



Published in final edited form as:

Hawaii Med J. 2008 August ; 67(8): 218–222.

Native and Pacific Health Disparities Research

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Health disparities are a national health priority and occur "...when a particular population has significantly higher rates of disease incidence, prevalence, morbidity, or mortality than the general population" (U.S. Public Law 106–525).¹ Health disparate populations are often defined by race/ethnicity, socio-economic status (SES), generational status (e.g., older adults), and geographical location (e.g., rural areas). Most often there is an overlap between different populations categorized as health disparate, for example the over-representation of a particular racial/ethnic group in a lower SES.

Although racial/ethnic disparities in health status have been acknowledged for more than a century, it has only recently become a national priority.² Toward this end, the Minority Health and Health Disparities Research and Education Act (USPL 106–525) authorized the establishment of the National Center of Minority Health and Health Disparities (NCMHD) under the National Institutes of Health (NIH).

The mission of NCMHD is "to promote minority health and to lead, coordinate, support, and assess the NIH effort to reduce and ultimately eliminate health disparities." To meet this mission, NCMHD seeks to "conduct and support basic, clinical, social, and behavioral research, promote research infrastructure and training, foster emerging programs, disseminate information, and reach out to minority and other health disparity communities."

In 2002, the Department of Native Hawaiian Health (DNHH) was funded by NCMHD to create a Center of EXcellence in Partnerships, Outreach, Research and Training (Center EXPORT) to address health disparities in Native Hawaiians and other Pacific Peoples. In 2007, the EXPORT Center was replaced and expanded into the Center for Native and Pacific Health Disparities Research (the "Center") which focuses on cardiometabolic disparities in Native Hawaiians, Alaska Natives, and other Pacific Island Peoples (including Samoans, Chuukese, and Filipinos). The Center is in the DNHH, John A. Burns School of Medicine, University of Hawai'i at Mānoa (UHM). Its partnerships include Alaska Natives in Anchorage and Native Hawaiians and other Pacific Island Peoples in California.

Native Hawaiians, Alaska Natives, and other Pacific Island Peoples are disproportionately affected by diabetes, cardiovascular disease (CVD), obesity, and associated risk factors. Following is an overview of the Center and its three main components that are designed to reduce and eliminate cardiometabolic disparities in the targeted populations.

Community Engagement and Partnerships Focusing on Health Disparities

To confront effectively health disparities in native and Pacific peoples (as with other populations), research activities need to involve partnerships that engage the community and academic researchers in ways that promote trust, co-learning, and mutual benefit. A rich and comprehensive approach to addressing health disparities than the conventional approaches for

conducting research are made possible from the diverse perspectives and expertise of different researchers, and the wisdom and intimate knowledge community-based organizations have of their own communities.³ Such community-academic partnerships can facilitate the translation of scientific research from bench-to bedside-to-communities, and from efficacy (e.g., RCT) to effectiveness (e.g., translational research) studies.⁴ Thus, the Center is comprised of dedicated communities and academic partnerships that extend from Hawai'i to California and to Alaska.

Academically, the Center is comprised of biomedical and behavioral researchers from departments in JABSOM, other UHM colleges, the Queen's Medical Center (QMC), and Southcentral Foundation (SCF), an Alaska Native health care organization. The researchers and their affiliations are Marjorie Mau, MD, J. Keawe'aimoku Kaholokula, PhD (Center's Co-Directors), Erin Saito, PhD, Ka'imi Sinclair, PhD, and Mele Look, MBA from the Department of Native Hawaiian Health; May Okihiro, MD from the Department of Pediatrics; Cecilia Shikuma, MD and Marianna Gerschenson, PhD from the Department of Medicine; Prathibha V. Nerukar, PhD from the College of Tropical Agriculture and Bioengineering; Jimmy Efird, PhD from Biostatistics and Data Management Facility, JABSOM; Todd Seto, MD from the QMC; and Ileen Sylvester, MBA and Denise Dillard, PhD from the SCF in Anchorage, Alaska.

In the community, the Center has forged partnerships with a diverse group of community organizations serving Native Hawaiians, Alaska Natives, and other Pacific Peoples. Partnering organizations in Hawai'i include Kōkua Kalihi Valley Family Comprehensive Services (KKV); Hui Mālama Ola Nā 'Ōiwi (the Native Hawaiian Healthcare System on Hawai'i Island); and the Hawai'i Primary Care Association. In Southern California, the community partner is the Pacific Islander Partnership, a grassroots non-profit organization that provides social and health outreach to Native Hawaiians and other Pacific Islanders in Southern California. In Alaska, the community partnership is located at Southcentral Foundation, an Alaska Native owned and managed healthcare corporation.

The Center embraces research referred to as Community-Based Participatory Research (CBPR) to guide the community-academic partnerships. CBPR is an approach to scientific inquiry that "equitably involves all partners [community and academic] in the research process and recognizes the unique strengths that each brings".⁵ In all Center-supported research projects, researchers will seek to involve actively community partners in different aspects of research, from identifying the research topics, implementing the study protocol, disseminating research information, and translating research results into practical applications.

The Community Engagement Core, directed by Mele Look, MBA, will enable and nurture our multiple community partnerships by listening to their needs, honoring their community knowledge and wisdom, and involving organizations where appropriate. Some of the activities include health information dissemination projects for diabetes and CVD programs in Native Hawaiians and other Pacific Islanders. In addition, capacity building for community health workers and outreach workers in diabetes and CVD are included.

Scientific Innovation to Eliminate Health Disparities

Health disparities research goes beyond the examination of risk factors, incidence, and prevalence of disease and their consequences. It is about developing effective and innovative interventions to prevent the onset as well as treat and manage diseases. Considered are medical and behavioral interventions, public health initiatives, and/or socio-political advocacy, which are both empirically supported and culturally meaningful. To address these issues, the Center is comprised of interdisciplinary researchers and scientists who conduct basic, clinical, and community-engaged research in partnership with grassroots organizations, native health systems, and community health centers.

Current innovative studies underway are

1. The Hula Empowering Lifestyle Adaptations (HELA) Study co-led by Todd Seto, MD from QMC and Mele Look, MBA and J. Keawe'aimoku Kaholokula, PhD from the DNHH. The HELA Study seeks to develop and test a cardiac rehabilitation program that involves hula, the traditional Native Hawaiian dance form, as a means of physical activity. This study is being conducted by the investigators in close consultation with an advisory board of kumu hula (hula experts and teachers) and cardiologists.
2. A study on the use of bitter melon juice on insulin metabolism in an animal model is being conducted by Pratibha V. Nerurkar, PhD from the College of Tropical Agriculture and Bioengineering. The hope is that bitter melon, a local food staple, may prove promising as a means of improving the metabolic syndrome in humans.
3. The Partnerships to Improve Lifestyle Interventions (PILI) 'Ohana Project, a community-academic partnership to address obesity disparities in Hawai'i. The researchers are from the DNHH (J.K. Kaholokula, PhD and M. Mau, MD) and five community organizations: 1) KKV (Sheryl Yoshimura, BS, RD), 2) Hawai'i Maoli of the Association of Hawaiian Civic Clubs (Henry Gomes; Charlie Rose), 3) Kula no Nā Po'e Hawai'i (Puni Kekauoha), 4) Ke Ola Mamo, Native Hawaiian Healthcare System on O'ahu (Donna Palakiko, RN, MS), and 5) Kalihi Pālama Community Health Center (KPCHC; Anne Leake, PhD). The PILI 'Ohana partnership seeks to test the effectiveness of a community based and community led weight loss maintenance intervention for Native Hawaiians and other Pacific Islanders using CBPR.
4. The Mālama Pu'uwai Study led by researchers from the DNHH (M. Mau, MD) and QMC (T. Seto, MD) is a randomized controlled trial (RCT) to test the efficacy of a culturally-informed heart failure education and support program, called the Mālama Pu'uwai Program (MPP), which is being compared to usual care in Native Hawaiians and other Pacific Islanders with heart failure. The MPP is a nurse-led, home-delivered heart failure intervention that targets symptom and medication management, sodium intake, and stress management.
5. A study examining obesity through mitochondrial dysfunction is underway by Mariana Gerschenson, PhD in partnership with KPCHC using a community engagement approach that bridges both basic science and clinical perspectives. By examining mitochondrial function in peripheral mononuclear cells (PBMCs), the hope is to find that a mitochondrial phenotype of diabetes and/or obesity may be studied in PBMCs.
6. An epidemiological study examining metabolic syndrome is being conducted by May Okihiro, MD in partnership with the Wai'anae Coast Comprehensive Health Center and KKV. This study aims to characterize, for the first time, ethnic differences of the metabolic syndrome in three high risk youth populations of Native Hawaiians, Samoans, and Filipinos. Given the rising tide of obesity in youth, this study offers the first step in addressing future efforts to curb the obesity epidemic in these health disparate populations.

Commitment to Research Training and Development of Health Disparities Researchers

Strong scientific expertise as well as cultural competence is required to address the health disparities faced by native and Pacific populations. Effective health disparities research involves communities and academic partners who strive to conduct innovative scientific and

culturally relevant research and programs. The Center focuses on research training and development of scientific investigators, primarily on junior investigators who have a commitment to health disparities research.

Cecilia Shikuma, MD, as the Director of the Center's Research Core, provides mentorship to health disparities investigators as well as oversees the pilot funding peer-review program. In addition, a Research Training and Development Unit of the Center, headed by Erin Saito, PhD, was created to support junior scientists interested in cardiometabolic disparities in designing meritorious research studies and acquiring NIH grant writing skills. Research training activities under this Unit will include workshops and seminars on biostatistics, epidemiology, and grant writing. A goal of the Center is to increase the number of investigators who will be capable of developing scientifically rigorous independent research using CBPR approaches in partnership with Native Hawaiian, Alaska Native, and other Pacific Peoples communities.

Center Administrative Core – Health Disparities Research Infrastructure

The Center's Administrative Core provides the foundation that supports the three main components of the Center – Community Engagement, Research Studies, and Research Training and Development. The Administrative Core functions to ensure that fiscal and administrative operations and human subject protection are maintained and monitored. In addition, it oversees the coordination of the annual He Huliau Health Disparities Conference and the External Scientific Advisory Committee (ESAC). The ESAC is comprised of senior scientists with a range of expertise that includes basic science, clinical research, epidemiology, health services research, and traditional healing. These senior investigators are Wilfred Fujimoto, MD; Barbara V. Howard, PhD; Haya R. Rubin, MD, PhD; Ted Mala, MD, MPH and Earl Francis Cook, ScD, MS.

Conclusion

The Center for Native and Pacific Health Disparities Research was developed around three fundamental aspects of health disparities research: The need for strong community and academic partnerships aimed at eliminating health disparities, the need for innovative and scientifically rigorous research agendas and studies that think “outside the box,” and the need to develop emerging health disparities researchers that balances scientific rigor with community realities. Building upon this foundation, the Center looks to the future for the people of Hawai'i and our Pacific region of the world that will not only support JABSOM's long term vision of the “best medical school with an Asian Pacific focus” but more importantly to eliminate health disparities in Native and Pacific Peoples through community-academic partnerships.

Acknowledgements

The Center for Native and Pacific Health Disparities is supported by a grant from the NCMHD (2P20MD000173) of NIH. Other research projects named in this article are also supported by a grant from the NCMHD (2R24MD001660; PILI 'Ohana Project) as well as a grant from the National Heart, Lung, and Blood Institute (NHLBI; 5U01HL079163; Mālama Pu'uwai Study). The content of this article is solely the responsibility of the authors and does not necessarily represent the official views of the NCMHD, NHLBI, or NIH. The authors would also like to recognize the important contributions Sheri Kataoka makes to the Center's administrative operations.

References

1. National Cancer Institute. <http://crchd.cancer.gov/definitions/defined.html>. 2008.
2. Examining the Health Disparities Research Plan of the National Institutes of Health: Unfinished Business. Institute of Medicine of the National Academies. Washington, DC: National Academies Press; 2006 Mar.

3. Tse Alice, M. Participatory Research Manual for Community Partners. Waipahu, HI: 2006. Palakiko, Donna-Marie.
4. Mau MK, Yee D. Hawaii's Role to Increase Public Participation in Health Research. *Hawaii Med J* 2008 January;67(1):4-6. [PubMed: 18309832]
5. Minkler, M.; Wallerstein, N. Community Based Participatory Research for Health. Introduction to community based participatory research. Minkler, M.; Wallerstein, N., editors. San Francisco, Calif: John Wiley & Sons, Inc; 2003. p. 3-26.