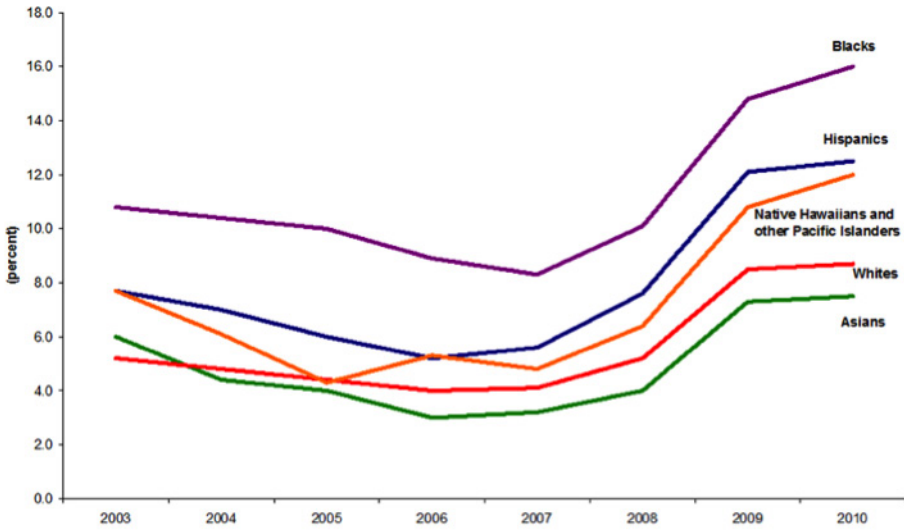
Figure 21. Occupations of NHPI in Hawai'i by Sex and Median Hourly Rates



Source: (U.S. Census Bureau, 2008) and (Hawaii State Department of Labor and Industrial Relations, 2011)
Note: the left axis is the percentage of male or female NHPI workers in Hawai□i and the right axis is the hourly wage (in dollars). The right axis begins at $10 so the data point for "Food Prep & Serving" is not shown, as it is $9.75.

In terms of unemployment nationally, NHPI had higher rates than that of Whites and Asians but a lower rate than Hispanics and Blacks. Between 2007 and 2010, the NHPI unemployment rate increased from 4.8% to 12%, a 60% change.

Figure 22. Unemployment Rate by Race in U.S. (annual averages, 2003-2010)



Source: (U.S. Department of Labor, 2011)

Overall, the following key factors are critical considerations regarding the economic situation of Native Hawaiians in Hawai‘i (Naya, 2007):

• Native Hawaiians are relatively young and, therefore, have much less wealth accumulation.
• Native Hawaiians have bigger household sizes.
• Though high school graduation record is good, the Native Hawaiian labor force has a lower rate of college degrees. In addition, there are lower numbers in terms of graduates in such fields as, science, technology, and business. Education in these fields leads to higher wages earned.
• Fewer Native Hawaiians are employed in higher paying management and professional occupations than non-Native Hawaiians (22.7% versus 32.2%).
• There are 3.2 Native Hawaiian-owned business firms per 100 Native Hawaiians compared to 10.4 firms for non-Native Hawaiians.

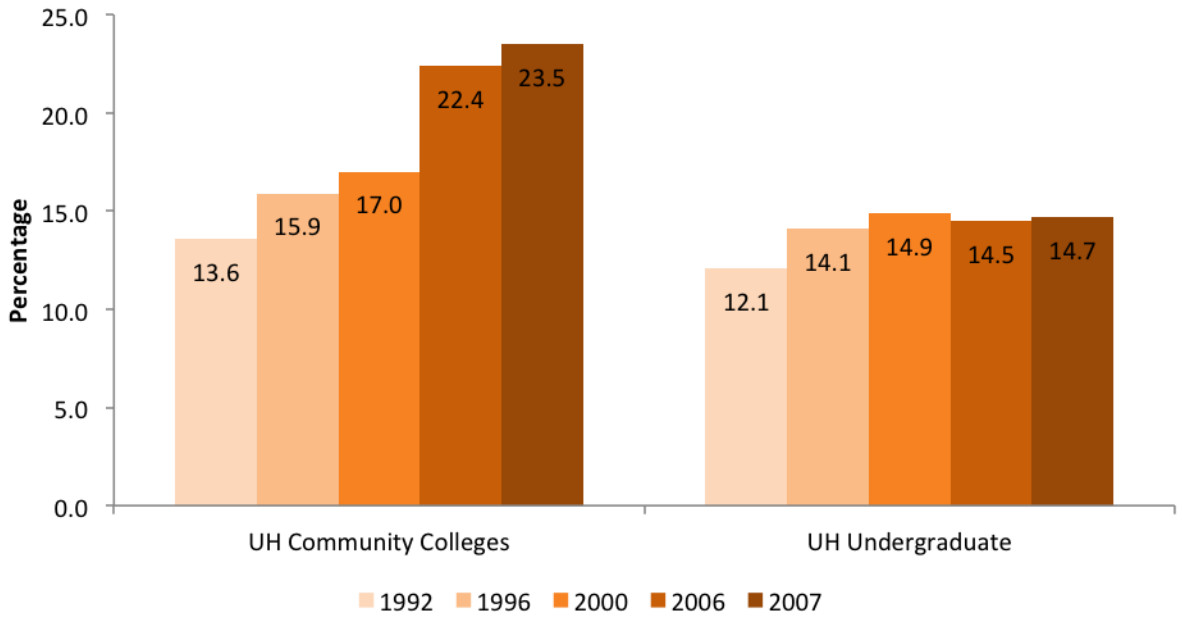
EDUCATION

Educational attainment is related to socio-economic conditions, and the link between personal income and health status has been well established. Within Hawai‘i, the earnings benefit of a college education is higher among Native Hawaiians than it is among other major ethnic groups. This highlights the cyclical and mutually dependent relationship between educational and financial well-being, suggesting that economic forecasts for the Native Hawaiian population are closely tied to its educational future (Kanai‘aupuni et al., 2005). In fact, a primary reason for many students to pursue a college education is to boost future earnings. Over a lifetime, a worker with an associate’s degree will earn nearly $500,000 more than someone with only high school diploma. Individuals who earn a bachelor’s degree will do even better, earning roughly $1.1 million more than someone with an associate’s degree and $1.6 million more than a high school graduate (Brock, 2010).

In the U.S. 15.9% of Native Hawaiians and other Pacific Islanders hold at least a bachelor’s degree and 4.6% have obtained a graduate or professional degree. This compares with 24.4% of the total population that hold a bachelor’s degree and 8.9% with advanced degrees (Kana‘iaupuni et al., 2005). Clearly, there continues to be a need for improvement in this area. For example, Native Hawaiian standardized reading scores compared to other major ethnic groups lagged behind school averages by about 6 to 9 percentile points across grades 3, 5, 8 and 10. Native Hawaiian students also continue to score the lowest in standardized mathematics tests. A closer look at scores indicates that disparities between Native Hawaiians and non-Hawaiians widen during high school years. Non-Hawaiian students earned above average scores at nearly three times the rate of Native Hawaiian students. The percentage of Native Hawaiians scoring below average for math achievement in Grade 10 is more than double the percentage of Native Hawaiians scoring below average in Grade 3 (Kamehameha Schools, 2009).

An important and promising educational trend is the growing number of Native Hawaiians who are enrolling in community colleges within the University of Hawai‘i System. Between 1992 and 2010, the percentage of Native Hawaiian students enrolled in community colleges jumped 53%, going from 13.6% to 28.8% of the total number of students enrolled.

Figure 23. Trends in Native Hawaiians as a Percentage of Total University of Hawai'i Enrollment



Source: 1992 to 2000 data from (Kana'iaupuni et al., 2005); 2006 and 2007 from (Kamehameha Schools, 2009)

Native Hawaiians pursing majors in health care fields will impact the health care workforce, and likely deliver health care to Native Hawaiians. As seen in Table 2 below, the University of Hawai'i's School of Social Work has successfully attracted a high proportion of Native Hawaiians.

Table 2. University of Hawai'i – Native Hawaiian Attendance

Health School or Department	University of Hawai'i at Mānoa (N)	NH Majored in College/School (N)	NH Majored in College/School (%)
School of Medicine	497	39	8.0
Psychology Department	294	25	8.5
School of Human Nutrition, Food & Animal Sciences	185	23	12.0
School of Nursing & Dental Hygiene	665	96	14.0
School of Social Work	301	63	21.0

Source: (Balutski et al., 2010)

The following advancements over the years in the area of education provides great hope in realizing improvements in this critical factor that impacts the economic well-being of Native Hawaiians:

• The Native Hawaiian Education Act of 1988 triggered a surge of activity in the mid-1990s including addressing the needs of gifted and talented students; development of educational and vocational curricula that incorporate Hawaiian knowledge; development of community-based learning centers to serve preschoolers and-after school students; and research and evaluation of the educational status and needs of Native Hawaiians.
• The Hawaiian language immersion movement is one of the most successful examples of Native Hawaiians asserting control over the learning process while implementing educational models adapted to meet children's needs and to build on the community's strengths.
• The emergence of Hawaiian focused charter schools – about half of 23 charter schools in Hawai'i are Hawaiian focused which "reflect, respect, and embrace Hawaiian cultural values, philosophies and ideologies" (Borofsky, 2010).

SOCIAL & CULTURAL WELL-BEING

Key Finding:

Hawaiian youth are reconnecting with traditional Hawaiian values and practices, such as relationship to land and its natural resources.

Promising Trends:

Continued promotion of traditional values, such as lōkahi, ʻohana, and aloha, strengthen the resilience, identity, and social connectedness of Native Hawaiians and Pacific Islanders and contribute to their physical, mental, and spiritual health.

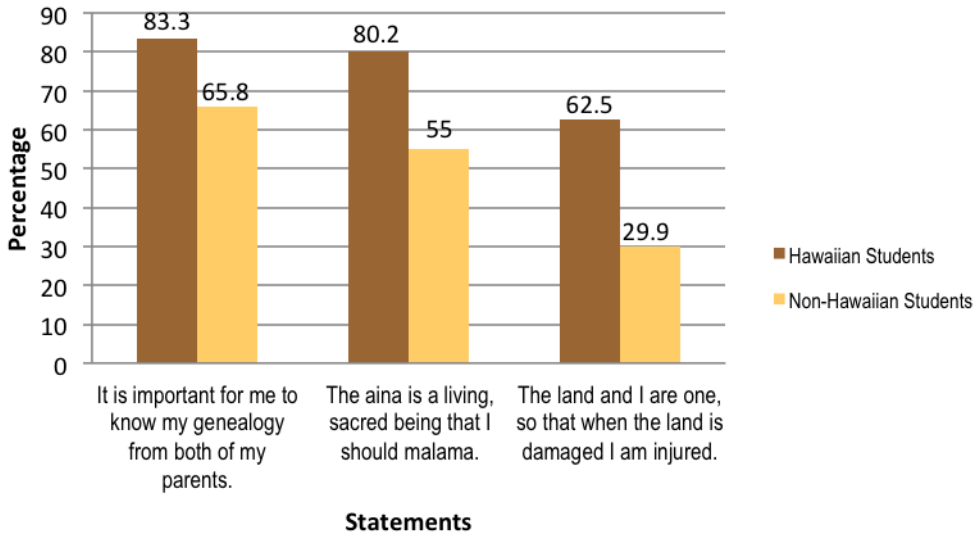
"Create a welcoming refuge, kīpuka, for patients, clients, and community members to lay down [their] cares. Making them feel safe and respected is at the core."

-Urban Community Health Center Leadership

The opportunity for better health is situated in our families, neighborhoods, schools, and jobs. Some of the socioeconomic disparities many Native Hawaiian families face include lack of livable wages, food insecurity, and a lack of affordable housing. In addition, Native Hawaiian people as a whole contend with issues of self-determination and federal recognition. These and other stressors can manifest into socially- and self-destructive behaviors, such as drug use, violence, and criminal activities, resulting in disproportionately high rates of arrest, incarceration, and interpersonal violence among Native Hawaiians. Data shows that stressors such as single-parent households, unemployment, financial insecurity, discrimination, and chronic illness are more prevalent within the Native Hawaiian community in comparison to other ethnic groups, suggesting systematic inequalities within the structure and institutions of society.

In the face of such problems, traditions and cultural values have helped many in the Hawaiian community cope with, if not overcome, these social challenges and unite around a collective identity and aspiration. Research suggests that Native Hawaiian families' strength may be traced, in part, to the culture that binds together members of the ʻohana and unites families into a tight-knit community. For example, Native Hawaiian families are more likely than families of other ethnic backgrounds to share cultural values and beliefs, such as inclusive notions of ʻohana (family) and a sense of obligation to the larger community (Stern et al., 2004). They are fortified by the strength and cohesion of culture, families, and community. In the face of adversity, Native Hawaiians continue to draw on traditional cultural values to strengthen the social systems

Figure 24. Student Alignment with Key Hawaiian Concepts, Percent in Agreement



Source: (Kamehameha Schools, 2009)

that serve as a primary source of support and resolve – family and community. Social support is a key factor that reinforces emotional well-being. Social support provides protection in times of financial stress (Kanaʻiaupuni et al., 2005). The Native Hawaiian community possesses spiritual and emotional supports that stem from a strong sense of ʻohana and traditional and cultural values. These assets serve to fortify the resiliency of Native Hawaiians and can be leveraged as building blocks to achieving physical and economic well-being.

The Hawaiian cultural awakening that was launched in the 1970s ignited efforts to strengthen cultural identity, which has helped to bolster the social well-being of Native Hawaiians. It has helped Hawaiians to reclaim their culture and instill authenticity back into the word "Hawaiian." It is evidenced by the spread of Hawaiian music; the revival of *hula kahiko* (traditional Hawaiian dance) and male hula dancers; a resurgence in the practice of traditional arts and crafts; the growing number of clubs and individuals involved in *hoe waʻa* (canoe racing), and the number of clubs and individuals dedicated to revitalizing traditional Hawaiian values and practices, such as *lua* (Hawaiian fighting art), *hale* (traditional house) building, *kalo* (taro) farming, *loko iʻa* (aquaculture) to name a few. Some examples of this cultural resurgence include:

• *The global presence of hula* – there are more than 967 *hālau hula* (schools of traditional Hawaiian dance) worldwide with at least 187 in Hawaiʻi, 557 in the continental U.S., and 223 hālau hula in other countries around the globe (www.mele.com, 2012).

• *Native Hawaiian charter schools* – there are currently 15 Native Hawaiian charter schools that enroll approximately 1,930 students (Borofsky, 2010). These schools use place-based learning; Hawaiian language and often a second or third language; hula; *oli* (chanting); and a rigorous, integrated math, science, and reading curriculum. They share the belief that Native Hawaiian students have not failed in the Hawaiʻi public education system, but that the current public education system has failed Native Hawaiian students (Borofsky, 2010).

• *Cultural kīpuka*– cultural *kīpuka* (a calm and safe place) were traditional centers of spiritual power where Native Hawaiian beliefs and practices were able to develop and persist long before Western and Christian influences. A few of these centers across the islands were able to survive the onslaught of urbanization and industrialization after Hawaiʻi was occupied by the U.S. and have provided the safe space to pass on cultural and spiritual knowledge and practices (McGregor, 2007).

EMOTIONAL & SPIRITUAL WELL-BEING

Core cultural values shared by NHPI include family, community, spirituality, and a holistic view of life and health, which strongly influence health behaviors. The holistic worldview of Native Hawaiians emphasize the interconnectedness of all things, including the belief that spiritual health contributes to physical health (Pukui et al., 1972).

For Native Hawaiians, the values held by lōkahi, ʻohana, and aloha are central to how they perceive health. *Lōkahi* (unity) is about balance and harmony – one is healthy when the physical, mental, and spiritual aspects of a person are all in harmony. ʻOhana and aloha involve the concepts of kuleana (responsibility) to provide love, caring, and compassion to the extended family, the traditional social structure of Native Hawaiians (Handy & Pukui, 1999).

Many of the same values held by Native Hawaiians shape the traditional health beliefs of other Pacific Islanders. Kinship and the extended family, for example, are central to many social and economic aspects of life for Micronesians and Samoans (Palafox & Warren, 1980). Social isolation has been one of the primary causes of psychological problems and mental illness, such as depression. Generally, familes who are unhappy are more susceptible to diseases, hypertension, and suicidal ideations and attempts. There is a strong need to build healthy communities that can engage people of all ages to combat social isolation (Kaiser Foundation, 2010). An average of 12.8 persons per 100,000 of the resident population died in 2009 due to intential self-harm (State Vital Statistics, 2009).

There has been wide concern particularly focused on adolescent suicide rates, the third leading cause of death in the U.S. among this age group (Gutierrez, et al., 2001). In Hawaiʻi, the youth risk behavior survey of public high school students showed that 16.1% of all students seriously considered attempting suicide in comparison to 17.2% of Native Hawaiian youth (CDC, 2011). Overall, Native Hawaiians have higher rates of suicides than other ethnic groups and have a higher lifetime prevalence of suicide (Liu & Alameda, 2011).

FINDING SOLUTIONS

The NHPP labor force needs more individuals in the high wage fields of science, technology and business to boost individual and family income levels. Creating educational and professional pathways into these fields can be done through various means such as focused scholarships, internships, and educational enrichment programs. Successful models can be found in the educational initiatives implemented in University of Hawaiʻi's community colleges. These institutions have demonstrated impressive gains in reaching and teaching NHPP. Often a key element has been a focus on Native history and cultural practices, which appear to encourage bi-cultural success; an ability to achieve excellence in both NHPP and western environments.

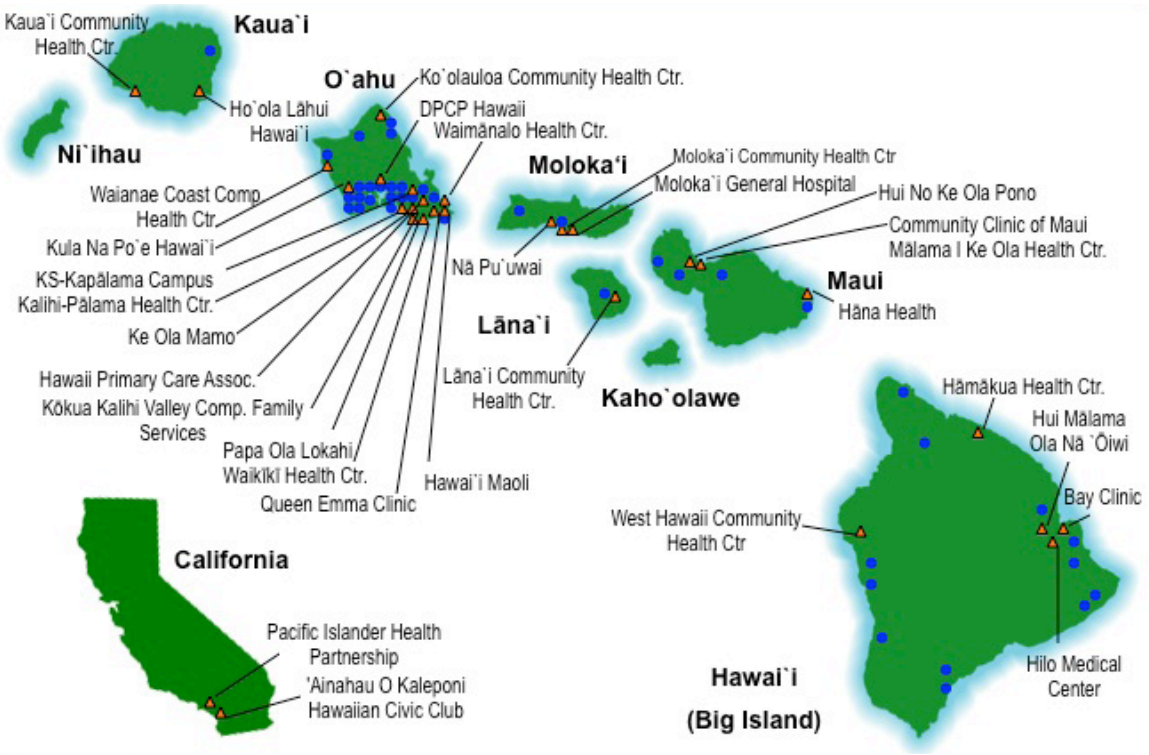
COMMUNITY SPEAKS OF HEALTH NEEDS

"Diabetes, obesity, heart disease, long term effects of pulmonary disease; problems remain the same, but it has gotten bigger."

-Neighbor Island Health Leader

Interviews were conducted with leaders in the Ulu Network about priorities, needs, and concerns for the health and well-being of the communities, families, and individuals they serve. The Ulu Network was formed by the University of Hawai'i's Center for Native and Pacific Health Disparities Research (Center) as a community coalition dedicated to improving the health and well-being of NHPP. The Network includes 30 community organizations with nearly 70 sites spanning across Hawai'i and reaching into California (see Figure 25). The membership has grown 40% since it began in 2003. The Network now includes all 14 federally qualified community health centers (CHC) in Hawai'i, all five federally established Native Hawaiian Health Care Systems (NHHCS), two partners in California, and several rural community hospitals, non-profit organizations, educational institutions, and grass-root organizations.

Figure 25. Map of Ulu Network Organizations, 2013



These informant interviews were completed over 12 months between September 2011 and October 2012. The interview participants primarily were comprised of Ulu Network organizational leadership with roles as Executive Director (42.6%), clinical leadership (22.2%), administrative leadership (20.4%), and other staff (14.8%). Most interviews were conducted on-site at each of the organization's headquarters to allow the interviewer to better understand the various geographic communities and each agencies scope of work. Typically there were two note-takers present at each interview. Notes were compared and consolidated for clarity and accuracy. Qualitative analysis software, Nvivo8, was used for frequency and thematic analysis. While the interviews also included specific queries pertaining to collaborative work of the Center with research and health programs, a summary of the responses about community health needs and concerns are provided here.

PRIORITY MEDICAL AND HEALTH AREAS

Cardiometabolic disease, collectively defined as the conditions of diabetes, cardiovascular disease, and obesity, was identified by most organizations (93.3%) as the top medical concern for their community and organization. Of the cardiometabolic conditions, **diabetes** was specifically identified by majority (83.3%) of organizations. More than half (53.3%) raised the issue of **overweight and obesity** of community members as a priority health area. **Heart disease** was also identified as a top concern by many (53.3%), with the risk factor of **hypertension** most frequently mentioned (30.0%) as an issue for their community. Some of the Ulu Network members reflected that the priority areas have not changed in the past decade. As a neighbor island health leader described, "Diabetes, obesity, heart disease, long term effects of pulmonary disease; problems remain the same, but it has gotten bigger."

Behavioral and mental health was another area of concern and need with 53.3% of organizations discussing patient and community health issues related to anxiety, stress, and depression as well as behavioral and lifestyle modification. Some discussed the relationship of mental health with chronic disease, specifically identifying the link between depression and diabetes, others relayed that the poor economic environment was impacting their clients level of psychosocial stress and the ability to have effective chronic disease self-management. Emphasis was also placed on the need for innovative strategies, such as family-oriented health services or group visits, to successfully work with the typical patient population in need of behavioral health intervention. As one organization put it, "the health center's patient base in general is more complex…the more difficult patients who have been 'fired or let go' from other providers end up at the health center."

Substance abuse, as a behavioral and mental health issue, was specifically identified by 30.0% of Ulu Network organizations as having a high community impact. Organization leaders relayed that community members with prescription drug addiction and illegal drug use were challenges for their organization and community. Some organizations elaborated that many patients dealing with substance abuse also had chronic health conditions and providers often struggle with the time and staff needed to effectively care for patients with these multiple conditions. They commented that

> *"The health center's patient base in general is more complex...the more difficult patients who have been 'fired or let go' from other providers end up at the health center."*
>
> -Community Health Center Leader

typical insurance reimbursements did not always cover the various costs for effective management. A few health leaders described the importance of addressing the social determinants of health. As one CHC clinical manager relayed, "Behavioral health is quite important; particularly stress management and depression." She went on to describe that, for her community, methamphetamine or 'ice' was not presently a top concern but she expected escalation, especially with youth, if economic related issues like unemployment did not improve.

Table 3: Top Community Medical Concerns Identified by Ulu Network Leaders

Condition	Percentage (%)
Diabetes	83.3
Heart Disease	53.3
Obesity	53.3
Mental & Behavioral Health	53.3
Hypertension	30.0
Substance Abuse	30.0
Cancer	23.3
Asthma	20.0
Dental Health	20.0
Tobacco/Smoking	16.7

Also identified among the top concerns was administrative issues related to the **prevention and management of chronic diseases** (16.7%), such as inability to sustain health programs for those with pre-diabetes because of lack of health insurance reimbursement. Others relayed challenges related to care management of new Pacific Island immigrants (e.g., Chuukese and Marshallese). Complexity of their health care management included limited English language proficiency, limited education, lack of financial resources, and confusion about the Hawai'i and U.S. social systems. A large Honolulu health organization commented, "handling the increasing demand of the Micronesian population and their needs has eclipsed the [needs] of the Native Hawaiian population."

NEEDS IN HEALTH AND MEDICAL SERVICES

When asked to reflect on what services were needed to address these health and medical priority areas, most said: **primary care, enabling services, cultural competency, prevention services, and facilitation of collaborative partnerships for early intervention.** There were several areas of clear difference between the service needs identified by urban O‘ahu and rural neighbor island organizations. One distinct difference was that 56.3% of O‘ahu organizations identified primary and secondary preventive services, which included lifestyle interventions and chronic disease management. But this was mentioned only by 7.1% of neighbor island organizations. In fact, 31.3% of O‘ahu organizations said they wanted more availability of physical activity oriented lifestyle programs or similar kinds of options. Neighbor island organizations more frequently identified needing basic health and medical services, specifically: 1) nutrition services and education; 2) cardiometabolic disease care; and 3) behavioral and mental health.

“Cultural competency” was acknowledged by many (40.0%) as an important means to improve service delivery to their patients. It was seen as having the potential to improve patient-provider relationships, and make the environment of their clinical and health services more comfortable and accepting of NHPP beliefs, customs, and practices. Integration of various traditional healing practices into the clinic setting was mentioned by several organizations as an area of interest. One of the neighbor island organizations mentioned that it would be helpful for their providers to have “some kind of…orientation to the Pacific populations, with a focus on health beliefs, practices, and communication strategies” which reflected the overall sentiment of building trusting and lasting relationships with the clinics’ patients.

When asked specifically about traditional **Native Hawaiian healing practices**, 27.6% of Ulu Network organizations offering health and medical care responded that their organization presently offered such services. They elaborated that these healing practices were either provided by staff or through a direct referral relationship to traditional healing cultural practitioners in their community. The practice of *lomilomi* (massage/physical manipulation) was most frequently available for patients or clients, with a few organizations also providing *lā‘au lapa‘au* (use of herbal medicine) and one offering *lā‘au kahea* (use of prayer/chant). For the remaining Ulu Network organizations, 66.7% reported that they were “very interested” in having Native Hawaiian healing practices as part of their service provision. The three most frequently mentioned barriers for not presently offering the service were: 1) concern about financial support required; 2) limited organizational knowledge about the healing practices, limited knowledge about administrative issues such as liability and, care delivery models; and 3) not knowing or having these cultural practitioners in their community. One of the community health centers is actively working on a strategy to overcome these barriers and stated that they will be “working with a kupuna council and Board member[s]” to offer Native Hawaiian healing practices to the community.

PROMISING PRACTICES

When asked to identify promising practices for their community, a few strategies and programs consistently emerged. The **Patient-Centered Medical Home (PCMH)** model was specifically and enthusiastically identified by many CHC as a meaningful approach to care delivery. The few that had implemented this integrated care delivery model felt very positive about the improved patient outcomes and satisfaction it has received. Moreover, the utilization of the PCMH model has helped bring additional resources. As one Hawai'i Island member mentioned, "PCMH has brought good things, such as patient navigators [and] case managers."

> ***"PCMH has brought good things, such as patient navigators [and] case managers."***
>
> -Community Health Center Executive DIrector

Two cardiometabolic health initiatives developed through partnerships between several Ulu Network organizations and JABSOM's Department of Native Hawaiian Health were identified as promising practices. One, the **PILI Lifestyle Program**, developed by the **PILI 'Ohana Project,** was discussed as an evidence-based weight-loss and weight-loss maintenance option that was culturally appealing to community members because the program "worked as a team and spoke their language." The second, the **Land, Food and Health initiative**, which combines diabetes self-management classroom education and returning to the land through backyard or communal gardening was also was identified by several community health leaders as an effort that was new, effective, and appealing to those they serve. The general popularity of **food gardens** was a promising practice discussed by several Ulu Network leaders. They described the many forms to include: school gardens, aquaponics for home food production, and community gardens. Hawai'i Island organizations noted that the gardening initiative was being promoted for various objectives, such as organic farming, nutrition education, and subsistence lifestyle. Regardless of the purpose, the direct and indirect health benefits were widely acknowledged.

Wai'anae Coast Comprehensive Health Center (WCCHC) and **Kōkua Kalihi Valley Health Center** (KKV) were organizations consistently identified as role models and innovators. WCCHC was admired for their tight integration into the west O'ahu community, focus on enabling services, and incorporation of Native Hawaiian culture into their organizational culture and services. KKV was seen as a leader in the assimilation of the social determinants of health into their service delivery strategies and the use of NHPP beliefs and practices in their programming. Additionally, the organization's promotion of the relationship of returning to the 'āina (land) and health is seen as a bold and interesting approach for a CHC, which as one Neighbor Island member stated, resulted in the "development of physicians as teachers."

NEEDS IN ORGANIZATIONAL TRAINING TO IMPROVE CARDIOMETOBOLIC HEALTH

> *"Actionable messages or simple messages that will be consistent directions for the patients and community and can be communicated consistently from providers to receptionist."*
>
> -Neighbor Island Ulu Network Member

Most of the leaders (93.3%) expressed a need for specific types of training and education for their organization. The clinical topics identified followed the cardiometabolic health priority identified earlier with many interested in obesity and kidney disease education. Nutrition education for staff was mentioned by 23.3% of interview participants, topic areas included: education on portion size, diet patterns, and food and cooking preferences of Pacific ethnicities. An O'ahu organization suggested that "actionable messages" or "simple messages that will be consistent directions for the patients and community and can be communicated consistently from providers to receptionist" would be especially helpful.

Cultural competency related trainings were of considerable interest to 33.3% of the leaders. The term "cultural competency training" was used by the interview participants to describe developing skills to interact effectively with people of different cultures and socio-economic backgrounds. Neighbor island organizations in particular described the challenges faced by new staff who were inexperienced with multicultural environments. Many organizations were seeking relevant strategies for specific populations. They believed that new approaches, such as a walk-in diabetes clinic or group visits targeting Micronesian patients could work, but wanted more education on how to handle administrative and logistical issues. The health needs and issues of the new immigrant Marshallese were often specifically discussed as a growing concern. Moreover, training about using translators in treatment rooms and education about Pacific Islander and Filipino health beliefs and traditions were of interest. Organizations described being overwhelmed by the complexity of social and health needs and believed increased understanding could lead to better solutions for care delivery. Education of clinical staff on coaching **behavioral change**, especially training in **motivational interviewing skills,** was consistently identified as needed. As one organization reflected, "we assume people understand what we say but we need to change that [assumption]."

Table 4. Top Priorities for Organizational Training to Improve Cardiometabolic Health

Training and Informational Needs	Percentage (%)
Cardiometabolic Disease Training	36.7
Cultural Competency Training	33.3
Nutritional & Healthy Diet Training	23.3
Motivational Interviewing Training	23.3
Behavioral Change & Goals Setting Training	23.3
Exercise Programs and Information	16.7

The target audience for training and education varied with topic area. More than one organization leader announced they would be willing to close the entire clinic so all staff could receive important educational training. Community health worker and outreach worker training was of consistent interest, as staff do not have many educational opportunities for training about chronic diseases. The **Ulu Trainings** (Diabetes 101, Heart 101, Kidney 101), five-hour seminars for allied health professional staff facilitated by the Center, continues to be popular with the Ulu Network because of its NHPP cultural-relevance and interactive teaching methods. One reason the Ulu Trainings continue to benefit the community is that "people that were trained are now no longer here so we have a brand new group that must be trained." Lastly, separate training for physician, nursing, and other clinical staff was also seen as important in the topic areas previously discussed.

FINDING SOLUTIONS

Integrated primary care delivery through approaches such as the Patient Center Medical Home, was identified as foundational to improved outcomes. These health improvements could be enhanced in several ways. One way is with greater support for prevention programs such as PILI 'Ohana, and another way is providing training of health professionals in cultural competency with NHPP. Community leaders were interested in new models to enhance culturally aligned health services or environments, such as traditional Native Hawaiian healing, but wanted more guidance, technical support, and financial resources to enable implementation. They noted the patients they serve responded well to the Land, Food and Health initiative that combine patient education with Pacific Peoples relationship to land. Innovation pioneered in organizations such as Kōkua Kalihi Valley Comprehensive Health Center and Wai'anae Comprehensive Health Center are successful models that can be replicated at other sites.

CLOSING

FINDING SOLUTIONS

Improvements in health status will come through:

- ***Community-based integrated approaches to health & well-being,***
- ***Initiatives that incorporate cultural knowledge and practice,***
- ***Collaborations and partnerships are key to innovative and sustainable solutions.***

While health inequities continue to persist in NHPP communities, the incremental improvements in many areas are notable. For example, life expectancy, a key indicator of health status, increased for Native Hawaiians and Filipinos by almost 12 years since 1950. Although Native Hawaiian life expectancy is six years less than the overall state, there have been improvements over the last several decades. It is also remarkable that the percent of Native Hawaiians in University of Hawai'i's community colleges nearly doubled over a 15-year period. Clearly, the community colleges have successfully identified and overcome the barriers for Native Hawaiians to access higher education.

Leading thinkers both locally and globally agree that an integrated and multi-systemic approach is required in order to establish health equity for populations such as NHPP. Integration includes acknowledging health and well-being as complex and multi-dimensional. We must understand that where we live, learn, work, and play affect our health and well-being. Moreover, we must acknowledge and celebrate the wisdom of our *kūpuna* (elders and ancestors); as the mainstream healthcare delivery system begins to understand that individual health is influenced not only by physical conditions but also emotional and even spiritual aspects.

Collaborations, partnerships, and a comprehensive, synergistic health development plan are required to achieve health equity for Native Hawaiians and other Pacific Peoples. This collective approach not only allows for leveraging of resources, but also extends reach and garners expansive expertise. While cooperative efforts are often time consuming and difficult, they have the potential for breakthrough innovations and making a larger and sustainable impact. Nā Limahana o Lonopūhā, the Native Hawaiian Health Consortium, is a case in point of a new kind of collaboration that has brought together a wide range of expertise and organizations with a collective vision for health improvement among Native Hawaiians. The Department of Native Hawaiian Health at the University of Hawai'i's medical school is proud to be a part of this new consortium and have worked hard over the past decade to build alliances and innovations with individuals, communities, and institutions in our islands and across the globe.

The findings of this report clearly identify problem areas that span scientific literature, governmental evaluation, and assessments by community health leaders. The solutions must be community-driven, based on rigorous scientific evidence, and built through partnerships and collaborations.

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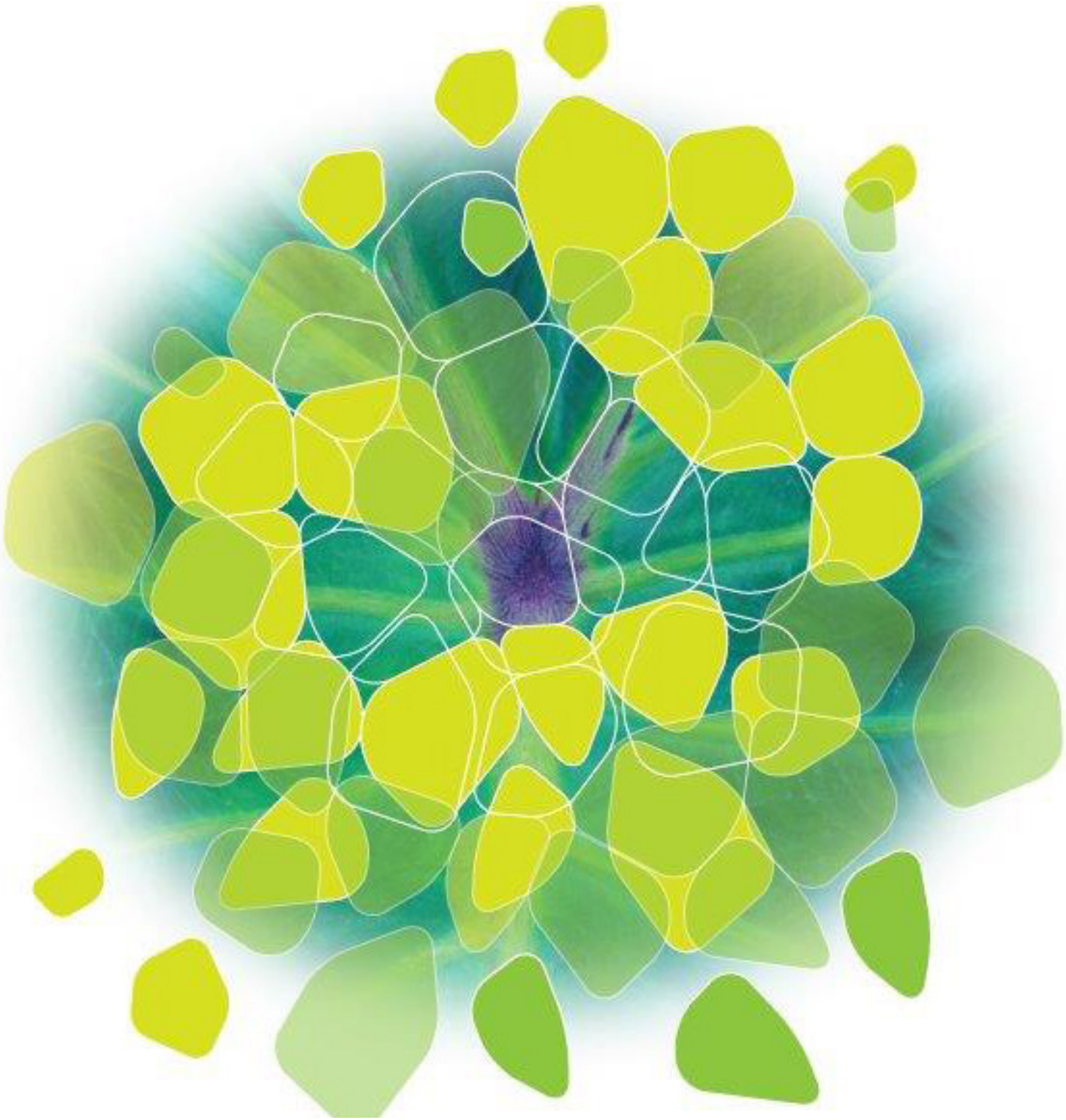
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