UNIVERSITY OF HAWAIʻI AT MĀNOA

John A. Burns School of Medicine
Department of Native Hawaiian Health

UNITED STATES SENATE
COMMITTEE ON INDIAN AFFAIRS
Brian Schatz, Hawaiʻi, Chairman
Lisa Murkowski, Alaska, Vice Chairman

FIELD HEARING
Upholding the Federal Trust Responsibility:
Funding & Program Access for Innovation in the Native Hawaiian Community

DATE: June 1, 2022
TIME: 10:30 A.M.
PLACE: Keoni Auditorium
East-West Center
1777 East-West Road
Honolulu, Hawaiʻi, 96848

Aloha mai e (warm greetings) honorable Chair Schatz and Vice-Chair Murkowski and distinguished members of the United States (U.S.) Senate Committee on Indian Affairs. Mahalo nui (much gratitude) for this opportunity to provide written testimony regarding "Upholding the Federal Trust Responsibility: Funding & Program Access for Innovation in the Native Hawaiian Community."

This testimony is humbly being submitted jointly by Drs. Joseph Keaweʻaimoku Kaholokula and Winona Kaalouahi Lee:

I, Dr. Joseph Keaweʻaimoku Kaholokula, am a kanaka maoli (Native Hawaiian) whose ancestors lived and thrived in this pae ʻāina (Hawaiian archipelago) for centuries before Western contact. I am a Professor and Chair of the Department of Native Hawaiian Health (NHH) at the John A. Burns School of Medicine (JABSOM) of the University of Hawaiʻi at Mānoa UHM). In my role as NHH Chair, I oversee pathway programs that are supported by both state and federal funding and designed to increase the number of Native Hawaiians, Pacific Islanders, and other persons from backgrounds underrepresented in medicine, other health professions, and the health sciences. I am also a translational behavioral scientist who oversees several federally-funded research programs designed to address the most pressing health concerns of our Native Hawaiian and Pacific Islander communities and to increase the number of persons from these communities in the health sciences. I am also a licensed clinical psychologist who has provided clinical services to Native Hawaiian and Pacific Islander patients at federally-qualified health centers and the Native Hawaiian Health Care Systems as well as helped to build culturally-responsive behavioral health programs for these populations. I have served and currently serve as a subject matter expert or committee member for several federal agencies concerning Native Hawaiian and Pacific Islander health. On a cultural level, I am a poʻo (leader) and member of Halemua o Kūaliʻi, a grassroots cultural organization whose mission is to revitalize and perpetuate our traditional Hawaiian customs and practices. Altogether, I have over 25 years of clinical, academic, and community experience concerning Native Hawaiian health and wellbeing.

I, Dr. Winona Kaalouahi Lee, am a Native Hawaiian medical educator driven by a passion for promoting the success of disadvantaged and underrepresented students in medicine. I oversee key diversity programs at the University of Hawaiʻi John A. Burns School of Medicine (JABSOM) including the ʻImi Hoʻōla Post-Baccalaureate Program and the Native Hawaiian Center of Excellence. In my role as the Association of American Medical Colleges Diversity

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Officer, I led the creation of JABSOM's first institutional policy on diversity. I am the Co-Editor of *Ho'i Hou Ka Mauli Ola*, Pathways to Native Hawaiian Health, and have led the creation and expansion of culturally-responsive, strengths-based enrichment and training programs for the past 20 years. I currently serve as the Director of the Western Region of the National Association of Medical Minority Educators and the Co-Chair of the JABSOM Coordinating Committee on Opportunity, Diversity, and Equity and the 'Apu Kaulike Diversity Task Force. I am proud to be a former first-generation college student and homegrown leader from 'Ewa Beach. I am a graduate of Kamehameha Schools Kapālama campus, received my undergraduate and medical degrees from the University of Hawai'i at Mānoa, and completed my residency in Pediatrics at the University of Hawai'i Integrated Pediatrics Residency Program.

This joint testimony to the U.S. Senate Committee on Indian Affairs addresses the fiduciary obligation of the U.S. in fulfilling its trust responsibility to Native Hawaiians – an obligation codified in federal law. This trust responsibility is due to the role the U.S. played in the unlawful overthrow of the Sovereign of the Kingdom of Hawai'i, Queen Lili'uokalani, on January 16, 1893, and the subsequent U.S. occupation of Hawai'i. A fact recognized by two U.S. Presidents – President Glover Cleveland based on the findings of the Blount Report that same year and President Bill Clinton in 1993 with the Apology Resolution (U.S. Public Law 103-150). This federal trust responsibility is exemplified in the Hawaiian Homes Commission Act of 1920 and the Native Hawaiian Education and the Native Hawaiian Health Care Acts of 1988. However, the trust responsibility of the U.S. extends beyond these three significant federal laws and should be a bipartisan issue.

Historical Context for the Health Inequities Experienced by Native Hawaiians

Native Hawaiians are the Indigenous People of the Hawaiian Islands, territories now controlled by the U.S. Hawai'i was a sovereign nation under the Kingdom of Hawai'i from the time the islands were united under one government by King Kamehameha I in 1810 until the illegal overthrow of Queen Lili'uokalani in 1893.[1] Native Hawaiians never relinquished their claims to their inherent sovereignty over their national lands to the U.S.[2] "either through the Kingdom of Hawai'i or through a plebiscite or referendum," as stated in U.S. Public Law 103-150.

Before Western contact, Native Hawaiians were a thriving and healthy people, with a sophisticated sociopolitical system and a rich cultural tradition. Following Western contact, Native Hawaiians were decimated by novel infectious diseases; forced to abandon their native language, customs, and beliefs; manipulated by foreign powers, and marginalized through legislation.[1,3-5] These deleterious changes were exacerbated after U.S. control of Hawai'i.[1] Similar to American Indians (Native) Americans) and Alaska Natives, the discrimination and marginalization experienced by Native Hawaiians under U.S.-control led to significant social, educational, and economic disadvantages as well as cultural repression, placing many Native Hawaiians at a greater risk for physical and mental health concerns than any other racial/ethnic group in their homeland and throughout the U.S.

Today, Native Hawaiians have higher rates of physical diseases and mental health disorders than other racial/ethnic groups in Hawai'i across all ages.[6-11] Among these conditions are obesity,[12,13] hypertension,[14,15] diabetes,[16,17] chronic kidney disease,[18] cardiovascular and cerebrovascular diseases (CVD),[19,20] and certain cancers (e.g., breast and lung cancer),[10,21] which are identified national health disparate priorities by the Office of Minority Health for Native Hawaiians and Pacific Islanders.[22] They contract these conditions at younger ages.[20] In Hawai'i and nationally, Native Hawaiians also have a higher prevalence of mental health conditions, such as substance use and abuse,[11,23] depression,[11,24] adverse childhood events,[7] and suicide.[25]

Many of these physical and mental health conditions are strongly linked to one another (e.g., co-morbid depression and diabetes).[26-28] Native Hawaiians have among the lowest life expectancy (an average of 10 years lower overall) of any other racial/ethnic group.[9,29] They are more likely to be diagnosed with a chronic disease at later stages or with greater severity,[10] readmitted to the hospital,[30] and frequent users of the emergency room and outpatient services.[31] Compared to other racial/ethnic groups, they are more likely to live in impoverished and obesogenic neighborhoods and crowded conditions, and to work in low-paying jobs.[32-35] They are less likely to obtain a college degree or to own a home.[33-35] A third (30%) are uninsured/underinsured[36,37] and 15% live in extreme poverty.[38,39] Native Hawaiians experience high levels of discrimination with adverse effects on their health.[40-42] They are also overrepresented among Hawai'i's other health-disparate underserved and vulnerable populations, such as rural (60%),[43,44] homeless (57%),[45] and sexual/gender minorities (52%).[46] Native Hawaiians, along with other Pacific Islanders, in Hawai'i and other states (California, Oregon, and Washington) were among the hardest hit by COVID-19.[47,48]

To effectively eliminate the health inequities experienced by Native Hawaiians the following actions need to be taken: 1) an increase in federally supported programs and legislation specifically targeting Native Hawaiians and their most pressing health concerns and 2) an increase in federal support to increase the number of Native Hawaiians in the health professions and health sciences.

The Need for Federally-funded Culturally-Responsive Health Equity Programs

Many Native Hawaiian serving organizations have and continue to benefit from federally-funded programs, such as those offered by the Administration for Native Americans (ANA), Health Resources and Services Administration (HRSA; e.g., Center of Excellence program), and the Center for Disease Control and Prevention (CDC) – all under the U.S. Department of Health and Human Services (DHHS). And, in recent years, there have been significant federal investments made toward improving Native Hawaiian health. Some examples include the recent funding announcement by the Substance Abuse and Mental Health Services Administration (SAMHSA) to establish an Asian American, Native Hawaiian, and Pacific Islander Behavioral Health Center of Excellence; by the National Institute on Minority Health and Health Disparities of the National Institutes of Health (NIH) for research proposals concerning epidemiologic studies in Asian Americans, Native Hawaiians, and Pacific Islanders; and by the Office of Minority Health (OMH) to establish a Center for Indigenous Innovation and Health Equity.

Although these recent funding opportunities are much needed and appreciated, they are often tied to, or aggregated with, other racial/ethnic groups or subjected to a competitive process that casts such a wide net that inadvertently limits, if not excludes, meaningful participation by Native Hawaiians or academic and community organizations working of their behalf. For example, the arbitrary and pervasive practice of aggregating or attaching funding for Native Hawaiians and Pacific Islanders to the larger and broader Asian American rubric, such as in the case of SAMHSA's call to establish an Asian American, Native Hawaiian, and Pacific Islander Behavioral Health Center of Excellence, is highly problematic. The funding being offered ($700,000 annually over 5 years) is not enough to meet the unique behavioral health needs of the over 24 million Asian Americans in the U.S. who comprise over 20 different sub-groups as well as the 1.6 million Native Hawaiians and Pacific Islanders who comprise over 12 different sub-groups based on the 2020 U.S. Census.

There is no justifiable reason to attach Native Hawaiians and Pacific Islanders to Asian American populations. This erroneous practice perhaps came about because of a previous racial/ethnic category by the Office of Management and Budget (OMB) that aggregated these three groups together. Although Native Hawaiians and Pacific Islanders have been disaggregated from Asian Americans under OMB Directive 15 since 1994, the practice of aggregating them continues – a practice that needs to stop because it masks the true health issues faced by all racial/ethnic sub-groups involved.[49]

In thinking about establishing new federally-supported programs, it is important to consider that Native Hawaiians have called for and responded best to culturally responsive health promotion programs – programs that are either built upon or leverage their cultural perspectives and practices. A vast majority of Native Hawaiians (93%) strongly identify with their Native Hawaiian heritage and culture[50] and 80% strongly believe it is important to maintain their unique cultural values and practices for psychological wellbeing.[51] Rigorous scientific research we have conducted with NIH funding has found that community-based and led, culturally responsive health promotion programs can improve the health and wellbeing of Native Hawaiians as well as other Pacific Islanders. Among these programs is our PILI Lifestyle Program to address obesity,[52-55] the Partners in Care Diabetes Self-Management Program,[56,57] and Ola Hou i ka Hula (restoring life through hula) Program to lower cardiovascular disease risk in Native Hawaiians and Pacific Islanders.[58] For example, our Ola Hou i ka Hula program – a culture-based lifestyle program using our traditional dance of hula – led to significant improvements in blood pressure control and a 10-year risk for CVD among Native Hawaiians with previously uncontrolled hypertension.

The innovation of these culturally grounded programs resides in their paradigm shift away from an exclusive focus on Western notions of health promotion based on treating disease-associated physiology toward an Indigenous perspective of health promotion based on leveraging or strengthening cultural and community assets. However, what is often made available for funding are programs deemed "evidence-based" for which the evidence was based on research that included predominately White samples. This is unacceptable since the validity of any intervention can only be linked with any high degree of confidence within the population(s) in which it was tested. Thus, health promotion programs for Native Hawaiians that have proven their effectiveness among Native Hawaiians need to be disseminated and implemented in real-world settings, such as federally-qualified community health centers and the Native Hawaiian Health Care Systems as well as other community-based organizations.

The Need for Federal Support for Native Hawaiians to Enter the Health Professions

Despite their significant health disparities, access to quality and timely medical care for Native Hawaiians is poor and, in part, due to the severe physician shortage in Hawai'i and the underrepresentation of Native Hawaiians in the medical profession. The physician shortage in Hawai'i rose across all counties from 2019 to 2020 (see Figure 1). Primary care (i.e., Family Medicine, Internal Medicine, Pediatrics, and Geriatrics) represents the largest shortage statewide (412 FTEs needed) on all islands. Despite comprising up to 21% of the population in Hawai'i, Native Hawaiians represent less than 4.5% of the physician workforce.

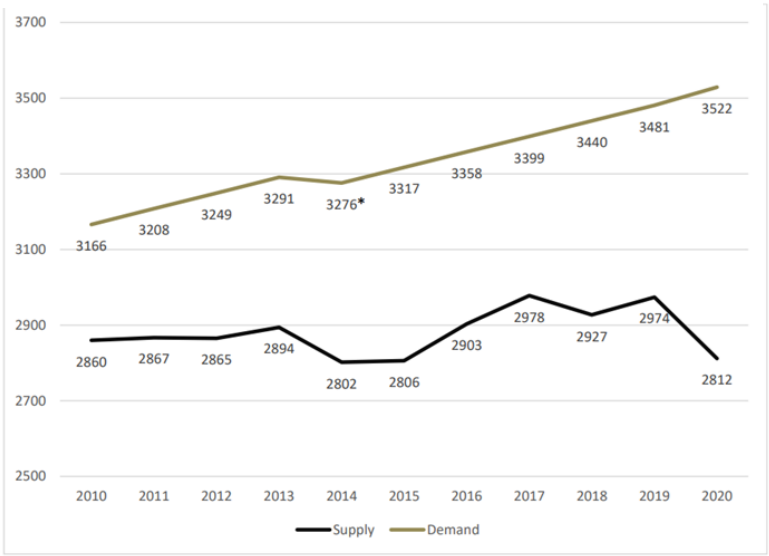

Figure 1. Physician Supply and Demand FTE Comparison from 2010 to 2020

Source: https://www.hawaii.edu/govrel/docs/reports/2021/act18-sslh2009_2021_physician-workforce_annual-report_508.pdf

Complicating matters, many Native Hawaiians harbor mistrust and

suspicion of Western medicine and science because of past transgressions against them.[59-61] They also face numerous sociocultural and socioeconomic challenges, such as economic deprivation, the need to hold down multiple jobs, and strong family and community obligations, that often prevent or hinder their ability to seek timely medical care. For all these reasons, growing our local physicians, especially Native Hawaiians, has never been more critical, as well as vital efforts to create a robust culturally-responsive physician workforce committed to Hawai‘i and its people.

The social and economic challenges faced by Native Hawaiian students who are pursuing careers in medicine and other health professions impact their ability to succeed at the undergraduate level. In Fall 2021, the University of Hawai‘i at Mānoa (UHM) reported that only 14.5% of the UHM student population were Native Hawaiian.[62] Native Hawaiians face higher poverty rates than the statewide average with 15.5% of NH families with children under 18 living in poverty compared to the state-wide average of 10.5%.[63] These early challenges are critical reasons to create a pathway for potential medical students starting at the high school level by providing outreach and service programs that address academic preparedness, college readiness, and financial and career planning. Native Hawaiian students are more likely to be first-generation college students and only 13.2% of Native Hawaiian students over 25 years of age have a bachelor’s degree, compared to the statewide average of 22.1% of Caucasians.[64] Without Native Hawaiian role models or mentors, it is difficult for Native Hawaiian students to realize that attending a health professions school is within their reach. These students do have academic potential and with the right mentors and supportive learning environment, can achieve their career goals.

Pathway programs such as the Native Hawaiian Center of Excellence (NHCOE) and the ‘Imi Ho‘ōla Post-Baccalaureate Program at JABSOM serve as educational models of success that should be replicated and expanded to create a sustainable, expansive solution to meeting the academic, personal, and professional needs of Native Hawaiian students pursuing careers in medicine. NHCOE has strengthened the nation’s capacity to produce a diverse, culturally competent health care workforce that is prepared to meet the needs of diverse and underserved patient populations. NHCOE is the only Center of Excellence in the U.S. focused on Native Hawaiian student and faculty pathways to success in medicine. Since its inception in 1991, NHCOE has evolved and expanded its activities, engagement, and outreach with the support of the Bureau of Health Workforce under HRSA, JABSOM, and NHCOE’s extensive and long-standing community and educational partnerships.

One of our premier programs, the Native Hawaiian Student Pathway to Medicine Program (NHSPM) has now completed its 12th cohort since its inception in 2010. NHSPM has successfully led culturally responsive, student-centered training sessions for 186 Native Hawaiian premedical and other health professions students. Of these, 51 NHSPM students were accepted to medical school at JABSOM (n = 30) and the continental U.S.A (n = 21). Thus, 61% of NHSPM students who applied to medical school (n = 51 / 83) were accepted. Within JABSOM, NHCOE is the lead unit providing cultural competency training to 100% of JABSOM matriculated medical doctorate (MD) students, supporting clinical training in communities that serve Native Hawaiians, and integrating traditional healers within the context of western medicine. In 2014, NHCOE established the first Dean’s Certificate in Native Hawaiian Health awarded to JABSOM medical students who meet culturally intensive studies as well as academic, research, and community service requirements. NHCOE has also supported the Indigenous Faculty Forum (IFF), an ongoing partnership between NHCOE and the Northwest Native American Center of Excellence at the Oregon Health Sciences University to create a formal networking and collaborative partnership with indigenous faculty across the nation.

The ‘Imi Ho‘ōla Post-Baccalaureate Program is a proven pathway program that provides educational opportunities to disadvantaged students pursuing careers in medicine. Since 1973,

‘Imi Ho‘ōla (Hawaiian meaning those who seek to heal) has successfully equipped students with the knowledge, skills, and confidence to achieve success in the competitive field of medicine. Up to 12 students are enrolled each year and once students complete the rigorous program, they matriculate as first-year students in the JABSOM MD program. To date, 297 `Imi Ho`ōla alumni have successfully graduated from JABSOM. ‘Imi Ho‘ōla’s contributions to Pacific Islander diversity at JABSOM are significant. Thirty-eight percent (38%) of all Native Hawaiians, 34% of Filipinos, 57% of Micronesians, and 89% of Samoan students who graduated from JABSOM – came through ‘Imi Ho‘ōla. ‘Imi Ho‘ōla graduates also produce more MDs who choose primary care and residency programs in Hawai‘i when compared to non-‘Imi Ho‘ōla MDs (72% vs 57%).[65]

JABSOM is one of only 45 (forty-five) schools across the nation that have a post-baccalaureate program. Of these schools, only 16 (sixteen) programs consider student groups that are underrepresented in the health professions as a criterion for enrollment and only 6 (six) programs grant admissions to an affiliated medical school upon successful completion. ‘Imi Ho‘ōla not only strengthens our ability to diversify the workforce here in our island state but is an exemplar of excellence across our nation. In short, ‘Imi Ho‘ōla and NHCOE are vital pathways to address the current physician workforce shortage and can be used as models to effectively produce a health care workforce that reflects and understands our diverse communities by supporting Native Hawaiian and Pacific Islander students in achieving their dreams of becoming healers for their communities.

The Need for Federal Support for Native Hawaiians to Enter the Health Sciences

As recognized by the National Science Foundation (NSF), Native Hawaiians/Pacific Islanders along with American Indians/Alaska Natives, African Americans, and Hispanics are underrepresented in science, technology, engineering, mathematics, and medicine (STEMM) fields and the health sciences.[66] This is reflected in the dismal number of Native Hawaiians who apply for federal funding and the number of projects funded that focus on Native Hawaiians/Pacific Islanders. According to a recent report, only 0.17% (529) of NIH’s entire funding went to Asian American Native Hawaiian, and Pacific Islander-focused research collectively between 1992 and 2018.[67] And, only 35 of these research projects were focused on Native Hawaiians and/or Pacific Islanders. Figure 2 shows that in 2013 and 2018 there were only 18 applicants of Native Hawaiian and Pacific Islander ancestry in both years, which represents a 0% increase. In 2020, only 25 research grants awarded went to Native Hawaiian and Pacific Islander investigators compared to 102 for American Indians/Alaska Natives, 1,052 for African Americans, 8,858 for Asians, and 28,587 for Whites.

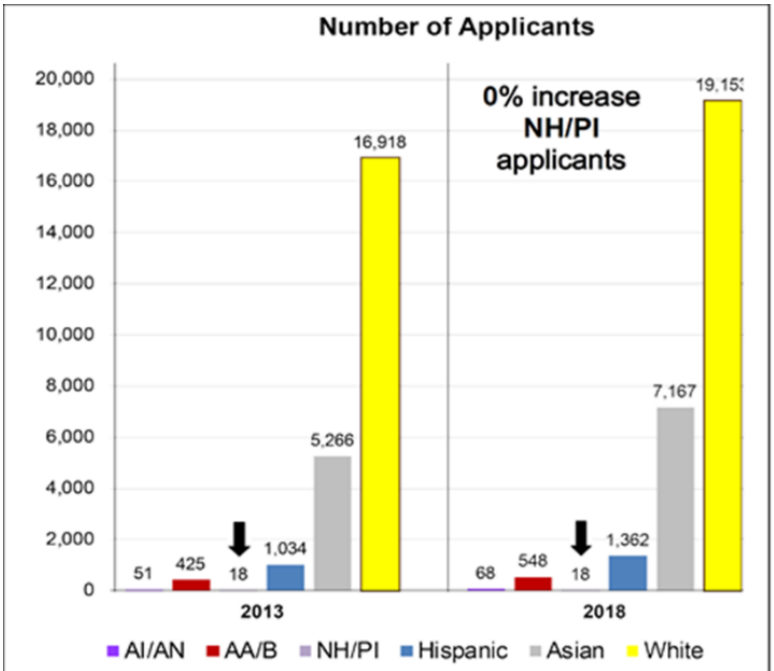

Figure 2. R01 Applicants by Race/Ethnicity: 2012-2018

Complicating this issue in Hawaii is the significant disparities in the number of Native Hawaiian and Pacific Islander faculty at UHM at all levels – individuals eligible to apply for federal funding – compared to their racial/ethnic representation in the overall population of Hawai'i.[68] The overall population of Hawai'i is about 25% Native Hawaiian/Pacific Islander, 25% non-Hispanic White, and 23% Asian. Yet, only 8.9% of HM faculty are Native Hawaiian/Pacific Islander compared to 46% non-Hispanic White and 29.2% Asian. Of tenure-track and tenured faculty, the number drops to 8% for Native Hawaiians/Pacific Islanders but increases for non-Hispanic Whites to 52.2%. At JABSOM, only 7.8% are Native Hawaiian/Pacific Islander compared to 32% non-Hispanic Whites and 45.3% Asians.

Native Hawaiians and Pacific Islanders face considerable challenges that prevent or complicate their pursuit of an MD or PhD in scientific fields and in securing tenure-track faculty positions.[69] Like most individuals of minority status, there is high attrition in their transition from training status into faculty-level research careers.[70] Pursuing an academic or research career is often daunting for them because of racial/ethnic discrimination and biases; isolation and a lack of network and mentors with similar backgrounds; fewer career development opportunities; heavy clinical and community obligations; and a heavy mentoring load of Native Hawaiian/Pacific Islander students and early career faculty.[71,72] Native Hawaiian physicians often turn to private practice to pay off their educational loan debt, which leads them away from an academic career. Recently, COVID pandemic related financial challenges at UHM have further limited the ability of JABSOM to provide competitive academic opportunities across all disciplines, but this most significantly impacts Native Hawaiian/Pacific Islander professionals seeking an academic health career in the Pacific. The limited research on IPP faculty echoes the barriers experienced by other URM.

Although Native Hawaiians and Pacific Islanders are Indigenous to territories now under US control, they do not receive the same level of attention and special consideration by federal funding agencies as do American Indians/Alaska Natives. For example, Native Hawaiians and Pacific Islanders are excluded from the Native American Research Centers for Health (NARCH) program funded by NIH and the Indian Health Services, designed to support biomedical research and career enhancement opportunities to meet the health needs of American Indian/Alaska Native communities. The 33% increase in R01 applications from American Indian/Alaska Native principal investigators over the 5 years is no doubt due to NARCH and other similar research infrastructure programs focused exclusively on American Indians/Alaska Natives. A similar investment in Native Hawaiians and Pacific Islanders is urgently needed.

Program and Policy Recommendations

Given the dire need for culturally responsive health promotion programs for Native Hawaiians, health professionals who can provide culturally responsive care for Native Hawaiian patients, and health-related researchers to identify and develop promising intervention programs for Native Hawaiian communities, we offer the following recommendations for consideration:

1. Native Hawaiians and Pacific Islanders should not be combined with Asian Americans, or any other racial/ethnic group, under a single project or program for funding because of large differences in health status and outcomes, as well as the social and cultural determinants of health impacting these different ethnic groups. Combining Native Hawaiians and Pacific Islanders with Asian populations only directs attention and resources away from Native Hawaiians and Pacific Islanders because of their smaller representation in the U.S. compared to Asians. Native Hawaiians and Pacific Islanders **must have their own programs and line of funding** to address their unique concerns.

2. Native Hawaiian **representation and consultation** should be required in the designing, funding, and oversight of all federally-supported programs aimed at improving Native Hawaiian health including any special interest groups and committees tasked with Native Hawaiian health. All too often Native Hawaiians and Pacific Islanders are lumped with Asians in many federally-supported programs with very little to no Native Hawaiian or Pacific Islander representation or input.

3. Culturally responsive, community-based health promotion programs are needed, which go beyond the current strategy of simply adapting and implementing interventions deemed as 'evidence-based' from research with mainly the majority population. What is needed are funding opportunities and technical assistance to support **the dissemination and implementation of culturally responsive interventions** already identified as effective for Native Hawaiians and to support **innovative health-related research programs** exclusively aimed at improving Native Hawaiian health, as well as for other Pacific Islanders, similar to those designed for American Indians/Alaska Natives (e.g., NARCH).

4. We have documented the success of our pathway programs at JABSOM for Native Hawaiians and Pacific Islanders. However, resources are limited to meet the needs of our Native Hawaiian and Pacific Islander learners and to meet our goal of increasing the number of Native Hawaiians in medicine. Federal funding is needed to **expand and strengthen culturally-responsive and strengths-based pathway programs** for Native Hawaiian students to enter the health professions (e.g., medicine, psychology, nursing, and social work). These pathway programs need to be implemented starting in high school and continuing at the undergraduate and post-baccalaureate levels.

5. Given the large inequities in adverse childhood experiences and behavioral health issues across the board among Native Hawaiians, an issue exacerbated by the COVID-19 pandemic, a **special emphasis is needed on addressing Native Hawaiian/Pacific Islander behavioral health disparities**, especially funding to increase behavioral health services and programs in rural and primary care settings, as well as in educational settings. Also, more behavioral health providers are needed in the professions of clinical psychology, psychiatry, and clinical social work.

6. To support the increase in behavioral health services for Native Hawaiians as well as increase the number of clinical psychologists, psychologists need to be included in the "incident to" language in Medicare to **allow reimbursement for services provided by graduate trainees under the supervision of psychologists** similar to physicians and medical residents. This will allow for sustainable training opportunities for clinical psychologists.

7. As we understand it, the recipients of the Native Hawaiian Health Scholarship are being **unfairly taxed for their professional school tuition** by HRSA, and this is in addition to being taxed for the monthly stipend they receive for their living expenses. The additional tax on tuition can be as high as $10,000 annually for these scholarship recipients. The IRS tax code exempts the tuition for National Health Service Corps recipients from taxation. Native Hawaiian students face economic challenges and these taxes only add to their economic burdens. Out of financial necessity, it also deters many physicians and other health professionals (e.g., psychologists, social workers) from practicing in rural settings and community-based clinics where salaries are lower than in urban settings and larger healthcare systems.

Again, mahalo nui for this opportunity to provide testimony regarding “Upholding the Federal Trust Responsibility: Funding & Program Access for Innovation in the Native Hawaiian Community.” Should you have any questions regarding this testimony please feel free to contact us. Our contact information is provided below.

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Literature Cited

1. Dougherty M. *To steal a kingdom.* Waimanalo, HI: Island Style Press; 1992.
2. Sai DK. *Ua mau ke ea = Sovereignty endures : an overview of the political and legal history of the Hawaiian Islands.* Third Edition. ed. Honolulu, Hawai'i: Pu'a Foundation; 2015.
3. Kaholokula JK, Nacapoy AH, Dang K. Social justice as a public health imperative for Kānaka Maoli. *AlterNative: An International Journal of Indigenous Peoples.* 2009;5(2):117-137.
4. Marsella A, MCCubbin LD. Native Hawaiians and psychology: The cultural and historical context of indigenous ways of knowing. *Cultural Diversity and Ethnic Minority Psychology.* 2009;15(4):374–387.
5. Goodyear-Ka'opua N, Hussey I, Wright EK. *A nation rising : Hawaiian movements for life, land, and sovereignty.* Durham: Duke University Press; 2014.
6. Wu LT, Blazer DG, Swartz MS, Burchett B, Brady KT, Workgroup NA. Illicit and nonmedical drug use among Asian Americans, Native Hawaiians/Pacific Islanders, and mixed-race individuals. *Drug Alcohol Depend.* 2013;133(2):360-367.
7. Ye D, Reyes-Salvail F. Adverse childhood experiences among Hawai'i adults: Findings from the 2010 Behavioral Risk Factor Survey. *Hawaii J Med Public Health.* 2014;73(6):181-190.
8. Mau MK, Sinclair K, Saito EP, Baumhofer KN, Kaholokula JK. Cardiometabolic health disparities in native Hawaiians and other Pacific Islanders. *Epidemiol Rev.* 2009;31:113-129.
9. Panapasa SV, Mau MK, Williams DR, McNally JW. Mortality patterns of Native Hawaiians across their lifespan: 1990-2000. *American journal of public health.* 2010;100(11):2304-2310.
10. Tsark JU, Braun KL. Eyes on the Pacific: cancer issues of Native Hawaiians and Pacific Islanders in Hawai'i and the US-associated Pacific. *J Cancer Educ.* 2009;24(2 Suppl):S68-69.
11. Wu LT, Blazer DG. Substance use disorders and co-morbidities among Asian Americans and Native Hawaiians/Pacific Islanders. *Psychol Med.* 2015;45(3):481-494.
12. Bacong AM, Holub C, Porotesano L. Comparing Obesity-Related Health Disparities among Native Hawaiians/Pacific Islanders, Asians, and Whites in California: Reinforcing the Need for Data Disaggregation and Operationalization. *Hawaii J Med Public Health.* 2016;75(11):337-344.
13. Davis J, Busch J, Hammatt Z, et al. The relationship between ethnicity and obesity in Asian and Pacific Islander populations: a literature review. *Ethn Dis.* 2004;14(1):111-118.
14. Martiniuk AL, Lee CM, Lawes CM, et al. Hypertension: its prevalence and population-attributable fraction for mortality from cardiovascular disease in the Asia-Pacific region. *Journal of hypertension.* 2007;25(1):73-79.
15. Watson RE, Karnchanasorn R, Gossain VV. Hypertension in Asian/Pacific Island Americans. *Journal of clinical hypertension.* 2009;11(3):148-152.
16. Grandinetti A, Kaholokula JK, Theriault AG, Mor JM, Chang HK, Waslien C. Prevalence of diabetes and glucose intolerance in an ethnically diverse rural community of Hawaii. *Ethn Dis.* 2007;17(2):250-255.
17. Aluli NE, Jones KL, Reyes PW, Brady SK, Tsark JU, Howard BV. Diabetes and cardiovascular risk factors in Native Hawaiians. *Hawaii medical journal.* 2009;68(7):152-157.
18. Mau MK, West MR, Shara NM, et al. Epidemiologic and clinical factors associated with chronic kidney disease among Asian Americans and Native Hawaiians. *Ethn Health.* 2007;12(2):111-127.
19. Aluli NE, Reyes PW, Brady SK, et al. All-cause and CVD mortality in Native Hawaiians. *Diabetes research and clinical practice.* 2010;89(1):65-71.
20. Nakagawa K, Koenig MA, Seto TB, Asai SM, Chang CW. Racial disparities among Native Hawaiians and Pacific Islanders with intracerebral hemorrhage. *Neurology.* 2012;79(7):675-680.

21. Palafox NA, Reichhardt M, Taitano JR, et al. A Socio-Ecological Framework for Cancer Control in the Pacific: A Community Case Study of the US Affiliated Pacific Island Jurisdictions 1997-2017. *Front Public Health.* 2018;6:313.
22. Profile: Native Hawaiians/Pacific Islanders. U.S. Department of Health and Human Services; 2020. https://minorityhealth.hhs.gov/omh/browse.aspx?lvl=3&lvlid=65. Accessed September 16, 2020.
23. Wu LT, Blazer DG, Gersing KR, et al. Comorbid substance use disorders with other Axis I and II mental disorders among treatment-seeking Asian Americans, Native Hawaiians/Pacific Islanders, and mixed-race people. *J Psychiatr Res.* 2013;47(12):1940-1948.
24. Andrade NN, Hishinuma ES, McDermott JF, Jr., et al. The National Center on Indigenous Hawaiian Behavioral Health study of prevalence of psychiatric disorders in native Hawaiian adolescents. *J Am Acad Child Adolesc Psychiatry.* 2006;45(1):26-36.
25. Subica AM, Wu LT. Substance Use and Suicide in Pacific Islander, American Indian, and Multiracial Youth. *Am J Prev Med.* 2018;54(6):795-805.
26. Grandinetti A, Kaholokula JK, Crabbe KM, Kenui CK, Chen R, Chang HK. Relationship between depressive symptoms and diabetes among native Hawaiians. *Psychoneuroendocrinology.* 2000;25(3):239-246.
27. Kaholokula JK, Haynes SN, Grandinetti A, Chang HK. Biological, psychosocial, and sociodemographic variables associated with depressive symptoms in persons with type 2 diabetes. *J Behav Med.* 2003;26(5):435-458.
28. Kaholokula JK, Haynes SN, Grandinetti A, Chang HK. Ethnic differences in the relationship between depressive symptoms and health-related quality of life in people with type 2 diabetes. *Ethn Health.* 2006;11(1):59-80.
29. Wu Y, Braun K, Onaka AT, Horiuchi BY, Tottori CJ, Wilkens L. Life Expectancies in Hawai'i: A Multi-ethnic Analysis of 2010 Life Tables. *Hawaii J Med Public Health.* 2017;76(1):9-14.
30. Sentell TL, Ahn HJ, Juarez DT, et al. Comparison of potentially preventable hospitalizations related to diabetes among Native Hawaiian, Chinese, Filipino, and Japanese elderly compared with whites, Hawai'i, December 2006-December 2010. *Prev Chronic Dis.* 2013;10:E123.
31. Narcisse MR, Felix H, Long CR, et al. Frequency and predictors of health services use by Native Hawaiians and Pacific Islanders: evidence from the U.S. National Health Interview Survey. *BMC Health Serv Res.* 2018;18(1):575.
32. Pobutsky P, Bradbury E, Wong Tomiyasu D. *Chronic Disease Disparities Report 2011: Social Determinants.* Honolulu, HI: Hawaii State Department of Health, Chronic Disease Management and Control Branch;2011.
33. Affairs OoH. *Kānehōʻālani – Transforming the Health of Native Hawaiian Men.* Honolulu, HI: Office of Hawaiian Affairs;2017.
34. Affairs OoH. *Haumea—Transforming the Health of Native Hawaiian Women and Empowering Wāhine Well-Being.* Honolulu, HI: Office of Hawaiian Affairs;2018.
35. Look M, Trask-Batti M, Agres R, Mau M, Kaholokula J. *Assessment and Priorities for Health & Well-being in Native Hawaiians & other Pacific Peoples.* Honolulu, HI: Center for Native and Pacific Health Disparities Research, University of Hawai'i;2013.
36. Park JJ, Humble S, Sommers BD, Colditz GA, Epstein AM, Koh HK. Health Insurance for Asian Americans, Native Hawaiians, and Pacific Islanders Under the Affordable Care Act. *JAMA Intern Med.* 2018;178(8):1128-1129.
37. Park JJ, Sommers BD, Humble S, Epstein AM, Colditz GA, Koh HK. Medicaid And Private Insurance Coverage For Low-Income Asian Americans, Native Hawaiians, And Pacific Islanders, 2010-16. *Health Aff (Millwood).* 2019;38(11):1911-1917.
38. Hostetter CJ. *Income Inequality and Native Hawaiian Communities in the Wake of the Great Recession: 2005-2013.* Honolulu, HI2014.

39. Health TOoM. Heart Disease and Native Hawaiians/Pacific Islanders. http://minorityhealth.hhs.gov/templates/content.aspx?lvl=3&lvlID=6&ID=8654. Accessed January 7, 2014.
40. Kaholokula JK, Antonio MC, Ing CK, et al. The effects of perceived racism on psychological distress mediated by venting and disengagement coping in Native Hawaiians. *BMC Psychol.* 2017;5(1):2.
41. Kaholokula JK, Iwane MK, Nacapoy AH. Effects of perceived racism and acculturation on hypertension in Native Hawaiians. *Hawaii medical journal.* 2010;69(5 Suppl 2):11-15.
42. Hagiwara MKI. *Racial discrimination, health, and healthcare in Hawaii's Chuukese community*. Honolulu, HI: Office of Public Health Sciences, University of Hawaii at Manoa; 2016.
43. Oliveira-Berry J, Austin A, Miyamoto R, Kaholokula JK, Yano B, Lunasco T. The Rural Hawai'i Behavioral Health Program: Increasing access to primary care behavioral health for Native Hawaiians in rural settings. *Professional Psychology: Research & Practice.* 2006;37(2):174-182.
44. Hafoka SF. Assessing the active living environment in three rural towns with a high proportion of Native Hawaiians and other Pacific Islanders. *Health Promot Perspect.* 2017;7(3):134-139.
45. State of Homelessness: A Look at Race and Ethnicity. National Alliance to End Homelessness; 2020. https://endhomelessness.org/state-of-homelessness-a-look-at-race-and-ethnicity/. Accessed August 20, 2020.
46. Care Pi. *Sexual and Gender Minorities 2020 Sub-Report.* Honolulu, HI: Partners in Care;2020.
47. Kaholokula JK, Samoa RA, Miyamoto RES, Palafox N, Daniels SA. COVID-19 Special Column: COVID-19 Hits Native Hawaiian and Pacific Islander Communities the Hardest. *Hawaii J Health Soc Welf.* 2020;79(5):144-146.
48. Samoa R, Kaholokula JK, Penaia C, et al. COVID-19 and the State of Health of Pacific Islanders in the United States. *AAPI Nexus: Policy, Practice and Community.* 2020;17(1 & 2).
49. Panapasa SV, Crabbe KM, Kaholokula JK. Efficacy of Federal Data: Revised Office of Management and Budget Standard for Native Hawaiian and Other Pacific Islanders Examined. *AAPI Nexus.* 2011;9(1-2):212-220.
50. Kaholokula JK, Nacapoy AH, Grandinetti A, Chang HK. Association between acculturation modes and type 2 diabetes among Native Hawaiians. *Diabetes Care.* 2008;31(4):698-700.
51. Schools K. *Ka Huaka'i" 2014 Native Hawaiian Educational Assessment.* Honolulu: Kamehameha Schools;2014.
52. Pacific islanders pay heavy price for abandoning traditional diet. *Bull World Health Organ.* 2010;88(7):484-485.
53. Kaholokula JK, Mau MK, Efird JT, et al. A family and community focused lifestyle program prevents weight regain in Pacific Islanders: a pilot randomized controlled trial. *Health education & behavior : the official publication of the Society for Public Health Education.* 2012;39(4):386-395.
54. Kaholokula JK, Townsend CK, Ige A, et al. Sociodemographic, behavioral, and biological variables related to weight loss in native Hawaiians and other Pacific Islanders. *Obesity.* 2013;21(3):E196-203.
55. Kaholokula JK, Wilson RE, Townsend CKM, et al. Translating the Diabetes Prevention Program in Native Hawaiian and Pacific Islander communities: the PILI 'Ohana Project. *Translational Behavioral Medicine.* 2013:1-11.
56. Ing CT, Zhang G, Dillard A, et al. Social Support Groups in the Maintenance of Glycemic Control after Community-Based Intervention. *J Diabetes Res.* 2016;2016:7913258.
57. Sinclair KA, Makahi EK, Shea-Solatorio C, Yoshimura SR, Townsend CK, Kaholokula JK. Outcomes from a diabetes self-management intervention for Native Hawaiians and Pacific

People: Partners in Care. *Annals of behavioral medicine : a publication of the Society of Behavioral Medicine.* 2013;45(1):24-32.
58. Kaholokula JK, Look M, Mabellos T, et al. A Cultural Dance Program Improves Hypertension Control and Cardiovascular Disease Risk in Native Hawaiians: A Randomized Controlled Trial. *Annals of behavioral medicine : a publication of the Society of Behavioral Medicine.* 2021.
59. Gollin LX, Harrigan RC, Calderon JL, Perez J, Easa D. Improving Hawaiian and Filipino involvement in clinical research opportunities: qualitative findings from Hawai'i. *Ethn Dis.* 2005;15(4 Suppl 5):S5-111-119.
60. Kaholokula JK, Saito E, Maua MK, Latimer R, Seto TB. Pacific Islanders' perspectives on heart failure management. *Patient Educ Couns.* 2008;70(2):281-291.
61. George S, Duran N, Norris K. A systematic review of barriers and facilitators to minority research participation among African Americans, Latinos, Asian Americans, and Pacific Islanders. *American journal of public health.* 2014;104(2):e16-31.
62. Hawai'i Uo. *Enrollment at UH Mānoa up 6%, record freshman numbers. .* Honolulu, HI.: University of Hawai'i; October 17, 2021 2021.
63. Affairs OoH. *Native Hawaiian Data Book 2021, Table 08.13 Families Below Poverty Level by Race-Ethnicity in Hawai'i: 2019.* Honolulu, HI: Office of Hawaiian Affairs;2021.
64. Affairs OoH. *Native Hawaiian Data Book 2021, Table 06.73: Educational Attainment by Race-Ethnicity in Hawai'i: 2019.* Honolulu, HI: Office of Hawaiian Affairs;2021.
65. Purdy CM. *Evaluation of a Post-Baccalaureate Medical Education Program for Disadvantaged Students to Diversify the Healthcare Workforce of Hawai'i (1996-2016).* Honolulu, HI: University of Hawai'i at Mānoa;2019.
66. Diversity in Medicine: Facts and Figures 2019. American of American Medical Colleges 2019. https://www.aamc.org/data-reports/workforce/report/diversity-medicine-facts-and-figures-2019. Accessed January 29, 2021.
67. Đoàn LN, Takata Y, Sakuma KK, Irvin VL. Trends in Clinical Research Including Asian American, Native Hawaiian, and Pacific Islander Participants Funded by the US National Institutes of Health, 1992 to 2018. *JAMA Netw Open.* 2019;2(7):e197432.
68. Manoa Institutional Research Office: Employee. University of Hawai'i at Manoa; 2019. https://manoa.hawaii.edu/miro/employee/. Accessed January 29, 2021.
69. Ong M, Wright C, Espinosa LL, Orfield G. Inside the Double Bind: A Synthesis of Empirical Research on Undergraduate and Graduate Women of Color in Science, Technology, Engineering, and Mathematics. *Harvard Educational Review.* 2011;81(2):172-208.
70. Valantine HA, Lund PK, Gammie AE. From the NIH: A Systems Approach to Increasing the Diversity of the Biomedical Research Workforce. *CBE Life Sci Educ.*15(3).
71. Soong S. *Undergraduate Health Research Training Programs for Racially and Ethnically Underrepresented Students in the Health Sciences*. ProQuest LLC: Office of Public Health Studies, University of Hawaii; 2019.
72. Nivet MA, Taylor VS, Butts GC, et al. Diversity in academic medicine no. 1 case for minority faculty development today. *Mt Sinai J Med.* 2008;75(6):491-498.