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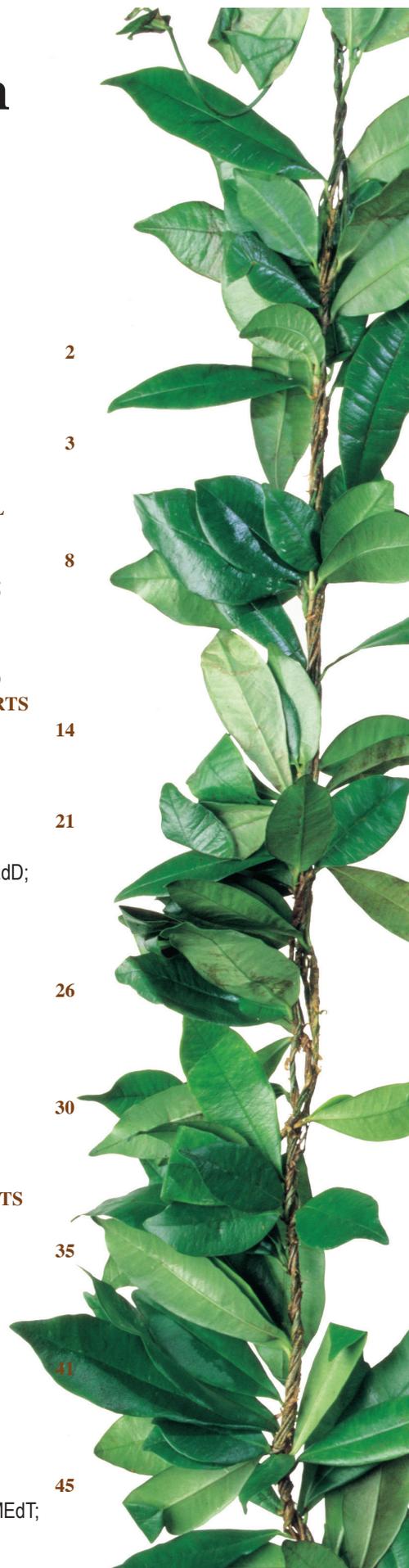
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Guest Editor's Message: Pacific Region Indigenous Doctors Congress (PRIDoC) 2018

Malia Lee MD

This special issue is published to recognize the Pacific Region Indigenous Doctors Congress (PRIDoC) 2018 hosted by 'Ahahui o nā Kauka, the Association of Native Hawaiian Physicians, in Hilo, HI July 2018. This bi-annual conference brought indigenous physicians, healthcare providers, medical educators, and healthcare organizations together from the continental United States, Australia, New Zealand, Canada, Taiwan, and the Pacific Basin to experience an exchange of knowledge designed with the intention of leading indigenous populations back to the thriving health models they once embodied.

Inspired by the 'olelo no 'eau (Hawaiian proverb), 'A 'ohe hua o ka mai 'a i ka lā ho 'okaāhi, many no task is too big when done together, the PRIDoC Committee organizers worked steadily with volunteers, students, community physicians, cultural experts, and community partners for two years to deliver a masterfully designed program. Striving to achieve health equity, presenters shared clinical interventions, policy initiatives, innovations in medical education, and local and global strategies addressing health inequity and climate change. Ideas stimulated discussions on how our communities can work together to improve indigenous healthcare, medical student education, indigenous faculty and student development, health workforce, and cultural training programs.

The conference attendees, presentations, and messages of *malama 'āina/malama honua* (care for the land/care for the earth) were wrapped, like *ho'okupu* (ceremonial offering), in cultural protocol, hula, oli, ceremony, and celebration. The theme, "Oi Ola Wai Honua," (life is better while the earth has water), gifted to the coordinators from the Edith Kanaka'ole Foundation, truly brought meaning that resonated throughout all of the week's activities.

As a contributing sponsor of PRIDoC 2018 and the pre-conference Indigenous Faculty Forum, the Native Hawaiian Center of Excellence (NHCOE) invited all of the conference participants who delivered presentations on the development of physician/health care workforce, student research, cultural competency training curriculum, and indigenous faculty to submit an original article based on their conference abstracts. Twenty-two (22) academic faculty, 11 medical, social work, or public health students, and 3 community health care providers responded by submitting their works to be published in this peer-reviewed issue.

Made possible through multiple international, national, and community partnerships, the editors of this journal wish to express their deepest appreciation for all of the donations of time, coordination and funding that have supported PRIDoC 2018. A special acknowledgement is extended to Breanna Morrison PhD, and to the PRIDoC 2018 conference coordinators, Dee-Ann Carpenter MD, and Martina Kamaka MD, for their invaluable assistance in editing this issue.

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Conflict of Interest

This author reports no conflict of interest.

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Conference Report: The Pacific Region Indigenous Doctors Congress (PRIDoC) 2018

Dee-Ann Carpenter MD and Martina Kamaka MD

Keywords

conference, culture, doctors, Hawaiian, Hawai'i, indigenous, Pacific, protocol

Abbreviations

AIDA = Australian Indigenous Doctors Association

CME = Continuing Medical Education

IFF = Indigenous Faculty Forum

JABSOM = John A. Burns School of Medicine

NNaCoE = Northwest Native American Center of Excellence

NHCOE = Native Hawaiian Center of Excellence

PRIDoC = Pacific Region Indigenous Doctors Congress

Introduction

This was “The best PRIDoC ever,” exclaimed one of the attendees at the ninth biannual Pacific Region Indigenous Doctors Congress (PRIDoC) held in Hilo, Hawai‘i on July 12-17, 2018. PRIDoC is a biannual conference that brings together indigenous physicians and medical students from around the Pacific and from those lands and territories connected to the Pacific in some way. What made this PRIDoC so special? PRIDoC offers a culturally safe space where indigenous doctors and medical students can come together to build relationships and share resources and expertise. The week-long event included extraordinary cultural grounding on the island of Hawai‘i. Hawai‘i island is the largest in the Hawaiian Island chain and is home to Kilauea, an active volcano that had erupted continuously since 1983 (flows stopped in the fall of 2019), and the home of Pele, Native Hawaiian goddess of volcanoes.

The PRIDoC medical conference strives to improve the health of indigenous populations while offering CME (continuing medical education) activities, but what truly sets it apart is its use of a cultural lens to focus providers on how to better their care for patients. Sharing stories, histories and struggles as well as achievements and best practices empowers participants to influence public policies for the health of our ecosystems, our lands and waters as well as the well-being of our communities. As indigenous physicians, we know that “the health of our lands” cannot be separated from the “health of our people.” PRIDoC creates a space to share research advances, issues, strategies, and best practices for health and well-being. In addition, mentorship of medical students, is emphasized as they are “our future.”

Background of PRIDoC

PRIDoC has its origins in 1999 when both the ‘Ahaui o nā Kauka (Association of Native Hawaiian Physicians) and Australian Indigenous Doctors Association (AIDA) reached out to Te ORA (Te Ohu Rata o Aotearoa-Maori Medical Practitioners Association) for assistance in organizing indigenous doctors in their respective territories. An invitation to speak at Te ORA’s annual meeting and a subsequent visit to the AIDA annual meeting led to discussions about similarities in the impacts of colonialism and the health disparities seen within indigenous populations. The three organizations decided that a conference focusing on indigenous health care disparities, including highlighting indigenous-specific best practices, could be very valuable. The leadership of the three groups decided early on that the conference would be different; it would provide an indigenous safe space and culture would be an integral part.

The conference was named the Pacific Region Indigenous Doctors Congress to reflect the Pacific connections of the three original members. The acronym “PRIDoC” was felt to represent our commonality as proud (“PRID(e)”) indigenous doctors (“Doc”). PRIDoC has since expanded from the original three organizations of indigenous physicians to include Indigenous Physician Association of Canada (IPAC), Medical Association of Indigenous People of Taiwan (MAIPT), and the Association of American Indian Physicians (AAIP). The Pacific Basin Medical Association (PBMA) is a long-standing associate member.

In 2002, the first PRIDoC was held in Honolulu, Hawai‘i at Waikiki Beach and was supported by funding from Te Ora, the Native Hawaiian Center of Excellence (NHCOE) at the John A. Burns School of Medicine (JABSOM), and a grant from Eli Lilly New Zealand. Local conference organizers work hard to obtain support for subsequent PRIDoCs through many governmental and nonprofit agencies. The organization chosen to host the next PRIDoC conference also leads the PRIDoC council for two years. Other member organizations form the PRIDoC council and provide guidance and support to the hosting organization. Conferences are held every other year and rotate amongst the various partner organizations. Conference locations are included in Table 1. Plans are already underway for PRIDoC 2020 which will be hosted by IPAC in Vancouver, Canada on September 15-18, 2020.

Cultural Grounding at PRIDoC 2018

Since PRIDoC’s founding in 2002, culture has played a central role. As host organizations change every 2 years, the host culture dictates the protocol and cultural activities offered at PRIDoC. ‘Ahaui o nā Kauka (Association of Native Hawaiian Physicians) hosted PRIDoC 2018 and worked closely with the Edith Kanaka’ole Foundation (EKF), a widely respected Hawaiian cultural based organization whose mission is to elevate Hawaiian intelligence through cultural education founded on the teachings and traditional practices of Edith and Luka Kanaka’ole. Pualani Kanahele and her daughter, Kekuhi Keali’ikanaka’oleo Haililani, are cultural consultants from EKF who were profoundly involved in the planning and execution of the cultural components of the conference. Members of ‘Ahaui o nā Kauka were asked to undergo training in Hawaiian cultural protocol as part of the responsibility of hosting PRIDoC. The consultants helped guide the cultural aspects of the conference from opening and welcoming protocols, to daily reminders of connections to culture, to closing ceremonies. The consultants also gifted us with the theme of the conference, “‘*Oi Ola Wai Honua*,” meaning “life is better while the earth has water,” which reminded participants of the importance of “caring for

our resources, including those of us who function as resources to our people.” The hope was that the theme would inspire the exchange of ideas and collective knowledge that would enable “our people, our communities, our lands and especially us as indigenous healthcare providers, to thrive physically, emotionally, spiritually, socially and culturally.”

PRIDoC 2018 Conference Overview (Table 2)

Pre-Conference Workshop (July 12): Indigenous Faculty Forum

PRIDoC has featured pre-conference workshops in the past, usually focusing on medical education and/or research. The University of Hawai‘i John A. Burns School of Medicine (JABSOM) Native Hawaiian Center of Excellence (NHCOE), has been an essential partner of PRIDoC when held in Hawai‘i. While preparing for PRIDoC 2018, the Northwest Native American Center of Excellence (NNACoE), based at Oregon Health Sciences University, reached out to the NHCOE to collaborate on a pre-conference Indigenous Faculty Forum (IFF). NHCOE and NNACoE are the only 2 indigenous focused COE’s which are funded by the Health Resources and Services Administration’s Bureau of Health Professions, US Department of Health and Human Services. The 2018 pre-conference workshop would be the second IFF for the NNACoE and an extension of the NHCOE’s previous involvement with medical education workshops at PRIDoC 2008.

Speakers delivered valuable, riveting discussions relevant to indigenous faculty development in medical education and health care. Tips and pointers specifically for indigenous faculty were shared including guidance on effective leadership and mentorship as well as lessons learned in balancing clinical practice and academia. An international panel addressed the topics of microaggression, racism and bias in medicine and academia. The IFF closed with an inspiring speech on how to walk in two worlds, western medicine and culture as an indigenous doctor.

2002: Honolulu, Hawai‘i, USA
2004: Cairns, Australia
2006: Rotorua, Aotearoa (New Zealand)
2008: Waimea, Kauai, Hawai‘i, USA
2010: Whistler, Canada
2012: Alice Springs, Australia
2014: Hualien, Taiwan
2016: Auckland, Aotearoa
2018: Hilo, Hawai‘i, USA
2020: Vancouver, Canada

Date/Location	• July 12-17, 2018 in Hilo, Hawai‘i
Attendees	• 315 conference delegates, from Australia, Canada, New Zealand, Taiwan, Hawai‘i and the US Continent • 64 medical students
Academic program	• 18 Plenary, 59 oral abstract presentations, 10 workshops, 27 poster presentations • 28.5 AMA Category 1 CME (Continuing Medical Education Credits) credits
Preconference Workshop	• NNACOE /NHCOE Indigenous Faculty Forum
Conference Venue Sites	• Hilo: ‘awa (kava) ceremony at Wainaku, academic program at UH Hilo—Hale’Ōlelo and Performing Arts Center, opening reception at ‘Imiloa Astronomy Center, lū’au (feast) at Aunty Sally’s Lū’au Hale, banquet in the Crown Room at the Grand Naniloa Hotel • Kamuela: Kahilu theater, Kanu o ka ‘Aina, • Mauna Kea: Pu‘u Huluhulu • Kawaihae: Na Kalai Wa‘a (home of Makali‘i)
Kekuni Paratene Advocacy Award 2018 Recipient	• Mr. Romlie Mokak (Australia) given for his Advocacy work for the indigenous people of Australia (Aboriginals and Torres Strait Islanders)

Welcoming Ceremony

As is customary, delegations are welcomed to the lands of the host organization. At PRIDoC 2018, the welcoming took place off site at Wainaku. Overlooking Hilo Bay with the glow of Kilauea's eruption in the distance, over 300 conference participants and guests were welcomed to the island of Hawai'i with an 'awa (kava root) ceremony offered by *kauka hui* (host physicians) and Native Hawaiian medical students.

Day 1 (July 13)

The main conference venue for PRIDoC 2018 was the University of Hawai'i Hilo. Plenary sessions were held in the theater, and breakouts and workshops took place at Hale'ōlelo, the home of Ka Haka 'Ula o Ke'elikōlani College of Hawaiian Language. Day one began the formal opening of the conference with a march of the conference attendees into the UH Hilo theatre where they were greeted by the beating of *pahu* (traditional drums) and blowing of *pū* (conch shells). The leaders of the various delegations from PRIDoC then bestowed *ho'okupu* (traditional gifts or offerings) for the *lele* (structure upon which to place the offerings) which was built on the stage and remained a focal part of the conference throughout its duration. The opening ceremony set the tone and foundation for the conference which was further solidified by the opening speaker, Dr. Pualani Kanahale, who described Native Hawaiian "Nomenclature Profundity." Thereafter, plenaries discussed "Our Healthy Future," "Mana and Maoli Ola (Power and Native Health)," and "Racism and Mental Health." Afternoon breakout sessions fell into one of several streams such as "Mental Health," "Medical Education," "Workforce Development," "Chronic Disease," and "Changing Systems of Care." Various other topics of clinical importance, as well as numerous workshops, were featured throughout the conference.

Day 2 (July 14)

The following day, the conference venue moved to Kamuela, on the northern part of the island, where activities centered around the theme of "*Ke Ala Ola*" (Pathway to Health). The opening featured a discussion on traditional wayfinding (navigation used by Pacific Islanders) led by a panel of a navigator, captain, and crew from the Hōkūle'a Hawaiian voyaging canoe, which had recently completed her Mālama Honua (Care for Island Earth) voyage circumnavigating the earth. This set the stage for a day of "caring for ourselves, our communities, our canoe." Other topics of discussion included traditional Native Hawaiian health practices and caring for our 'āina (land), especially Hawai'i's sacred mountain, Mauna Kea.

In the afternoon, conference attendees were able to choose from a number of workshops which promoted personal cultural growth. These workshops were presented by cultural consultants or traditional healers who were conference attendees or from the local community.

The medical student attendees had a separate "track" that involved a visit to a local voyaging canoe, the Makali'i, to learn from her crew about traditional wayfinding and the importance of caring for our resources. Conference guests were offered an afternoon of shopping, visiting a nearby beach and/or learning about local *loko i'a* (fish ponds) — resources used by ancient Native Hawaiians to help feed their communities.

At sunset, all three groups (delegates, medical students and guests) gathered at the base of Mauna Kea to pay honor to the 'āina (land) with protocol at Pu'u Huluhulu.

Days 3, 4, and 5 (July 15-17)

The following days featured more plenaries, breakouts and workshops on specific topics affecting indigenous people and their health. Some examples of topics included climate change, workforce diversity, chronic diseases, women's health, men's health, indigenous child rearing, traditional healing, genomics and social justice. A separate gathering for the *kūpuna* (elders) from the various delegations was held as a new and unique addition to this PRIDoC. All of the presentations were powerful, uplifting spirits and buoying resiliency.

The conference closed with the following set of resolutions that were generated and approved by the conference delegates to:

- Address "waves of colonialism: destruction of our natural and cultural resources,"
- Advocate and support access to healthcare for Marshallese and other Micronesians in Hawai'i and throughout the USA.

An *oli* (chant), gifted and taught to the conference participants, and a moving *hula* (dance) performance by Hālau o Kekuhi formally closed the conference.

Student Tract

Special mention should be made about the medical student track. JABSOM students, under the tutelage of 'Ahahui o nā Kauka board members who were medical students at previous PRIDoCs, introduced a curriculum for visiting international indigenous students involving Native Hawaiian protocol and 'āina (land)-based activities. Students attended the conference but had separate or parallel tracts during the pre-conference workshop as well as during parts of day 2. The students all stayed in the same dorm to promote camaraderie, and each was housed with someone from a different medical school. As mentioned above, students were fortunate to visit the Makali'i, Hawai'i island's voyaging canoe, and to participate in workshops that emphasized the importance of protecting our island resources while advancing indigenous health care. Many students presented either a poster or oral presentation, helping them to prepare for future leadership, and giving insight to cutting edge advances in research and education that support indigenous health and the reduction of health disparities throughout the world.

- “It just feels like home. My heart rejoices in our shared knowing. I feel like I have a place in the profession of medicine. We aren’t alone in our struggles.”
- “Keeps me centered; keeps me going; tells me the important things to remember and to do.”
- “It always inspires and enlightens me. It reenergizes me to continue the often hard and challenging work of advancing indigenous health. Coming together every 2 years is like a big family reunion. We are always so happy to see each other. The networking and mutual support is amazing.”
- “This was my first PRIDoC. It won’t be my last.”

Inspiration was the most important thing that was taken away from the conference, along with *aloha* (love, compassion), knowledge, strength and friendship, peace and hope. Hopes are high for more cultural inspiration, indigenous networking support, and sharing of knowledge at the next PRIDoC, hosted by IPAC and scheduled to take place September 15-28, 2020 in Vancouver, Canada.

Conflict of Interest

None of the authors identify a conflict of interest.

Disclosure

Both Dr. Dee-Ann Carpenter and Dr. Martina Kamaka work for the UHM John A. Burns School of Medicine, Department of Native Hawaiian Health Native Hawaiian Center of Excellence. Dr. Martina Kamaka is the Secretary and past-President of the ‘Ahahui o na Kauka and Dr. Dee-Ann Carpenter is an immediate past-Board member on ‘Ahahui o na Kauka. Neither has any conflicts of interest.

This project received support from the Native Hawaiian Center of Excellence award, D3HP16044, from the Health Resources and Services Administration’s Bureau of Health Professions, US Department of Health and Human Services. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the BHP, HRSA, DHHS or the US Government.

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The Indigenous Faculty Forum: A Longitudinal Professional Development Program to Promote the Advancement of Indigenous Faculty in Academic Medicine

Erik Brodt MD; Amanda Bruegl MD, MS; Marissa Fuqua Miller BS; Cynthia Taylor PhD; Martina Kamaka MD; Dee-Ann Carpenter MD; Vanessa Wong MD; and Patricia A. Carney PhD, MS

Abstract

American Indian, Alaska Native (AIAN) and Native Hawaiian and other Pacific Islander (NHPI) faculty, are substantially under-represented (<1%) at US medical schools. The Oregon Health & Science University's Northwest Native American Center of Excellence and The University of Hawai'i Native Hawaiian Center of Excellence have created an Indigenous Faculty Forum (IFF), a one-day structured course with flanking social activities, specifically designed to meet the unique needs of AIAN and NHPI academic faculty. It provided: (1) Indigenous space, (2) skill building, (3) networking, and (4) ongoing mentorship, each of which were included to specifically mitigate isolation and tokenism that negatively affects promotion and advancement. Two Forums have been conducted, first in Portland, OR in 2017 and the second in Hilo, Hawai'i in 2018. Nine of eighteen AIAN faculty in the three-state region (CA, OR, WA) attended IFF Session #1, representing 50% of known AIAN faculty in this region. Thirty-four Indigenous faculty from around the world attended IFF Session #2, with twenty-nine completing program evaluations. Respondents were predominantly female (81.6%), under age 44 (52.7%), and either instructors or assistant professors (52.6%). In terms of career choice, both sessions included primary care physicians as the most represented group (55.6% at Session #1 and 62.1% at Session #2). Increasing Indigenous faculty representation in US medical schools, while simultaneously fostering their career advancement and meaning in work, is vitally important. We have begun the work needed to address this problem and look forward to conducting more efforts, including longitudinal evaluation designs to study effectiveness.

Keywords

Indigenous, faculty development, Native American, underrepresented, minority

Abbreviations

AAIP = Association of American Indian Physicians
AIAN = American Indian, Alaska Native
AIDA = Australian Indigenous Doctors Association
IFF = Indigenous Faculty Forum
IPAC = Indigenous Physicians Association of Canada
MAIPT = Medical Association of Indigenous Peoples of Taiwan
NHPI = Native Hawaiian and other Pacific Islander
NHCOE = Native Hawaiian Center of Excellence
NNACoE = Northwest Native American Center of Excellence
OHSU = Oregon Health & Science University
PRIDoC = Pacific Region Indigenous Doctors Congress

Introduction

The percentage of under-represented faculty has increased nationally across all medical schools since 2000; however, the promotion of minority faculty in academic medicine continues to lag behind that of non-Hispanic whites.¹ This issue is especially problematic for American Indian, Alaska Native (AIAN) and Native Hawaiian and other Pacific Islander (NHPI) Indigenous faculty, as they are severely under-represented at US medical schools. A recent analysis of trends in US faculty rank shows that Indigenous faculty are either not experiencing increases or are decreasing in representation, with Indigenous faculty comprising the lowest percentage (<1%) of full professors among all racial groups.² Despite efforts to increase minority faculty recruitment and development at US medical schools over the past two decades, Indigenous faculty appear not to benefit from these efforts as evidenced by their persistent overall under-representation and lack of advancement as medical school faculty.^{2,4}

In the early 1990's comprehensive minority physician faculty development programs began to emerge in the United States as a result of discordance between minority and non-minority faculty in recruitment, retention, and promotion.³ A 2013 study found these programs exist at 29% of US medical schools. However, other research indicates that the sole presence of a minority faculty development program is insufficient to increase underrepresented minority faculty representation, recruitment, or promotion.⁴ Yet subgroup analyses of these findings did reveal that programs in place for at least five years were associated with greater increases in underrepresented minority faculty. In a systematic review published in 2014, Rodriguez et al. identified four key elements linked to minority faculty program effectiveness, including: (1) networking activities, (2) specific skill development, (3) support of senior faculty, and (4) training on institutional culture.⁵

Despite these compelling findings, some faculty development initiatives may inadvertently contribute to perpetuating the failure to recruit and promote Indigenous faculty, as they may be deficient in addressing the unique needs of this group. We found only one published study exploring AIAN health care providers and their perceptions of academic medicine, which revealed that recognizing challenges in balancing AIAN and

academic cultures, heightening career awareness, collaborating with the Indian Health Service (IHS) on faculty recruitment strategies, and identifying concordant role models/mentors were all important features for Indigenous faculty members.⁶ Novel, culturally-specific, professional development initiatives are needed to support AIAN and NHPI advancement in academic careers, which has the potential of further enriching the entire academic climate at US medical schools.

The Oregon Health & Science University's (OHSU) Northwest Native American Center of Excellence (NNACoE) and the University of Hawaii's Native Hawaiian Center of Excellence (NHCOE) are collaborating to deliver an annual Indigenous Faculty Forum (IFF) designed to increase the number of Indigenous faculty and foster their retention and advancement. In this paper, we describe the design and implementation of the IFF as a model for developing Indigenous faculty at US medical schools.

Methods

Program Design, Implementation & Evaluation Tools

OHSU Northwest Native American Center of Excellence (NNACoE) was launched in 2017 to increase the number of AIAN physicians and better train tomorrow's healthcare leaders in tribal health.⁷ NNACoE is a partnership between OHSU, Portland State University (PSU), and the 43 federally recognized tribes of the Pacific Northwest through the Northwest Portland Area Indian Health Board (NPAIHB).⁸ NNACoE supports programs in several key areas including: (1) Tribal Engagement, (2) Outreach and Recruitment, (3) Education, and (4) Comprehensive Evaluation, which are spread across the three partner institutions in the form of six teams. NNACoE is guided by a Pathways Advisory Council comprised of Indigenous experts and leaders in AIAN medical education. The Indigenous Faculty Forum (IFF) is a key component of the education team and is NNACoE's primary effort to specifically recruit, retain, and advance AIAN and NHPI faculty.

IFF is a one-day structured CME course with flanking social activities specifically designed to meet the unique needs of junior Indigenous faculty by providing: (1) Indigenous space, (2) skill building, (3) networking, and (4) ongoing mentorship. Based on tokenism theory, "tokens" or those who represent less than 15% of a group's total, are very likely to experience a variety of difficulties in the workplace, such as feelings of unwanted heightened visibility, isolation, and limited opportunities for advancement.⁹ Each of these themes were addressed in the IFF specifically to mitigate isolation and tokenism. The first IFF occurred in Portland, Oregon in November, 2017 and the second IFF occurred in partnership with the University of Hawai'i Native Hawaiian Center of Excellence (NHCOE) and was held concurrently with the Pacific Region Indigenous Doctors Congress (PRIDoC) in Hilo, Hawai'i in July of 2018.

Recruitment for IFF was multifaceted due to the scarcity of Indigenous faculty and relied on personal connections, professional organizations, offices of diversity and inclusion, and social media. Faculty who identify as being American Indian and Alaska Native were included in the first forum. The initial recruitment effort identified eighteen AIAN faculty at medical schools in Washington, Oregon, and California. The most effective means of recruitment was through "word-of-mouth" and personal connections of potential participants.

Content and organizational structure of Session #1 is outlined in Appendix A. Briefly, after a traditional AIAN opening, introductory remarks were made by OHSU's Vice Provost for Diversity and Inclusion. These remarks were followed by three content-specific interactive presentations. The first presentation focused on strategic career development planning; the second addressed maintaining cultural identity within the larger institutional culture; and the third addressed building bridges with tribal clinics and communities. A focus group was held in the afternoon session and was designed to better understand the professional development needs of AIAN faculty, as well as the enablers and barriers to their career success. The focus group was followed by a program evaluation that included five questions assessing the extent to which the program enhanced participants' knowledge about topics covered during the forum and two open-ended questions about the most influential aspects of the forum and areas for improvement. The evaluation also included the 22-item Diversity Engagement Survey, which measures perceptions of institutional culture as it relates to diversity and inclusion.¹⁰ Lastly, a social gathering was held in the evening. A follow-up survey is mailed one year after each IFF to assess progress and any changes in institutional culture. This component of the project is still underway and will be described in a future manuscript. All activities were reviewed and approved by OHSU Institutional Review Board (IRB #17588).

After the success of Session #1, and after identifying persistent under-representation of AIAN faculty and the statistically significant decline in NHPI faculty, OHSU NNACoE and UH NHCOE joined efforts to offer IFF Session #2 as a pre-conference workshop of the 2018 Pacific Region Indigenous Doctors Congress (PRIDoC). Started in 2002, PRIDoC provides space for Indigenous physicians and students, researchers and health professionals from across the Pacific to gather around shared issues of well-being, to network, to discuss issues of mutual interest, and to share scientific advances and best practices as well as ancient wisdom and traditional knowledge to further the health and well-being of Indigenous communities.¹¹

PRIDoC hosts a biannual meeting that rotates throughout the Pacific region. PRIDoC 2018 was hosted by 'Ahahui o nā Kauka (Association of Native Hawaiian Physicians). Other members of PRIDoC include Te ORA (Maori Medical Practitioner's Association), AIDA (Australian Indigenous Doctors Association), IPAC (Indigenous Physicians Association of Canada),

and MAIPT (Medical Association of Indigenous Peoples of Taiwan). Members of the AAIP (Association of American Indian Physicians) also attend PRIDoC, however AAIP is not an official member of PRIDoC at this time. Medical education has been a common thread throughout the conferences. PRIDoC 2018 provided a perfect opportunity for the second IFF given that it would highlight collaboration between the two Indigenous COEs in the United States.

The NHCOE is part of the Department of Native Hawaiian Health at the University of Hawai‘i, John A. Burns School of Medicine and ‘Ahaui o nā Kauka is a partner of the NHCOE. In existence since 1999, it focuses on improving Native Hawaiian health through education, research and community initiatives that enable Native Hawaiians to successfully pursue careers in medicine and other health professions. Specific focus areas include: (1) student recruitment and training, (2) faculty and student research, (3) faculty development, (4) cultural competency training, (5) providing informational resources and (6) developing community and university partnerships.

IFF Session #2 included Indigenous faculty from the Pacific Rim representing medical schools in Australia, Canada, New Zealand, Taiwan, and the United States (continental and Hawai‘i). Together NNACoE and NHCOE co-designed the forum to focus on the key areas of mentorship, networking, and skill building in an Indigenous space supportive of Indigenous expression and being. Content and organization structure of Session #2 is outlined in Appendix B. To create a safe place in the forum, an ‘*ohana*’ (family) style design was used where participants entered the building without shoes, illustrating respect and immersion into a Hawaiian place of learning. The University of Hawai‘i at Hilo Hale ‘Olelo (School of Hawaiian language) provided the setting for the workshop. A traditional Hawaiian opening featured a welcoming *oli* (chant) that acknowledged the ancestors, the place, and the group that was gathered for the forum. The Directors of NNACoE and NHCOE gave opening remarks, which were followed by keynote speaker Dr. Michael Painter from the Robert Wood Johnson Foundation. Thereafter came an opportunity for all present to greet and network with each other, followed by breakout sessions led by Indigenous senior faculty. The session topics centered on meaningful mentoring, strategic career planning, and bridging academic medicine with clinical work. Time was allocated for participants to discuss lessons learned from the breakout sessions with the wider group, followed by a panel on racism, unconscious bias, and microaggression in academia. The day concluded with a presentation on navigating academia and clinical practice while living Indigenous values and maintaining a focus on Indigenous health. Program evaluation similar to that for Session #1 was administered, with the five knowledge enhancement questions tailored to align with Session #2 content.

Data Analysis

Descriptive statistics were used to characterize demographic and clinical practice/career information. Because small cell sizes could result in identifying participants, cell sizes less than 6 were regrouped into larger categories with descriptors for each of the groups. SPSS version 24 was used to conduct analyses.

Results

NNACoE staff identified 18 AIAN faculty in the three-state region (CA, OR, WA), and 9 attended the IFF Session #1, representing 50% of all known AIAN faculty in this region. There were 34 attendees at the 2nd IFF, 29.4% were from Hawai‘i, 23.5% were from the Continental US (all Native American except for 1 Pacific Islander), and the remaining participants were from Canada, New Zealand, Australia or Taiwan. Twenty-nine of the 34 attendees completed program evaluations (85.3%) revealing that participants were predominantly female, under age 44, and either instructors or assistant professors (Table 1).

Participants were asked how long in years they had been a faculty member. For participants in Session #1, seven responded (two were not faculty) with a mean number of years as a faculty member of 8.8 (range = 1 year to 26 years). Among participants of Session #2, the mean number of years as a faculty member was 7.8 (range 0.25 year to 22 years) (Table 1). In terms of career choice, both sessions included primary care physicians as the highest represented group with 55.6% at Session #1 and 62.1% at Session #2 (Table 2). Sub-specialty physician participants were represented by 22.2% in Session #1 and 10.3% in Session #2 and non-physician faculty represented by 22.2% in Session #1 and 17.2% in Session #2. Because small cell sizes could result in identifying participants, Indigenous affiliations were categorized as follows: (1) American Indian/Alaska Native; (2) Canadian First Nations; (3) Native Hawaiian; (4) Other Indigenous Affiliation; and (5) No Indigenous Affiliation. Across both sessions, 31 Indigenous Affiliations were represented, with 100% of participants reporting an American Indian/Alaska Native affiliation for Session #1. For Session #2, 24% of participants identified as American Indian/Alaska Native, 17% as Canadian First Nations, 10% as Native Hawaiian, and 45% as having an “Other” Indigenous Affiliation.

Table 1. Demographic Information for Attendees of the Indigenous Faculty Forum Session #1 and #2						
	Attendees Combined n = 38		Session #1 n = 9		Session #2 n = 29	
	n	%	n	%	n	%
Gender						
Female	31	81.6	8	88.9	23	79.3
Male	7	18.4	1	11.1	6	20.7
Age						
25 – 34	5	13.2	-	-	5	17.2
35 – 44	15	39.5	6	66.7	9	31.0
45 – 54	8	21.1	2	22.2	6	20.7
Older than 54	8	21.1	1	11.1	7	24.1
Missing	2	5.3	-	-	2	6.9
Faculty Rank						
Junior Faculty	20	52.6	4	44.4	16	55.2
Associate Professor	7	18.4	3	33.3	4	13.8
Professor	3	7.9	-	-	3	10.3
Other*	8	21.1	2	22.2	6	20.7
	Mean (Range)	Standard Deviation	Mean (Range)	Standard Deviation	Mean (Range)	Standard Deviation
Years as Faculty Member	8.55 (0.25-26)	7.12	8.8 (1-26)	6.8	7.8 (0.25-22)	8.9

*For Sessions #1 and #2 "Other" includes non-faculty attendees

Table 2. Primary Specialty Groups According to Program Session				
	Session #1 n=9		Session #2 n=29	
	n	%	n	%
Primary Career Group				
Physicians	6		22	
Primary Care	5	55.6	18	62.1
Sub-Specialty	2	22.2	3	10.3
Other	-	-	1	3
Non-Physicians				
Faculty from Other Disciplines	2	22.2	5	17.2

Table 3. Participants' Indigenous Affiliation According to Program Session Attended				
	Session #1 n=9		Session #2 n=29	
	n	%	n	%
Indigenous Affiliation				
American Indian/Alaska Native	9	100	7	24
Canadian First Nations	-	-	5	17
Native Hawaiian	-	-	3	10
Other Indigenous Affiliation	-	-	13	45
No Indigenous Affiliation	-	-	1	3

Discussion

This paper fills an important gap in existing literature in its description of a novel faculty development program designed to meet the unique needs of Indigenous faculty in academic medicine toward fostering their retention and professional advancement. Regrettably, in 2016 there were fewer than 20 Indigenous faculty at the full professor rank at all US medical schools, and to our knowledge, there has yet to be an Indigenous Dean. For the Indigenous junior faculty currently in academia, an abysmal gap in cultural mentorship exists which, if present, could foster greater success in academic career pathways.² The role of mentorship is widely recognized as influencing complex academic faculty career pathways; however, minority faculty have minimal access to ethnically and racially concordant senior faculty mentors. This limitation has been reported as a barrier to advancement among minority physician residents pursuing academic careers.¹²

Importantly, under-represented minority US medical school graduates pursuing non-clinical career tracks report intention to work with underserved populations that is twice the rate of other minorities and non-Hispanic Whites.¹³ Failure to foster the academic career pathways of Indigenous faculty may further contribute to the disparities seen in the inclusion of minorities in to research and education initiatives. Indigenous representation is so miniscule in academia that these important voices are vacant from both the academic culture and the literature that describes minority faculty development programs and their related outcomes.

The IFF includes features that created a space safe for Indigenous faculty to freely exist without repressing their full “self,” where it is safe to express one’s culture and identity without repression. The forum also succeeded in building an informal network among Indigenous faculty, with just a few degrees of separation, among AIAN, NHPI and other Indigenous faculty around the world, creating a foundation upon which to develop their skills and advance their careers.

Session #1 represented a pilot program and we were able to attract 50% of known Indigenous medical school faculty from California, Oregon, and Washington. An important success of the IFF Session #2 was that it was held concurrently with PRIDoC, which resulted in convening a large number and concentration of Indigenous medical school faculty at a single conference. This is important, given that Indigenous faculty (all Indigenous groups combined) represent far less than 1% (0.29%) of all US medical school faculty, with the percentage of AIAN faculty trending flat between 2014 to 2015 at 0.11%, and decreasing from 0.25% to 0.18% for NHPI faculty.² These findings suggest that Indigenous faculty may not be receiving or benefitting from existing faculty development programs.^{4,12}

This work is in its early stages. NNACoE is currently planning to continue the IFF through the duration of our current 5-year funding period. After three iterations that include completion of the corresponding follow-up survey, we will know more about the impact of the forum on the advancement of participants in terms of promotion as well as changes in the culture at their institutions regarding diversity and engagement. We are actively planning for IFF Session #3 to be hosted in Portland, OR and have begun early discussions to co-host IFF Session #4 concurrently with PRIDoC in 2020. We will continue to explore funding opportunities and make programmatic improvements based upon our evaluations, which may involve increasing both the intensity and frequency of forum activities and more formalization of the mentoring process.

Limitations of this work include that the IFF experience is less frequent and less intensive than is likely needed to be optimally effective. However, the time commitment for participants is minimal, which makes it feasible for busy clinical and non-clinical faculty to attend. Future research should examine which elements are most effective, which will require a more in-depth evaluation than is currently being conducted. For example, it will be important to determine if participation in the IFF contributes to faculty success in terms of recruitment, retention, and academic advancement, which would require a randomized controlled or cross-over study design. Another limitation is that we are currently unable to report robust outcomes as the one-year follow-up data are not yet available. We do plan to report those data when they are available.

In conclusion, it is vitally important to increase Indigenous faculty representation in US medical schools while simultaneously fostering career advancement and meaning in work. General minority faculty development programs may not be the most effective for AIAN and NHPI faculty. We have begun the work needed to attend to this problem and look forward to conducting more efforts, including rigorous evaluation designs to study long term effectiveness.

Conflict of Interest

None of the authors identify a conflict of interest.

Acknowledgements

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APPENDIX A

**Indigenous Faculty Forum
 Session #1 Portland, Oregon 97201
 November 16-17, 2017**

Description:

A special learning forum designed to support the professional development and academic success of American Indian/Alaska Native (AI/AN) faculty with content tailored to their specific career needs.

Conference Goals:

1. Provide instruction in key professional competencies leading to academic success.
2. Address unique cultural considerations for AI/AN faculty.
3. Foster networking and enhanced ongoing career support for AI/AN faculty.

Agenda:

Thursday Nov 16

6:00p – 8:00p Evening social gathering

Friday Nov 17

8:00 - 8:30 Traditional Opening (Polly Olsen, NNACOE Deputy Director of Tribal Engagement)

8:30 – 8:50 Welcome and Introductions (Dr. Brian Gibbs, PhD, MPA, Vice President, Equity & Inclusion, Oregon Health and Science University)

8:50 – 9:40 Content Session 1: Strategic career planning (Patrice Eiff, MD, Professor and Director of Faculty Development, Department of Family Medicine, Oregon Health & Science University)

9:40 - 10:30 Content Session 2: Maintaining one's own cultural identity within the larger institutional culture (Arne Vainio, MD, Family Practice Physician, Cloquet, MN)

10:30 – 10:50 Break

10:50 – 11:40 Content Session 3: Building bridges with tribal clinics & communities (Joe Finkbonner, RPh, MHA, Executive Director NPAlHB)

11:40 – 12:30 Lunch (PSU Food Carts)

12:30 – 2:00 Focus Group – Questions designed to better understand the professional development needs of AI/AN faculty and the enablers and barriers to their career success.

2:00 – 2:15 Complete Evaluation & Wrap-up

6:00 Evening social gathering

APPENDIX B

**Indigenous Faculty Forum
 Session #2: Hilo, Hawai'i
 July 12, 2018**

Time	Session
7:00-8:00	Breakfast
8:00-8:10	Welcome - Erik Brodt (NNACOE) and Malia Lee (NHCOE)
8:10-8:40	Opening Welcome: Michael Painter, MD - Robert Wood Johnson Foundation
8:40-8:55	AIAN and NHPI faculty-current status - Erik Brodt
8:55-9:15	Meet your colleagues-small groups
9:15-10:15	Break-out Sessions Providing Meaningful Mentoring - Carlos Gonzales, MD Room 202 Strategic Career Planning - Naleen Andrade, MD Room 211 Bridging Academic Medicine and Clinical Work - Dee-Ann Carpenter, MD Rm 207
10:15-10:30	Coffee break
10:30-11:00	Reports from Breakout sessions
11:00-12:30	Panel: Racism, unconscious bias, microaggression in academia Drs. Elana Curtis, Dennis McDermott, Andrea Hermosura
12:30-1:30	Lunch
1:30-2:15	Navigating Politics, Clinical Practice and Academia - Maintaining Our Focus on Indigenous Health - Evan Adams, MD
2:15-2:30	Closing

Opening protocol: Wainaku Estate

Making Progress: The University of Hawai'i at Mānoa's (UHM) Department of Surgery's Cross-Cultural Health Care Efforts from 2008-2018

Maria B.J. Chun PhD

Abstract

In 2008 the University of Hawai'i at Mānoa's (UHM) Department of Surgery introduced the concept of cross-cultural health care (aka cultural competency) to its faculty and trainees. Much work remains before the cultural efforts well-known outside the department are embraced within, but it has been prioritized for curriculum development and research. An example of the department's efforts include the Cross-Cultural Health Care Research Collaborative, which was created as a forum for faculty who have an interest in cultural issues related to healthcare and healthcare delivery. Participants from 14 UHM departments and other organizations developed projects and mentored students, resulting in over ten peer-reviewed publications. A related effort is the JABSOM Cultural Competency Resource Guide, which is in its 7th edition and reflects JABSOM activities and those of its collaborators. Another highlight is the Biennial Cross-Cultural Health Care Conference: Collaborative and Multidisciplinary Interventions, with six conferences held since 2010, hosting attendees from 28 US Mainland states and 11 countries. Additionally, the department has been recognized as one of the first to develop a cultural standardized patient exam for surgical residents. These nationally-recognized efforts resulted in invitations to serve on the very first cultural competency panel at the American College of Surgeons Clinical Congress and as a consultant on the development of Brigham and Women's Hospital's Center for Surgery and Public Health's Provider Awareness and Cultural dexterity Toolkit for Surgeons (PACTS), a standardized curriculum for surgical residents. The department plans to continue its work on these projects and document outcomes.

Keywords

cultural competency, cross-cultural health care, general surgery residency training

Abbreviations

ACGME = Accreditation Council for Graduate Medical Education
CCHCC = Cross-Cultural Healthcare Conference
CCHCRC = Cross-Cultural Health Care Research Collaborative
C3 = Cultural Competency Committee
JABSOM = John A. Burns School of Medicine
LCME = Liaison Committee on Medical Education
PACTS = Provider Awareness and Cultural dexterity Toolkit for Surgeons
SP = Standardized Patient
UHM = University of Hawai'i at Mānoa

Introduction

The role of culture and cultural competency in patient care continues to be a major focus in the healthcare field's attempts to address health disparities based on characteristics such as race, ethnicity, gender, religion, and socio-economic status. Although there is no standardized definition of culture or cul-

tural competence, one of the more commonly cited definition is as follows:

Cultural and linguistic competence is a set of congruent behaviors, knowledge, attitudes, and policies that come together in a system, organization, or among professionals that enables effective work in cross-cultural situations. "Culture" refers to integrated patterns of human behavior that include the language, thoughts, actions, customs, beliefs, and institutions of racial, ethnic, social, or religious groups. "Competence" implies having the capacity to function effectively as an individual or an organization within the context of the cultural beliefs, practices, and needs presented by patients and their communities.¹

In undergraduate and graduate medical education, both the Liaison Committee on Medical Education (LCME) and the Accreditation Council for Graduate Medical Education (ACGME) require the integration of cultural training into medical student and resident curriculum, respectively.^{2,3} Legal requirements also reinforce the importance of cultural training, for example, Section 1557 of the Affordable Care Act requires covered entities to develop a language access plan and ensure that limited English proficient patients have meaningful access to healthcare.⁴ Additionally because of the complexity of biological, sociological and psychological factors involved, providing optimal care to diverse patients often requires collaboration between multiple health professionals from different fields.⁵

Although the empirical evidence base for the efficacy of cultural (competency) training is still relatively weak,⁶ the literature on healthcare disparities tied to cultural factors, such as race, continues to grow. This discussion began with the seminal work, *Unequal Treatment*, in 2003, which found that after all other factors were removed, race/ethnicity remained as the most important reason for disparate treatment of patients.⁷ In another seminal work by Weissman et al. on resident preparedness to provide cross-cultural care, the authors reviewed differences among various medical specialties and found that surgery was one that paid minimal attention to culture in both its training and in practice.⁸ Awareness of this concern led the University of Hawai'i at Mānoa's (UHM) Department of Surgery (referred to in this article as *the department*) to introduce the concept of cross-cultural health care (aka cultural competency) to its faculty and trainees in 2008. Prior to 2008 and the initiatives described within this paper, there were no efforts to incorporate culture into the department's curriculum. The department could be considered "behind the times" as compared to some of the other departments at the John A. Burns School of Medicine

(JABSOM), especially the Department of Native Hawaiian Health who has been the lead in this area. Although its primary focus is on Native Hawaiians, the department and its Cultural Competency Committee (C3) have developed various mandatory curricula for all medical students at JABSOM.⁸

Much work remains before the cultural efforts well-known outside the department are embraced within, but “culture” - in its broadest sense - has been prioritized for curriculum development and research. Therefore, although critical pieces, such as more robust outcome measures, are needed, the department went from having no cultural competency initiatives to several that have been sustained over the past decade. This article provides a description of the department’s main cultural projects: 1) the *Cross-Cultural Health Care Research Collaborative*, 2) the *JABSOM Cultural Competency Resource Guide*, 3) the *Biennial Cross-Cultural Health Care Conference: Collaborative and Multidisciplinary Interventions*, and 4) cultural training efforts for general surgery residents.

Cross-Cultural Health Care Research Collaborative (CCHCRC)

The CCHCRC is a research group that was created in September 2008 as a forum for faculty with an interest in cultural issues related to healthcare/healthcare delivery. Suggested by Dr. Richard Kasuya, then Director of the JABSOM Office of Medical Education (OME) and the OME Fellowship, several members of the fellowship cohort formed a group to further their interest in culturally-related training efforts and research including faculty from the Departments of Internal Medicine (Brad Chun MD) and Psychiatry (John Huh MD). Because of their active research interests in cross-cultural healthcare, Martina Kamaka MD (C3 program lead from the Department of Native Hawaiian Health), Gregory Maskarinec PhD (Department of Family Medicine and Community Health), Marianne Tanabe MD (Department of Geriatric Medicine), and Angel Sy (Office of Public Health Studies) were also invited along with Ginny Tanji MSLS, MEd, then Director of the Health Sciences Library, for her expertise in identifying cultural resources. Led by the UHM Department of Surgery, the initial goals of the Cross-Cultural Health Care Research Collaborative (CCHCRC) were to identify departmental contacts and individuals who were 1) interested in developing cultural competency/humility initiatives, and 2) willing to share their cultural competency/humility initiatives with other departments and individuals. Over the past ten years, there have been multiple participants from UHM and other organizations — a total of 14 faculty from the aforementioned UH JABSOM Departments; UHM Office of Public Health Studies; UHM Dept of Psychology; UHM Shidler College of Business; University of Southern California (USC) School of Social Work and three community partners from Koaia Valley, Queen’s Native Hawaiian Health Program, and Queen Emma Clinic. The group did not “recruit” members per

se, but faculty, residents/fellows, students extended invitations to collaborative partners who shared similar research interests. Replacements were sometimes suggested when faculty left due to shifting interest and responsibilities or when residents/fellows and students left due to graduating/completing their studies.

Group members bonded during quarterly meetings, which provided updates on culturally-related activities, discussions on possible research project partnering, research advice from other members on topics such as instrument development, data collection, analysis and interpretation, professional development opportunities, and lessons learned over common obstacles faced when working on culturally-related projects. Quarterly meetings also allowed groups to plan the *Cross-Cultural Health Care Conference*, as discussed later in this article. For example, some have recruited speakers or have even presented at the conference themselves; others serve as volunteers and assist with tasks such as abstract review, speaker introductions, and room monitoring.

A number of CCHCRC faculty served as mentors for student projects producing over ten peer-reviewed publications. Mentees included six premedical students, seven medical students, one nursing student, two psychology graduate students, two public health graduate students, and one geriatric medicine fellow. Table 1 lists the publications in chronological order and Table 2 lists other publications and scholarly activities resulting from group collaborations.

JABSOM Cultural Competency Resource Guide

A product of the Cross-Cultural Health Care Collaborative is a resource guide that aids the UHM Department of Surgery’s in identifying potential collaborators. Suggested by Dr. Kasuya, the guide was initiated in Spring 2008 summarizing UHM JABSOM’s cultural competency initiatives/programs and encouraging partnerships both within and outside the medical school. A survey was done to “catalog” the existing cultural initiatives within the Office of the Dean and throughout each of the medical school’s departments. At that time, JABSOM was preparing for accreditation and the specific LCME criteria regarding culture in the curriculum was being considered. With faculty already interested in incorporating culture into its residency curriculum, the UHM Department of Surgery took the lead on collecting and compiling the data for what would become known as the *JABSOM Cultural Competency Resource Guide*. Given that a listing of all the cultural initiatives at JABSOM did not exist, the guide provided helpful information to faculty, students, and staff, and was also beneficial for accreditation.

The guide is viewed as a work in progress. Initially, yearly requests for new information and revisions were requested via email or through in-person meetings using the same survey distributed to those departments who participated in the first

Table 1. CCHCRC Faculty-Mentored Peer-Reviewed Publications [ie, Faculty Mentored Student(s)]	
Year	Citation
2009	Chun MB, Young KG, Jackson DS. Incorporating cultural competency into the general surgery residency curriculum: a preliminary assessment. <i>Int J Surg</i> . 2009 Aug;7(4):368-72.
2010	Chun MB, Jackson DS, Lin SY, Park ER. A comparison of surgery and family medicine residents' perceptions of cross-cultural care training. <i>Hawaii Med J</i> . 2010 Dec;69(12):289-93.
2012	Chun MB, Young KG, Honda AF, Belcher GF, Maskarinec GG. The development of a cultural standardized patient examination for a general surgery residency program. <i>J Surg Educ</i> . 2012 Sep-Oct;69(5):650-8
2013	Ly CL, Chun MB. Welcome to cultural competency: surgery's efforts to acknowledge diversity in residency training. <i>J Surg Educ</i> . 2013 Mar-Apr;70(2):284-90.
2013	Deptula P, Chun MB. A literature review of professionalism in surgical education: suggested components for development of a curriculum. <i>J Surg Educ</i> . 2013 May-Jun;70(3):408-22.
2013	Ambrose AJ, Lin SY, Chun MB. Cultural competency training requirements in graduate medical education. <i>J Grad Med Educ</i> . 2013 Jun;5(2):227-31
2013	Morihara SK, Jackson DS, Chun MB. Making the professionalism curriculum for undergraduate medical education more relevant. <i>Med Teach</i> . 2013 Nov;35(11):908-14.
2014	Chun MB, Deptula P, Morihara S, Jackson DS. The refinement of a cultural standardized patient examination for a general surgery residency program. <i>J Surg Educ</i> . 2014 May-Jun;71(3):398-404.
2017	Shah SS, Sapigao FB, Chun MJB. An overview of cultural competency curricula in ACGME-accredited general surgery residency programs. <i>J Surg Educ</i> . 2017; 74: 16-22.
2017	Yeung F, Yuan C, Jackson DS, Chun MJB. Gone, but not forgotten? Survey of resident attitudes toward a cultural standardized patient examination for a general surgery residency program. <i>Health Equity</i> . 2017 Sep 1;1(1):150-155.

Table 2. CCHCRC Faculty Publications/Scholarly Activities from Collaboration Among Group Members	
Year	Citation
2009	Chun MB, Huh J, Hew C, Chun B. An evaluation tool to measure cultural competency in graduate medical education. <i>Hawaii Med J</i> . 2009 Jun;68(5):116-7.
2010	Chun MB, Yamada AM, Huh J, Hew C, Tasaka S. Using the cross-cultural care survey to assess cultural competency in graduate medical education. <i>J Grad Med Educ</i> . 2010 Mar;2(1):96-101.
2012	Chun MJB, Chun BA, Sy A. Collaborating on Teams with Diverse Professions: Experiences with "Cultural" Matters in Administrative, Clinical, and Research Settings in Psychology, Medicine, and Public Health." <i>Hawai'i Psychological Association Annual Convention</i> . October 20, 2012, Ko'olau Ballrooms, Kaneohe, Hawai'i.
2012	Cross-Cultural Training at JABSOM; A Panel Discussion. Co-presenter with Bradley Chun, Martina Kamaka, & Glenn Rediger. UHM Department of Medicine, Grand Rounds, February 28, 2012, Queen's Conference Center, Honolulu, Hawai'i.
2013	Alden DL, Friend J, Chun MB. Shared decision making and patient decision aids: knowledge, attitudes, and practices among Hawai'i physicians. <i>Hawaii J Med Public Health</i> . 2013 Nov;72(11):396-400.
2013	Chun MJB, Lubimir K. Third Cross-Cultural Health Care Conference: Collaborative and Multidisciplinary Interventions; February 8-9, 2013. <i>Hawaii J Med Public Health</i> . 2013; 72(8 Suppl 3): 3-27.

edition. When little change was noted within a one-year period and some departments expressed difficulty finding someone to regularly coordinate their responses, the frequency of updates was reduced. As JABSOM's collaboration grew, invitations were extended to include information from Hawai'i inuiakoa School of Hawaiian Knowledge, the College of Health Sciences and Social Welfare (ie, School of Nursing and Dental Hygiene, School of Social Work, and the Office of Public Health Studies). The guide is now in its seventh edition. Recently, most of the updates include adding new research publications and other scholarly activities, and updating faculty and staff information.

Premedical or medical students were mentored to produce the updated guides while networking with faculty and learning about JABSOM's departments and programs. The recent inclusion of UHM schools, colleges, departments outside of JABSOM has increased the resource guide's impact. Since its inception, the guide has been featured on the JABSOM Health Sciences Library under its Cultural Resource for Health Professionals page (<https://libguides.jabsom.hawaii.edu/culture>) and is available to anyone who has access to the internet via https://www.researchgate.net/publication/319968956_UHM_JABSOM_Cultural_Competency_Resource_Guide_August_2017_Seventh_Edition. The current version of the guide has been read over 63 times.

Cross-Cultural Health Care Conference (CCHCC): Collaborative and Multidisciplinary Interventions

The CCHCC was developed primarily in response to the department's desire to provide more in-depth professional development in the area of cultural competency for its faculty, residents, and fellows. Prior to this, the surgical department had no formal training program in cultural competency/cross-cultural health care. In addition to inviting known experts from the field of cultural competency and healthcare disparities, a conscious attempt was made to invite surgeons who had an interest and expertise in the cultural aspects of healthcare. Because formal recognition of the importance of culture to the surgical field was emerging around the same time as the initiation of the conference,¹⁰ some of the surgical experts framed their presentations within the context of professionalism and/or interpersonal and communication skills (ie, the ability to care for diverse patients is related to these two ACGME competencies). Over time, presentations directly addressed cultural competency, to the point where a new term has been coined — "cultural dexterity"¹¹ and formal curricula for general surgery residents is being developed with the goal of nationwide implementation.

The inaugural CCHCC conference was held in October 2010 utilizing seed money provided by former Chair of Surgery, Dr. Danny Takamishi, Jr. Since that time, the conference has been self-sustaining through registration and exhibitor fees, grants, and donations. Additionally, dedicated time and resources

continue to be provided by current Chair of Surgery, Dr. Kenric Murayama. Conference attendance has grown from 95 at the first conference to an average of 150 to 160, with peak attendance of 244 in 2015. The conference provides an overview of critical issues facing healthcare professionals who care for diverse patient populations and serves as a forum to discuss the “evidence base” regarding cross-cultural healthcare training and treatment interventions; it fosters interprofessional collaboration (eg, medicine, psychology, public health, social work, nursing, pharmacy, and Hawaiian studies); and has welcomed attendees from 28 US Mainland states (AL, AZ, CA, FL, GA, ID, IL, IN, IA, LA, MA, MD, MI, MN, MO, MT, NC, NJ, NM, NV, NY, OK, OR, PA, TN, TX, WA, WI) and 11 countries (Australia, Canada, Germany, Italy, Japan, Nepal, New Zealand, Norway, Saudi Arabia, Sweden, and the UK).

Due to national/international recognition, the department was able to bring scholars with knowledge and expertise in cultural competence to present at the Hawai‘i conference. With the exception of the many invited UHM faculty and members of local community organizations who have shared their time and expertise, Table 3 provides a listing of national and international guest presenters and their area(s) of expertise as related to cultural competency/cross-cultural health care. More detailed information on each of the six conferences can be found at: <http://cchc-conference.jabsom.hawaii.edu/>.

Another positive impact of the conference is the free conference registration that has been provided for over 100 UHM undergraduate students from a variety of backgrounds and disciplines. This is separate from an additional 100 free registrations for UHM medical students and residents. The scholarship allows trainees to experience a “national/international” scientific conference in a friendly environment without the travel costs. The department also provides faculty and staff with opportunities to serve as invited speakers and have also welcomed them to submit abstracts for breakout and poster sessions. Additionally, special student breakout sessions have also been featured. A highlight is the panel of Deans, which have been comprised of the Deans from Medicine, Social Work, Public Health, Nursing, and Hawai‘inuiakea, and most recently Pharmacy, who have discussed diversity enhancing collaborations between the various schools, colleges, and programs. Web site access at <http://cchc-conference.jabsom.hawaii.edu/> is also available after the conference to anyone wanting to become familiar with experts in the field of culture and diversity.

Cultural Training Efforts for General Surgery Residents

The UHM Department of Surgery is recognized nationally as one of the first general surgery residency programs to develop a cultural competency curriculum. This is significant because, as noted, surgery is one of the last medical specialties to formally incorporate cultural competency into its residency training. Initi-

ated in 2008, the project is now in its eleventh year. Since 2009, all PGY-1/first year surgical residents participate in a cultural standardized patient exam that was developed in collaboration with the UHM Dept of Family Medicine and Community Health (Maskarinec & Buenconsejo-Lum) who had been utilizing cultural standardized patients for over a decade in its residency curriculum. A standardized patient (SP) scenario was designed involving a surgeon attempting to obtain informed consent from an elderly Samoan man who needs to have his leg amputated or face certain death. Two additional standardized patients also participate in the scenario – the patient’s wife and a medical interpreter. Certified Samoan medical interpreters from a local community health clinic provided input on the authenticity of the case during its formulation.

Two measures are used to assess resident performance: 1) The *Cross-Cultural Care Survey* or CCCS developed by Weissman and Betancourt. Keeping the survey’s scales intact, this abbreviated version of the survey focuses on preparedness and skillfulness;¹² and 2) a revised version of a written checklist (ie, rating sheet) developed by the UHM’s Department of Family Medicine and Community Health.¹³ The edits to the original version of the survey did not impact the reliability and validity of the survey. The rating sheet is comprised of a table that lists three of the six ACGME competencies that are most-related to the provision of culturally competent care (ie, Professionalism, Interpersonal and Communication Skills, and Patient Care) as well as Cultural Awareness. Categories of Below Expectations (1-2), Meets Expectations (3-4), and Exceed Expectations (5) are accompanied by detailed descriptions on what skills the resident needs to demonstrate to achieve a certain rating. The rating sheet is used by both the faculty preceptor and the standardized patients as well as the resident; the resident version, however, has additional questions regarding the exam.¹³

Immediately after completing the exam, the resident receives feedback from the faculty observer and the standardized patient as part of the debriefing process. In addition, the surgery resident completes a self-assessment form. The self-assessment/self-reflection allows the resident to compare their self-perceptions with the ratings of both the faculty and the standardized patient. The sessions are video recorded to allow residents to view their performance and other faculty who were not present can utilize the same standardized checklist to rate the resident. Prior to the post-test (typically one month after the pretest), the surgery residents participate in a Grand Rounds lecture, didactic session, or journal club. In years when there is a conference, senior-level residents (PGY-3,4,5) were required to attend the Cross-Cultural Health Care Conference.

A post-test is conducted three months later, and residents are readministered the *Cross-Cultural Care Survey* and cultural SP exam to determine the impact the lecture/didactic session/journal club, initial SP exam, and/or the debriefing had on resident perception of preparedness to provide cross-cultural

Table 3. List of National and International Guest Presenters at the Cross-Cultural Health Care Conference and Area of Expertise (2010 – 2019)*		
Year(s) Presented	Name	Area(s) of Expertise
2019	David A. Acosta MD	Diversity and inclusion in medical education
2019	Fabricio Balcazar PhD	Development of systematic approaches for effective involvement of people with disabilities in consumer advocacy organizations; culturally competent service provision for minorities with disabilities
2013	Jeff Belkora PhD	Development, implementation, and evaluation of patient education, decision support, and participation programs
2019	Russell S. Berman MD, FACS	Professionalism in surgical residency training; Surgical Professionalism and Interpersonal Communication Education (SPICE) curriculum
2010, 2011, 2013, 2015, 2017, 2019	Joseph Betancourt MD, MPH	Cross-cultural care and communication; racial/ethnic disparities in health and health care; hypertension, diabetes, and cerebrovascular disease in minority communities; cross-cultural care and education; workforce diversity; impact of language barriers on health care
2013	Christina Cordero PhD	Standards development projects for the hospital and laboratory accreditation programs, including patient-centered communication standards, cultural competence, and patient- and family-centered care
2011, 2015	Janice Dreachslin PhD	Diversity leadership in health services management; organizational cultural competence
2017	Glyn Elwyn MD, MSc, FRCGP, PhD	Patient engagement; shared decision making; decision aids; informed medical decisions
2015	Kevin Eva PhD	Educational practices within the health professions
2010	Bruce Gewertz MD, FACS	Professionalism in surgical residency training
2015	Tawara Goode MA	Development of curricula, assessment instruments, professional development series, and other resources that support cultural and linguistic competence
2015, 2017	Alexander Green MD, MPH	Culturally competent approaches to quality improvement; unconscious bias in health care delivery, language barriers and patient safety; cultural competence education for health professionals
2017	Amelia Grover MD, FACS	Surgical workforce diversity; healthcare disparities
2017	Adil Haider MD, MPH	Trauma disparities research; healthcare inequities including, describing and mitigating unequal outcomes based on gender, race, sexual orientation, ethnicity, age and socioeconomic status; optimal treatment of trauma/critically ill patients in resource-poor settings; Co-PI of Provider Awareness and Cultural dexterity Toolkit for Surgeons (PACTS) cultural dexterity curriculum for surgical residents
2013	Mark Hochberg MD, FACS	Professionalism in surgical residency training; Surgical Professionalism and Interpersonal Communication Education (SPICE) curriculum
2015	Maria Jibaja-Weiss EdD	Health promotion and cancer prevention and control research utilizing novel strategies to engage minority, multilingual audiences with limited health literacy
2010, 2011	Michael Kruley JD	Legal aspects of culturally competent care as it relates to equal access to and opportunity to participate in and receive services from all US Department of Health and Human Services (DHHS) programs
2015, 2017, 2019	Michael Leoz JD	Legal aspects of culturally competent care as it relates to equal access to and opportunity to participate in and receive services from all US Department of Health and Human Services (DHHS) programs
2010, 2011	Desiree Lie MD	Cultural competency curricula/training; efficacy of cultural competency training, including tools such as the Tool for Assessing Cultural Competence Training (TACCT)
2013	Robert Like MD, MS	Development of medical education programs and provision of training and technical assistance relating to the delivery of patient-centered, culturally responsive care to diverse populations
2010	Martin Martinez, MPP	Cultural competency and healthcare reform; culturally competent care and prevention strategies for African American and Latino men, and for Gay and Bisexual men of color and Transgender individuals.
2017	Julia Puebla Fortier	Linguistic and cultural competence in health care; federal health policy analysis; principal author of the National Standards for Culturally and Linguistically Appropriate Services (CLAS) in Health Care for the US DHHS
2015	Chirk Jenn Ng, MBBS, MMed, PhD	Shared decision making; Patient decision aids
2013	Elyse Park PhD	Cultural competency curricula/training; cultural competency measures, such as the Cross-Cultural Care Survey (CCCS); health-related behaviors, especially tobacco treatment among vulnerable medical populations; role of culture on cancer preventive behaviors and health care utilization
2019	Christopher S. Saigal MD, MPH	Nexus of quality of care and trends in medical technology; shared decision-making using computer applications
2019	Douglas S. Smink MD, MPH	Communication, leadership, and decision-making for surgeons and surgical teams; co-PI of Provider Awareness and Cultural dexterity Toolkit for Surgeons (PACTS) cultural dexterity curriculum for surgical residents
2010	Ellen Wu MPH	Cultural competency and healthcare reform; healthcare disparities

*Expertise described is as it relates to cultural competency/cross-cultural health care

care. So far, results of the two studies conducted have not demonstrated any statistically significant impact,^{13,14} but have aided in informing the department and others who would like to implement similar programs of potential issues for consideration. The sample sizes for both studies are small, but provide some results to be considered.

In the first study, no statistically significant improvement regarding surgery resident knowledge, skill and attitude towards cross-cultural care between the pre- and post-tests was noted.¹³ However, there were significant differences by ethnicity in all three categories of the *Cross-Cultural Care Survey* (attitude, knowledge and skills) on the pretest and for knowledge on the posttest. These results suggest that more tailored training as opposed to a “one size fits all” approach is needed. The study also noted that negative resident attitudes toward cultural competency training may be encountered. To mitigate this, collection of more data was suggested regarding the residents’ past cultural competency training, which may impact his/her attitude toward the training. Another suggestion was to provide more opportunities for formal instruction on cultural competency, including a “boot camp” approach to cross-cultural skills training.¹³

In the second study, there was also a paucity of statistically significant findings.¹⁴ However, note was made of the differences between US Born versus non-US Born residents. Non-US Born residents had a significantly higher score on attitude toward cross-cultural care than US Born residents, but not on knowledge and skills. Although one would assume that a more positive attitude would correspond to stronger skills and knowledge, this was not the case. In fact, US Born residents performed significantly better on the post-test as compared with the non-US born who showed little change. A potential concern was raised regarding observers and/or standardized patients potentially holding the non-White residents to different standards. The study noted that as with patients, trainees are also growing more diverse and issues such as language or “cultural” barriers will not only become a concern for patients, but also for residents/providers. Focus needs to be placed on both provider and patient characteristics.

Because the department was one of the first to implement an ongoing, formal cultural competency training, it was able to provide a “lessons learned” perspective and advise others seeking to implement similar programs on what worked and didn’t work. It shared its measurement tools which may be

adapted by others for their curricula. Invitations were extended to the department to speak at the first ever panel on cultural competency at the 2014 American College of Surgeons (ACS) Clinical Congress, and to serve as an expert consultant in 2015 on Brigham and Women’s Hospital’s Center for Surgery and Public Health’s cultural dexterity program for surgeons, known as PACTS (Provider Awareness and Cultural dexterity Toolkit for Surgeons). In 2018, the department was also invited to serve on the curriculum committee. PACTS will be the most standardized and comprehensive cultural competency training developed to date for training general surgery residents. Implementation of PACTS at pilot sites begins in July 2019. Because the department’s curriculum is largely comprised of one cultural SP exam, it would like to expand to include more exams and methods to evaluate outcomes. Once the curriculum is finalized, the department plans to adapt the PACTS curriculum to the extent possible, time and administrative and fiscal resources permitting.

Conclusion

The UHM Department of Surgery has made strides in the area of cultural training but has a long way to go. One key item that needs to be addressed is the impact and effectiveness of these efforts. Have these projects helped participants, and have they really made a difference? In 2017, one of its publications (Shah, Sapigao, Chun) was featured on the ACS Committee on Diversity Issues Web page as a resource: <https://www.facs.org/about-acg/governance/acs-committees/committee-on-diversity-issues/diversity-resources> and demonstrates an attempt to begin to answer this question.¹⁵ The article discusses shortfalls of the department and other programs, as well as positive factors that contribute to the projects’ long-term sustainability. Now entering its second decade, the department plans to be more proactive when it comes to documenting outcomes. For example, if the department is able to adapt the PACTS curriculum, it will be able to utilize the standardized measures that were developed and be able to gauge whether the cultural training efforts had a positive impact on the most critical of evaluation criteria - patient outcomes. As interest, time, and/or funding permits, the department also plans to continue its other cultural competency initiatives.

Conflict of Interest

The author does not identify any conflict of interest to report.

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Shifting the Tide: Innovative Strategies to Develop an American Indian/Alaska Native Physician Workforce

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Abstract

Despite extensive efforts to diversify the US physician workforce and increases in both the number of US medical schools and number of students enrolled, there has been no difference in the matriculation and graduation of American Indians and Alaska Natives (AI/AN). Furthermore, advancement remains elusive for AI/AN US medical school faculty, which currently constitutes approximately 0.1% of all US medical school faculty and remains disproportionately under-represented at the Associate and Full Professor ranks. The Northwest Native American Center of Excellence (NNACoE) aims to address these worrisome trends by implementing innovative programs to support a meaningful journey toward recruiting, training, and supporting AI/AN youth, medical students and faculty. NNACoE has piloted three innovations: 1) Tribal Health Scholars, a 14-week clinical shadowing experience for AI/AN youth in their tribal clinic; 2) Wy'East Post-baccalaureate Pathway, a 9-month structured curriculum with conditional acceptance into Oregon Health & Science University School of Medicine; and 3) Indigenous Faculty Forum, a longitudinal professional development conference for AI/AN medical school faculty to foster career advancement. NNACoE piloted all three programs in 2017 and is actively expanding efforts, while systematically evaluating all programs. Pilot results demonstrate that all Tribal Health Scholars are pursuing college and health science majors, 10 AI/AN Wy'East Post-Baccalaureate Scholars are enrolled to date, and 63 Indigenous medical school faculty are participating in professional development. More systematic evaluation of AI/AN-specific programming is needed to better illuminate how to successfully recruit, train and retain AI/ANs in the US physician workforce.

Abbreviations

AE = Academic Enhancement
AI/AN = American Indians and Alaska Natives
CC = Career Change
IFF = Indigenous Faculty Forum (IFF)
IRB = Institutional Review Board
NERDS = NNACoE Educational Research Data System
NNACoE = Northwest Native American Center of Excellence
OHSU = Oregon Health & Science University
THS = Tribal Health Scholars

Introduction

National studies show that a diverse workforce improves access to care, healthcare delivery, cultural competence and patient satisfaction.¹ Despite extensive efforts to diversify the US physician workforce and increase both the number of US medical schools and total medical student enrollment, trends

for American Indian and Alaska Native (AI/AN) matriculation and graduation remain flat.² Advancement remains elusive for AI/AN faculty at US Medical Schools, which constitutes approximately 0.1% of all US medical school faculty and remains disproportionately under-represented at the Associate and Full Professor rank.³ The number of American Indian and Alaska Native (AI/AN) US medical school graduates declined by 51% between 1980–2016.⁴ This negative trend is accelerating given the 70% decline in AI/AN applicants and 63% decline in AI/AN matriculants to US medical schools from 1996–2015.⁴ Because AI/AN health professionals are more likely to serve AI/AN communities than their peers,⁵ training more AI/ANs has a potential to alleviate current workforce challenges that exist throughout Indian Country as well as to improve the health and wellness in this population. Increasing the number of culturally competent, non-Native health professionals will also help to eliminate or reduce workforce shortages in tribal clinics. This could be achieved by increasing AI/AN representation in academic health centers and by enhancing training opportunities for *all* students and faculty to be more culturally aware and sensitive to the nuances necessary to meet the needs of tribal people.

The Northwest Native American Center of Excellence (NNACoE),⁶ based at Oregon Health & Science University (OHSU), began in 2017 in partnership with the Northwest Portland Area Indian Health Board (a non-profit tribal advisory organization serving the forty-three federally recognized tribes of Oregon, Washington, and Idaho) and Portland State University. The objectives of NNACoE are to: 1) Recruit, train, and retain AI/AN students and faculty to diversify the health professions workforce toward promoting and providing high quality, safe, and accessible healthcare; 2) Train tomorrow's health professions workforce in minority health issues, including health equity and social determinants of health; 3) Enhance and expand tribal-academic partnerships to meet the research needs of tribal communities. The purpose of this paper is to describe select NNACoE programs, which include Tribal Health Scholars, Wy'East (Multnomah tribe name for Mountain Hood) Post-baccalaureate Pathway, and the Indigenous Faculty Forum, and to report early findings from the first year.

Methods

Northwest Native American Center of Excellence Overview (NNACoE)

NNACoE, which is led by principal investigator (author EB) and deputy director (author AE), has six teams: 1) Northwest Portland Indian Health Board, 2) Portland State University, 3) OHSU Tribal Engagement, 4) NNACoE Educational Programs (includes Wy'East, Tribal Health Scholars & Indigenous Faculty Forum), 5) OHSU Student Outreach, and 6) a Comprehensive Evaluation Unit. All teams work collaboratively to address NNACoE objectives while focusing on three target groups of AI/ANs: pre-college students, college and post-college individuals interested in medical school, and academic faculty members. Each of these will be described in detail below. Each team is led by a faculty member supported by research staff who are considered equal members of the team. Meetings to share progress are held by phone monthly and each team holds weekly meetings to advance their work.

The Institutional Review Board (IRB) at Oregon Health & Science University (OHSU) deemed the project a research study (OHSU IRB # 17588) rather than an educational program evaluation because AI/ANs have historically been exploited by academia and researchers. Thus, all NNACoE educational activities and evaluation instruments receive IRB review and subsequent approval prior to implementation. A waiver of consent was requested and granted with a minimal risk assessment; all participants received information describing the educational programs, and explaining how the evaluations will be used, including program improvement, peer-reviewed publications, and presentations. Evaluation data is presented only in summary form and no individual participants are identified. Partner organizations undertook different IRB pathways. Portland State University ceded to OHSU's IRB and the Northwest Portland Area Indian Health Board's Tribal IRB decided it would only review materials for tribal youth. Once completed, community IRB approvals were also submitted to OHSU's IRB for review and approval. Each program and its evaluation activities is described below.

Tribal Health Scholars

NNACoE created the Tribal Health Scholars (THS) program for high school students interested in a health professions career. Three to five students per tribe are selected for a 14-week experience shadowing healthcare providers and staff in their tribal health clinic. To implement this program, the Tribal Engagement Team visited five of the nine tribes in Oregon during the first program year. Tribes uniformly expressed interest in supporting AI/AN youths' pursuit of higher education, fostering a culturally supportive environment during their studies, and increasing youth awareness of health professions. In the Spring of 2018, THS was piloted in the Confederated Tribes of Warm

Springs tribal community. Approximately 30 individuals affiliated with NNACoE participated in the development, planning and implementation of the THS pilot. The key stakeholders represented the Confederated Tribes of Warm Springs, Madras High School (the reservation-serving public high school), Portland Area Indian Health Service, OHSU's *On Track OHSU!* (an OHSU-based program for middle and high school students from underrepresented minority backgrounds interested in health sciences) and the Warm Springs Health and Wellness Center.

A presentation of the THS concept and approval in the form of a signed tribal resolution was obtained from the Confederated Tribes of Warm Springs tribal council prior to initiating planning meetings and participant recruitment. In addition to the OHSU IRB, all forms and evaluation instruments generated for THS were submitted to the Portland Area Indian Health Service Tribal IRB. Recruitment and selection of the pilot THS participants was conducted by Madras High School, *On Track OHSU!*, and the NNACoE Education Team.

Fourteen, weekly, one-hour, clinical shadowing sessions were scheduled for the THS Scholars. The first session involved an orientation to the clinic and health information management. The next ten sessions involved shadowing providers in different health careers, and the final three sessions were selected by the Scholars based on their area of interest. Each Scholar connected weekly with a NNACoE health pathway coach (also AI/AN, author DS) to work one-on-one discussing shadowing experiences and future goals. Evaluation activities included an assessment of the clinic experience and the coaching process. Data collection for these is currently occurring.

Wy'East Pathway

Existing literature indicates that AI/AN premedical students often experience significant barriers applying to medical school due to lower MCAT scores, non-competitive grade point averages, or lack of extracurricular activities.^{7,8} These barriers may result in being considered a non-competitive medical school applicant. NNACoE developed the Wy'East Pathway specifically for AI/ANs who either applied but were not accepted into medical school or who were seeking a career change. The two Wy'East pathways, *Academic Enhancement* and *Career Change* — briefly described below, were designed for these two groups of learners.

Wy'East Academic Enhancement (AE) is a 9-month (September through June) post-baccalaureate pathway designed specifically to prepare AI/ANs to excel in medical school. Upon successful completion of the program, conditional acceptance to OHSU's School of Medicine follows. The Wy'East AE is a part-time model, occurring from 9am–1pm Monday through Friday, it gives Wy'East participants the option of maintaining part-time work to supplement their living expenses. An unintended benefit is that some participants are employed part-time with local

tribal and urban Indian organizations, further reinforcing their relationships with AI/AN communities.

The structure of Wy'East AE is designed to support a direct transition to OHSU's novel competency-based curriculum, which was implemented in 2014.⁹ This innovative curriculum integrates foundations of medicine discipline-specific threads into threads that are horizontally integrated into an 18-month block structure. The compacted foundational portion provides flexibility but is also uniquely challenging to first year medical students. Wy'East AE uses a similar thread structure developed, led and taught by a team consisting of OHSU's undergraduate medical education (UME) thread directors and faculty. Threads include Foundational Sciences, Population Health, and Academic Skills and Wellness. Wy'East also provides an introduction to epidemiology, guest lectures from specialized projects, and an MCAT preparatory course. Additionally, participants join in clinical shadowing experiences, a research project, and cultural programming throughout the Pathway.

To track continuous academic performance, NNACoE created a thread-specific assessment system that follows the overall philosophy of the OHSU UME curricula. This consists of weekly quizzes, three quarterly block exams, participation in scholarly activities, and assessments of professionalism. For conditional acceptance to OHSU's School of Medicine, Wy'East AE participants must pass all evaluation components including attaining an acceptable MCAT score and meet professionalism standards. To evaluate the success of this program, Wy'East AE participants' applications, matriculations, and graduation from medical school (at OHSU or elsewhere) are tracked along with career choice, medical specialty, and post-training practice intentions. Focus groups with scholars are performed each year.

The *Career Change* (CC) Pathway involves taking premedical courses at Portland State University that help applicants to meet the requirements for admittance to medical school. With guidance from Wy'East faculty, each participant creates their own individualized course schedule based on self-identified needs. Participants take courses Monday through Thursday allowing them to join the Wy'East AE participants for the Academic Skills and Wellness thread on Fridays. During the winter quarter, CC participants are invited to take the MCAT preparatory course with the AE participants. At the end of the academic year, CC participants may choose to apply to medical school or the AE pathway.

Once in Wy'East, participants have additional avenues for building and maintaining relationships with local tribes and tribal organizations which can extend into their medical education. Wy'East cultural programming gives participants the option to engage in local tribal culture and history through visits to tribal museums and tribally significant landmarks. OHSU also interfaces with local tribes through various outreach programs, departments and institutions which Wy'East participants can engage in such as mentoring AI/AN youth, participating in

clinical care teams, and sitting on panels for diverse students interested in health careers. Wy'East Post-baccalaureate Pathway is the cornerstone of NNACoE's larger vision to improve the health and wellness of AI/AN communities by increasing the number of AI/AN physicians.

Indigenous Faculty Forum

NNACoE conducts an annual Indigenous Faculty Forum (IFF) to promote the advancement of AI/ANs in academic medicine. AI/AN faculty play an important role in training the future health care workforce, and it is vital to support professional faculty development and academic success. Unique challenges are experienced by AI/AN faculty that include limited information on academic career paths, lack of credit for teaching and community service, isolation, challenges in balancing AI/AN and academic cultures, and lack of role models/mentors.¹⁰ Additionally, AI/AN faculty, like other URM faculty, experience the "minority tax" and are burdened with increased institutional service commitments to help with diversity efforts, racism, and inequities in advancement such as promotion.¹¹

The objective of IFF was to create an AI/AN faculty development conference designed to enhance the success of current and future AI/AN academic health faculty. This annual conference aims to provide instruction in key professional competencies leading to academic advancement, address unique cultural considerations for AI/AN faculty, and foster networking and ongoing career support for AI/AN faculty. Ideally, the networking that occurs will provide academic support and create further opportunities for collaboration.

The pilot IFF conference was held on November 17th, 2017 in Portland, Oregon. The second IFF conference occurred July 12th, 2018 in Hilo, Hawaii as part of the Pacific Region Indigenous Doctors Conference (PRIDoC). Attendees were physicians and professors from US and Pacific Rim medical schools, representing a broad assortment of medical specialties and departments. The day-long conferences included faculty-led lectures on strategic career planning, maintaining one's own cultural identity within the larger institutional culture, and building bridges with tribal clinics & communities. Evaluation activities included a post-IFF program evaluation, a focus group held immediately after the Forum and a 12-month follow-up survey designed to assess how participants' careers are developing.

Results

Tribal Health Scholars enrolled three high school seniors in the pilot year. All three scholars are now pursuing college and health science majors. Building on the success of cohort 1 in the Warm Springs community, we are expanding THS with two additional tribal communities in 2019. In three years, plans to expand the operation of THS to include 5 tribal communities across Oregon (Table 1).

Table 1. Participation in the Northwest Native American Center of Excellence Activities in Year 1 and Projections for Years 2-5						
	Projected Participation					
	Pilot Year 1 2018/2019	Year 2 2019/2020	Year 3 2020/2021	Year 4 2021/2022	Year 5 2022/2023	Totals
Tribal Health Scholars	3	6	9	12	15	45
Wy'East Pathways	10	10	10	10	10	50
Indigenous Faculty Forum	10	50	15	50	25	150
Totals by Year	23	66	34	72	50	245

Twenty-nine completed applications were received for the Wy'East Pathway, thirteen applicants were interviewed and ten Wy'East participants were selected. Wy'East Cohort 1 is comprised of six Oregon residents and four non-residents. The cohort is tribally diverse, representing federally recognized tribes or villages from Alaska (three), Great Plains (two), Southwest (three), and Oregon (two). There are three participants in the Career Change (CC) Pathway (having worked in a prior career before pursuing medicine), and seven participants are in the Academic Enhancement (AE) Pathway. NNACoE has the capacity to enroll ten scholars each year, which would yield up to fifty participants by the end of the funding cycle.

Ten faculty members from the Pacific Northwest attended the first Indigenous Faculty Forum and fifty-three from across the Pacific Rim attended the second IFF. The follow-up survey from the first IFF attained a 100% response rate and will be used for analysis when further data is collected from the second and third IFF conferences. Participation capacity is projected to reach 150 Indigenous faculty by the end of the project cycle (see Table 1). Systematic evaluation is in process and findings will be reported in future publications.

Discussion

Many lessons were learned during the first years of NNACoE. Foremost, the experiences have reinforced the necessity of tribal voice (citizens and nations), both in including AI/ANs in educational pathways AND improving the health and well-being of AI/AN people. Educational initiatives aiming to improve health disparities in this population will not reach their full potential without tribal engagement and partnership. Collaboration with the Warm Springs community was absolutely crucial to the Tribal Health Scholars pilot program. Without key tribal input and stakeholders, the longevity of Tribal Health Scholars would certainly be in question and the pilot may have failed.

The Wy'East Pathway offered the most challenges and lessons learned due to the ambition of the planned activities. Offering two parallel pathways, Academic Enhancement (AE) & Career Change (CC), spread staff and faculty efforts too thin and likely diluted the cohort effect, which is the bonding that occurs among participants from sharing a common, sometimes difficult, experi-

ence. Coordinating clinical shadowing for Wy'East participants required more time than initially anticipated. OHSU clinics are spread throughout the Portland metro area and the interests of students fell across multiple specialties, thus a more diffuse effort was required to identify preceptors, pair participants in their desired specialty, and coordinate schedules and transportation. As a result, NNACoE learned it may be a more efficient use of personnel resources to focus on the AE Pathway and pause the CC Pathway until later in the project. The intent is to amplify the Wy'East cohort effect toward fostering strong relationships among participants that can lead to successful outcomes, while preserving faculty and coordinator energy.

The Indigenous Faculty Forum taught us there may be more demand than anticipated for AI/AN-specific professional career development, with ten of the eighteen faculty identified on the West Coast attending the first IFF, and 53 faculty attending the second IFF. It is too soon to tell the impact of the forum on career advancement, as the follow-up surveys for both IFF's are pending. Post-forum surveys are being used to iterate and plan the next IFF.

Pilot programming is nearing completion and systematic evaluations of each effort are underway. Our goal is to scale up NNACoE programs and partnerships. Tribal Health Scholars is actively expanding and will be operating with five tribes by year-three. Wy'East is entering the application and selection cycle for cohort two, where all participants will be in the AE Pathway. Early explorations and discussions are underway with regional medical schools to expand Wy'East. NNACoE will grow relationships with the Indigenous faculty identified, while actively working to identify more attendees. Systemic evaluation is crucial to the successful building of NNACoE programs. To make this process nimbler and more inclusive, the evaluation team has built the NNACoE Educational Research Data System (NERDS) to ensure timely access to evaluation data by NNACoE teams. There is a paucity of literature specific to the recruitment, training, and developing AI/AN physicians in the US workforce, which may, in part, be contributing to the limited success of US medical schools to train AI/AN physicians. Therefore, NNACoE is prioritizing the dissemination of findings in future publications, through digital media, and national and regional presentations so that others may learn

from our efforts. Ultimately, more US medical schools must be effective at training and graduating AI/AN physicians in order to achieve long-term, sustainable solutions.

NNACoE's Tribal Health Scholars, Wy'East Post-Baccalaureate Pathway, and Indigenous Faculty Forum are innovative efforts to increase both the number and successes of AI/ANs in the US physician workforce. Partnering directly with federally recognized tribes to build and operate an AI/AN-specific pathway to medical school has contributed greatly to the success thus far. Fundamentally, NNACoE has created a different way of recruiting, training, and developing AI/AN physicians. Standing upon the shoulders of those who have gone before us, NNACoE represents a new dawn in programmatic efforts to increase AI/AN voice in the US physician workforce. Time and systematic evaluation will speak to the effectiveness of these innovations. Together, perhaps we can shift the tide and actualize a future US physician workforce inclusive of more AI/AN voices.

Conflict of Interest

None of the authors identify a conflict of interest.

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‘Imi Ho‘ōla: Creating Pathways to Success for Indigenous Students in Medicine at the University of Hawai‘i John A. Burns School of Medicine

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Abstract

‘Imi Ho‘ōla is a program for those seeking to heal. Since 1973, ‘Imi Ho‘ōla has provided educational opportunities to students from underrepresented populations in medicine and has demonstrated its success as a pathway for Native Hawaiians and other Pacific Islanders into the University of Hawai‘i John A. Burns School of Medicine (JABSOM). The program’s student-centered, individualized, and team-based approach offers participants the opportunity to develop effective learning and study skills while solidifying students’ foundation in the basic sciences and humanities. ‘Imi Ho‘ōla is an educational model that has had a longstanding impact on the diversity within JABSOM and has contributed to the success of indigenous students in medicine.

Abbreviations

JABSOM = John A. Burns School of Medicine
NHOPI = Native Hawaiian and Other Pacific Islander
PBL = Problem Based Learning

Introduction

A significant body of evidence demonstrates that increasing the number of Native Hawaiian and Other Pacific Islander (NHOPI) health professionals may help to reduce health disparities experienced by NHOPI patients.¹⁻³ NHOPI suffer from the highest rates of chronic disease with a disproportionately higher prevalence of diabetes, heart disease, and cancer when compared to all other ethnicities in Hawai‘i.⁴ The longevity of disparities contribute to a 10 year gap between the longest-living groups, Japanese and Chinese, and the shortest-living group, Native Hawaiians.⁵ Studies have found that when there is racial or ethnic concordance between doctor and patient, patients note a greater degree of trust, higher patient satisfaction, and improved perceived quality of care.⁶ One significant factor that has been shown to increase the representation of minorities within the health professions is the educational pipeline. Health education pipeline and pathway programs are aimed at increasing the number of qualified students from underrepresented backgrounds who successfully matriculate into health professional schools. A Robert Wood Johnson Foundation study of a summer program to support minority college students’ aspirations and subsequent preparation for medical school found that participants had a 70 percent greater odds compared to the minority control group of students in gaining admission to medical school.⁷ Evaluation of University of California premedical post baccalaureate programs that enrolled higher numbers of minority and disadvantaged

students also found that program participants were more than twice as likely as control students to matriculate into medical school.⁸ Although pathway programs have been found to have a positive impact, the numbers of historically underrepresented students in medicine, including NHOPI, remain low. NHOPI residents make up 26.2% of the total Hawai‘i population and only 3.7% of the total Hawai‘i physician workforce, translating to an average ratio of 2.96 NHOPI physicians per 10,000 NHOPIs.⁹ These sobering statistics underline the critical need for educational pathway programs such as the ‘Imi Ho‘ōla Post-Baccalaureate Program. The purpose of this article is to describe the program’s admissions process, curricula, student support services, and participant outcomes.

Program Overview

‘Imi Ho‘ōla (Hawaiian meaning “those who seek to heal”) is a longstanding pathway program originally established in 1973 to increase the representation of Native Hawaiian and Other Pacific Islander (NHOPI) students in medicine.⁹ In the first two decades of the program’s history (1973-1994), the program provided premedical enrichment for aspiring medical students, many of whom were from Hawai‘i and the greater Pacific. Up to 25 students were accepted each year and upon program completion, students would then competitively apply for admission into JABSOM. In 1996, ‘Imi Ho‘ōla underwent a significant organizational change. In order to meet newly established, federal funding priorities, the program was restructured to become a post-baccalaureate program providing educational opportunities to students from disadvantaged backgrounds. The program currently seeks out students from economically, socially, and/or educationally disadvantaged backgrounds who possess the potential to succeed in medicine and have shown a commitment to serve in Hawai‘i and the Pacific.¹⁰ Although ‘Imi Ho‘ōla is not limited to persons of Hawaiian, Filipino, Samoan, Chamorro or Micronesian descent, a large number of students from these backgrounds have demonstrated that they are from a disadvantaged background and are deemed eligible for the program.

‘Imi Ho‘ōla accepts up to 12 students per year and once enrolled in the program, participants gain a conditional acceptance to JABSOM. The program’s mission continues to focus on improving health care for Hawai‘i and the Pacific by increas-

ing the number of physicians through a year-long educational program that addresses disadvantaged students' academic and professional needs. Its success is largely due to the longstanding commitment by the medical school, community supporters and stakeholders. For the past 15 years, the Queen's Health Systems has provided essential monthly stipends to program participants that are used for tuition, books, and other educationally-related expenses. All 'Imi Ho'ōla faculty positions and operational costs are completely institutionalized within JABSOM and is part of the Medical Education division of the Department of Native Hawaiian Health.¹¹

Admissions/Student Selection

All applicants must apply by November 1 of the calendar year prior to matriculation into the program. Applications undergo a review for initial screening which includes *kama'āina* (having ties to the state of Hawai'i and the Pacific), academic (minimum requirements), and disadvantaged requirements. Disadvantaged is defined as "an individual who: 1) comes from an environment that has prevented the individual from obtaining the knowledge, skills, and abilities required to enroll in and graduate from medical school; and/or 2) comes from a family with an annual income below low-income thresholds based on family size as published by the US Census Bureau." A Community Advisory Committee, comprised of leaders in education, medicine, law, and business reviews prospective candidates and provide recommendations for selection into the program. The Community Advisory Committee also provides input regarding admissions policy and overall guidance to the program. Students are reviewed based on their academic and professional potential as well as their commitment to serve in underserved communities of Hawai'i and the Pacific. The recommendations made by the Advisory Committee are then forwarded to the JABSOM Admissions Committee who completes the final selection of students who enter the 'Imi Ho'ōla Post-Baccalaureate Program.

Curricula

The curricula is divided into three phases, termed Phase 1 - Orientation and Assessment, Phase 2 - Academic Enrichment and Phase 3 - Pre-Matriculation. In Phase 1, students undergo a 5-week orientation in which the program administers formal assessments to obtain baseline data on students' knowledge in the biochemical sciences, reading, and learning/study skills. Faculty conduct presentations on specific learning strategies (eg, time management, exam preparation) with application to content-specific material; facilitate exercises to foster learner confidence; introduce students to the Problem Based Learning (PBL) process, and help students familiarize themselves with campus resources.¹² During Phase 2, students are immersed in the basic science curricula which includes Medical Biology and Medical Biochemistry. Students are also enrolled in Humanities in Medicine, a course formerly known as the Scientific Basis

of Medicine. During the Humanities in Medicine course, key discussion topics include an introduction to social determinants of health, health disparities, cultural competency, the structure and implementation of the health care system, community-based participatory research and community health experiences. Phase 3 is designed to ease the students' transition into medical school. Students engage in JABSOM's traditional PBL format which is more student-directed and less teacher driven. Students also participate in a one week rural shadowing experience with a community physician located in a rural setting on the island of O'ahu or on one of the neighboring islands, including Hawai'i Island, Kaua'i, Moloka'i or Maui. Once participants complete Phase 3 and achieve satisfactory credit in all courses, they matriculate into JABSOM ties to the state of Hawai'i and the Pacific.

Throughout the three phases of the program, program faculty utilize an integrated, team-based approach in which students learn how to improve critical thinking skills through mixed teaching methods. Faculty utilize a modified PBL format in which instructors provide more direction and guidance related to learning issues, formal lectures, small group discussions, and hands on experiences in gross anatomy lab and biochemistry to expose students to a diverse teaching environment that meets their individual learning needs. Students also participate in a year-long service-learning project in which they learn about the history of Hansen's disease (formerly known as leprosy) and its impact on the patient, their families, and communities. The service-learning project culminates with an annual trip to Kalaupapa located on the island of Moloka'i. Kalaupapa is a former settlement for Hansen's disease patients now established as a national park. The Kalaupapa service-learning project offers students the opportunity to learn about culturally competent health care services and the unique needs of rural and underserved patient populations.

Student Support Services

'Imi Ho'ōla services are student-centered, individualized, and comprehensive. In phase 1 of the program, students complete a battery of assessments that are used to determine the students' current level of learning skills development and approach to mastering new information. The information obtained by the learning assessments are analyzed by the Learning Specialist and faculty to create an individualized educational plan for each student. The learning plan is a culmination of results from the learning assessments, students' academic history, and personal/social demographics. This comprehensive educational plan is used throughout the year to offer feedback and to assist students in developing their optimal learning and study strategies to achieve success in the program. Students receive formal feedback a minimum of 6 times throughout the year via student conferences. During each student conference, the Director, Learning Specialist, and Program Assistant facilitate open dialogue with the student while providing feedback and

encouraging student reflection regarding his or her academic progress and professional behavior in the program.

Based on learning assessment results and student performance, students can be referred to services that may include evaluation for learning differences and behavioral health needs. The program works directly with Kahi O Ka Ulu 'Ana (KOKUA), a student services support program located on the University of Hawai'i at Mānoa campus which offers identification evaluation, and recommendations for students with learning differences or disabilities to promote their success academically. Testing accommodations and/or referrals to behavioral health professionals and other services that enhance student well-being and academic success are also provided within the individualized educational plans.

Participant Outcomes

Since 1978, 'Imi Ho'ōla's contributions to NHOPI diversity at JABSOM are significant for 38% of all Native Hawaiians, 34% of Filipinos, 57% of Micronesians, and 89% of Samoan students accessing medical school through the 'Imi Ho'ōla program and successfully graduating from JABSOM. Over the past 2 decades, there have been a total of 210 participants of 'Imi Ho'ōla. Of the 210, 168 (80%) students have successfully completed the program and matriculated into JABSOM. Many factors contribute to a student's ability to successfully complete the program which may include academic readiness and personal/social circumstances. Of these JABSOM matriculants, 41% were male and 59% female. Eighty percent (80%) of 'Imi Ho'ōla completers are from the state of Hawai'i, 16% from US affiliated Pacific Islands, and the remaining 4% from the continental US and various parts of Asia. Self-reported primary ethnicity of program completers is as follows: 32% Native Hawaiian, 29% Asian (includes Japanese, Chinese, Korean, Vietnamese, and Taiwanese), 25% Filipino, 12% Pacific Islander (includes Chamorro, Samoan, Palauan, Pohnpeian), and 2% making up a combination of American Indian/Alaska Native, African American, Laotian, and Caucasian.

After exclusion of 'Imi Ho'ōla graduates who are currently enrolled in JABSOM, 137 program graduates remain. Of the one hundred thirty-seven 'Imi Ho'ōla graduates who then obtained their MDs from JABSOM, fifty-eight percent have chosen primary care with the majority specializing in family practice (23%) and internal medicine (21%). Of those providing health care services following residency, 42% practice in Hawai'i, while 58% are practicing on the continental United States.

Table 1. Self-Reported Primary Ethnicity of 'Imi Ho'ōla Graduates (1996-2016)

Ethnicity	%
Native Hawaiian	32
Asian	29
Filipino	25
Pacific Islander	12
Other	2

Summary

For the past 45 years, 'Imi Ho'ōla has served as a pathway for indigenous students to achieve the challenging goal of becoming physicians. Through a combination of student-centered curricula and individualized student support services, 'Imi Ho'ōla participants strengthen their basic sciences foundation while developing effective learning strategies, building self-confidence, and creating a longstanding and critical support network that promotes their success in medical school and as a future physician. The 'Imi Ho'ōla program is essential to diversifying the physician workforce in Hawai'i, positively impacting health care services and improving health disparities experienced by NHOPI.

Conflict of Interest

None of the authors identify a conflict of interest.

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Empowering ‘Ōpio (Next Generation): Student Centered, Community Engaged, School Based Health Education

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and Vija M. Sehgal MD, PhD, MPH

Abstract

Education and health are vital for children to thrive, especially for those from rural and disparate communities. For Native Hawaiians, the indigenous people of the State of Hawai‘i, lōkahi (balance) frames the concept of ola (health), consisting of physical, emotional, and spiritual health. The foundation of ola is embedded in the cultural values — kupuna (ancestors), ‘āina (land), environment, and ‘ohana (family). Unfortunately, since westernization, Native Hawaiians have significant health disparities that begin in early childhood and often continue throughout their lifetime. Native Hawaiians also have a history of educational disparities, such as lower high school and college graduation rates compared to other ethnic groups. Social and economic determinants, such as poverty, homelessness, and drug addiction, often contribute to these educational disparities. In rural O‘ahu, the Waianae Coast Comprehensive Health Center recently established two school-based health centers at the community’s high and intermediate schools to improve student access to comprehensive health services. Recognizing the need to improve student health literacy and address specific health issues impacting the community and students, two health educators were added to the school-based health team. This article describes: 1) the initial steps taken by the health educators to engage and empower students as a means to assess their needs, interests and facilitate student lōkahi, ola, and wellness and; 2) the results of this initial needs assessment.

Keywords

Community Health, Community Health Centers, Culture, Hawai‘i Public School, Health, Health Education, Indigenous Health, Indigenous Public Health, Public Health, Native Hawaiian, Native Hawaiian Health, Rural Health, Rural Community Health, School Based Health Centers, Student Driven, Student Health, Student Health Needs, Waianae Coast Comprehensive Health Center

Abbreviations

DOE = Department of Education
SBHC = School Based Health Center
WCCHC = Waianae Coast Comprehensive Health Center
WHS = Wai‘anae High School
WIS = Wai‘anae Intermediate School

Introduction

Optimal health is essential for children to succeed academically. Healthy children are better learners and do better on standardized tests.¹⁻³ For many children, however, especially those from impoverished and/or rural communities, optimal health and academic achievement are difficult to attain. In Hawai‘i, children from these communities experience higher rates of chronic disease like obesity.⁴ They also have higher rates of high-risk behaviors such as smoking and drug use, as well as high rates

of academic underachievement.⁵ This includes Native Hawaiians who experience significant health disparities that begin in early childhood and often continue throughout their lifetime. For example, obesity in Native Hawaiians often begins very early in childhood and increases the risk for chronic diseases such as diabetes and cardiovascular disease.^{4,6} Native Hawaiian children also have a history of educational disparities, such as lower high school and college graduation rates compared to other ethnic groups.⁵

For Native Hawaiians, *lōkahi* (balance) frames the concept of *ola* (health), including physical, emotional, and spiritual health. The foundation of *ola* is embedded in cultural values including *kupuna* (ancestors), *‘āina* (land), environment, and *‘ohana* (family).⁷ Unfortunately, for many Native Hawaiian children and adolescents, social and economic determinants of health, including poverty and poor housing,^{9,10} continue the cycle of school failure and poor health making *lōkahi* and *ola* difficult to achieve.

School-based health centers (SBHC) can reduce barriers to health care by providing health services to students, including those who might otherwise not seek or receive health services.^{11,12} This is especially true for adolescents, who often avoid conventional clinic-based services. SBHC have been shown to improve access to healthcare.¹³ They have also been shown to improve school attendance in those who utilize the services, especially those accessing mental health services.¹² Thus, SBHCs may be an important component in addressing youth health disparities, especially for children and adolescents from rural and underserved communities.

Unlike many states, Hawai‘i has few SBHCs.¹³ However, in 2016, at the request of the Hawai‘i Department of Education (DOE) and community members, the Waianae Coast Comprehensive Health Center (WCCHC) established two SBHCs at Wai‘anae High School (WHS) and Wai‘anae Intermediate School (WIS). In Fall 2018, again, at the request of the community and the DOE, WCCHC opened a SBHC at Nānākuli High and Intermediate School. The Empowering ‘Ōpio (next generation) Project aims to improve healthcare access and health literacy as a means to enhance student *lōkahi*. The objective of this article is to describe the initial steps taken by WCCHC SBHC team, to engage and empower high school students to assess their health needs and community interests.

The Wai'anae Community and the WCCHC School Based Health Centers

The Wai'anae Coast is located on the rural, northwest side of O'ahu and is composed of eight *ahupua'a* (land divisions). It is home to one of the largest populations of Native Hawaiians, many of whom have lived on the coast for generations. Unfortunately, community members have some of Hawai'i's highest levels of poverty, homelessness, unemployment, and crime.¹⁴ Health statistics are poor, with high levels of chronic physical and mental health conditions beginning early in life.^{15,16} WCCHC is Hawai'i's largest federally qualified community health center and has served Wai'anae communities for over 45 years. In 2017, WCCHC served 37,204 patients, the majority Native Hawaiians (44%) and living at, or below, the poverty level (65%).

The WCCHC SBHCs serve all students, regardless of insurance status, providing comprehensive primary care, acute care, health education, and behavioral health services. Students are seen at SBHCs once parental consent is obtained. Visit summaries are sent to the adolescent's primary care provider after every visit. Since opening in 2016, healthcare providers at the three SBHCs have cared for over 2,795 students; 95% of them were able to return to class after treatment.

Soon after opening, the school principals, together with the WCCHC SBHC team, recognized the need to address specific health issues (ex: prescription drug abuse) impacting the community and the school. They also recognized the need to improve student health literacy and health-seeking behavior. While school health education courses may address these needs, in Hawai'i, the DOE health education requirements are minimal. Students are not required to take health education courses in intermediate school (7th and 8th grade) and only need one semester of a health education course to graduate from high school (9-12th grade).¹⁷ To address these needs, in September 2017, the WCCHC SBHC added two health educators to its team, both of whom are Native Hawaiian, from the community, and graduates of Wai'anae Coast public schools and the University of Hawai'i at Mānoa. The health educators' central focus is the *'ōpio* or the children. Both educators have training and experience using community participatory methods in research and health programming. These methods apply a range of strategies to facilitate active participation by community members to characterize problems and explore potential solutions. Participatory methods have been found to empower participants and are a method to effectively address health disparities.¹⁸ The WCCHC SBHC health educators sought to facilitate student *lōkahi*, health, and wellness by understanding the needs of students, providing health education on a broad array of topics, as well as connecting students to services and each other.¹⁸

Methods

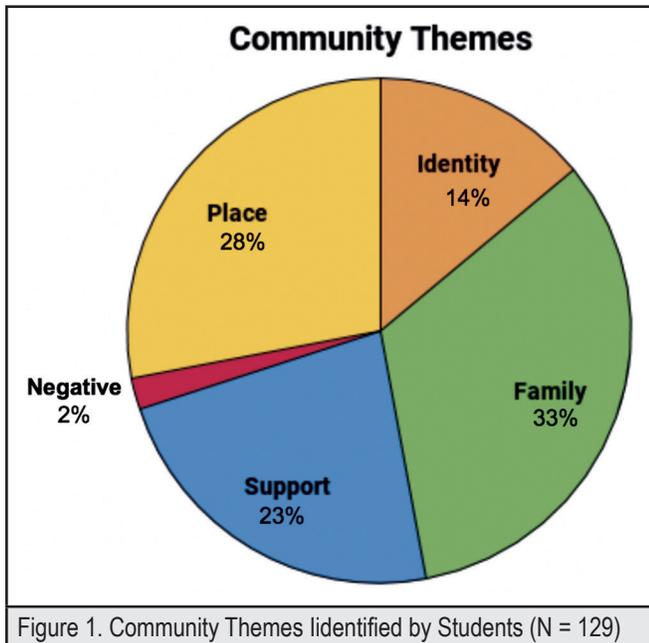
To begin the Empowering *'Ōpio* Project, the two WCCHC SBHC health educators explored participatory strategies with stakeholders including students, school principals, school administration, teachers and staff, along with the SBHC team. Participatory strategies that empower youth to think critically, solve problems and become socially active in issues that they are concerned about, have been shown to promote positive health behaviors and community action.¹⁸ The health educators were then invited by some teachers, including math and health education teachers, to use regular class time to meet with students.

With the goal of empowering the students, the health educators held sessions with the students that included a formal presentation on WCCHC SBHC services and community health. A "talk story" followed the formal presentations where the health educators shared their own personal stories about growing up in the community and the challenges they faced. The students were invited to ask questions and talk about their own concerns and challenges. The presentation concluded with a voluntary, confidential, open-ended paper survey that asked the students to describe the meaning of community, what it means to be from the Wai'anae Coast, and the students' needs and concerns about health issues for themselves and *'ohana*. To analyze the results, the health educators extracted the common themes then met with the SBHC team to reach consensus on the main themes. The health educators then reviewed the surveys to identify quotes and subthemes, or topics that cut across several main themes.

Results

Health educators held eight sessions at WHS and WIS with 133 students; all students present on the day of the class presentation opted to complete the voluntary, open-ended paper survey. However, survey questions were not mandatory to answer, thus the number (n) answering each question varied. Main themes related to the meaning of community included family, place, support, identity, and negativity. (see Figure 1). Sub themes related to the meaning of community were defined as topics that crossed over several of the main themes. The sub theme topics included kindness, peace, responsibility, knowing and respecting each other, pride, strength, humility, resilience, helpfulness, and Native Hawaiian cultural values. Selected quotes for each main theme are provided in Table 1.

- *Family*: Students strongly value the connection within their 'ohana and the aloha they have for one another between the Wai'anae Coast communities.
- *Place*: For students, the Wai'anae Coast is more than just a physical location or a community of families; it provides students with a sense of place, a sense of connection to their roots, and a generational connection to the community that is profoundly important to them.
- *Support*: Students value working together to support and improve their 'ohana, and their community.
- *Identity*: Thoughts about cultural and community identity were most frequently expressed by the students. The students expressed strong cultural identity and their passion about being from Wai'anae. They conveyed the importance of supporting, influencing, and motivating one another to surpass struggles they may face.
- *Negative*: Negative themes were expressed by a few students. These included "too many bad things", "we're stereotyped", and "struggling". Students often felt they were "being judged," and expressed the need to build a hard exterior. Some students expressed feeling that they are unable to be better because of these negative stereotypes against them.



Students identified several health concerns related to themselves and their family members including asthma, allergies, diabetes, cancer, drug use, alcohol abuse, heart disease, trauma, and suicide among many more (see Figure 2). With the open-ended question format, students often listed descriptive terms, such as "breathing problems", "heart problems" and "bad kidney", rather than disease names, making frequency counts difficult. Other health topics of interest to students were cancer, sports/physical health, diabetes, prevention and management of chronic diseases afflicting family members. During the discussions, students openly shared how these health issues impact their lives. Students and families frequently have to adapt their schedules and ways of doing things, to care for ailing family members, including extended family members. Some students expressed that they could not do extracurricular activities, or spend time with friends because they had to help care for family members. Students expressed interest in learning how to prevent these health problems and how to help their family members manage these conditions.

Identity Quotes	
"To be from Waianae means we are strong, we don't give up... What community means to me is people who are strong together."	"We have strong pride for who we our. Stronghold is our Native Hawaiian culture."
Place Quotes	
"Its community is my home. Being from Waianae is something to (be) proud about. Its where my roots lie. And people in Waianae always support the Waianae high school."	"I feel that it means that you have had a privilege to be able to be in one of the most beautiful places for education."
Family Quotes	
"What community means to me is when I hear Waianae I want to hear positive things and we also represent Waianae. And we in Waianae are all family."	"Community to me is the whole of waianae coast. I think as people of "waianae" we should strive to be better, is your ohana, friends, aloha, and culture."
Support Quotes	
"To be from Waianae means to be strong. It's not all seasons. We're all nice and help each other out. We aren't druggies and we don't all have criminal records."	"Community means to me is the people you live around the area your around is your kuliana, where we live helping each other out and move forward to help your peers and elders and everyone working together as ohana."
Negative Quotes	
"It means that everyone has stereotypes against us. Being from Waianae means its really hard, a lot of struggling you have to be tough, because there is a lot of negative in Waianae."	"It means that I always have to try my best because there's people out there who think we aren't good enough."

and implement interventions to prevent drug and alcohol use, as well as suicide.²⁵ WCCHC is now successfully working with community members, including school staff and community leaders, using community-engaged participatory methods to understand the needs of youth of the Wai‘anae Coast, and develop more effective programming to address these needs.

Data gathered from community engagement has been used successfully as leverage points to change policies, programs, and systems that can lead to more sustainable improvement in health and educational outcomes.^{20,25} This may be especially important in data gathered from and by non-conventional partners, such as students from indigenous communities. Additional resources will undoubtedly be needed to develop new health education strategies and programs based on this information. However, for communities faced with health and educational disparities, programs implementing similar participatory strategies may, in the long run, be more effective and efficient than those based on conventional models.

Conflict of Interest

None of the authors identify any conflict of interest.

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Professional and Cultural Development of Medical Students Mentoring Adolescents in a Predominately Native Hawaiian Community

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Jerrick J.K. Laimana BA; and Kelli-Ann N.F. Voloch MD

Abstract

First year medical students (MS1s) increase their skills in medical professionalism and their understanding of adolescent needs and cultural humility through an intermediate and high school health career pathway/mentoring program. Teaching and service-learning activities incorporate health promotion and traditional Native Hawaiian practices and provide experiences that help MS1s to understand concepts important to medical professional development and adolescent mentoring. The content of this article was presented as a workforce development session at the 2018 Pacific Region Indigenous Doctors Conference. Methods: This article describes the program curriculum for MS1 community health electives mentoring rural, underserved, predominantly Native Hawaiian students and examines the training elements and reflections from 40 MS1s participants in the first four years of the Nānākuli Pathways to Health teen mentoring program. Student reflections were themed and analyzed for content discussing the students' professional development and experience in mentoring. Results: Analysis of four separate medical student cohorts enrolled in a teen mentoring community health elective demonstrate that mentoring relationships and program curricula helped them to develop skills in medical professionalism including establishing relationships, self-reflection, self-evaluation, communication, compassion, excellence in teaching, and a deepened understanding of native Hawaiian culture and health disparity.

Keywords

medical student, professionalism, teen mentoring, health pathway, Hawaiian, culture

Abbreviations

BBBS = Big Brothers/Big Sisters
DNHH = Department of Native Hawaiian Health
JABSOM = John A. Burns School of Medicine
MS1s = First year medical students
NHIS = Nānākuli High and Intermediate School
NPH = Nānākuli Pathways to Health
NHCOE = Native Hawaiian Center of Excellence

Introduction

H. Swick's definition of medical professionalism acknowledges altruism, excellence, social responsibility, humanistic values, accountability, competency, self-regulation and self-reflection as essential professional behavioral characteristics to be developed.¹ In the past 25 years, there has been a movement to reform professional development curricula in physician training programs.² Medical schools continue to explore the best methods for

developing qualities of professionalism and cultural humility.³ Curricula on medical professionalism ranges in spectrum from formal didactic sessions to reflections on informal experiences emphasizing characteristics of medical professionalism.³ New approaches are continually sought.

Native Hawaiian Center of Excellence (NHCOE) faculty have responded to the need for innovative and effective curricula in professional development by creating community health electives that place first year medical students (MS1s) in an adolescent mentoring/health career pipeline program called the Nānākuli Pathways to Health (NPH). The combination of a community health elective with a pathway program provides a unique setting for the exploration of professionalism in medicine in the context of community service, adolescent mentoring, and cultural service-learning. This article describes the development of the NPH program, since its inception in 2013, and explores the impact it has had on students' professional development while serving in a rural, underserved, Native Hawaiian community. It also explains the curriculum design and an analysis of student reflections in the first four years of program delivery.

While the state of Hawai'i continues to face a growing shortage of physician providers, neighboring islands and rural areas outside of Honolulu, O'ahu are noted to have the greatest need.⁴ The mission of the NHCOE at the John A. Burns School of Medicine (JABSOM) is to improve the health of Native Hawaiians through education, research and community engagement. NHCOE programs address a growing need to increase the competitive applicant pool for medical school, improve cultural humility in healthcare, and increase Hawai'i's physician workforce especially in the rural areas. Schiff, et al, compared the early school origins of JABSOM medical students to post-residency practice locations, and found that JABSOM students from rural areas were nine times more likely to return as physicians to practice in rural locations.⁵ Thach, et al, explains that exposing medical trainees to rural communities cultivates interest in choosing a future rural practice.⁶ Additionally, the NHCOE community health electives/health pathway combination introduce medical student trainees to the unique qualities and needs of adolescents from a rural, predominantly native Hawaiian community.

Program Origins and Objectives

Building Community Relationships and Program History

In 2008, Kelli-Ann Voloch MD, a JABSOM Department of Native Hawaiian Health (DNHH) faculty member and pediatrician in west O‘ahu, established a relationship with Nānākuli High and Intermediate School (NHIS) when she perceived a need for mentoring and positive role models for Nānākuli’s adolescent population. Upon further investigation, she soon discovered disparities in high school completion and graduation rates were significantly lower at NHIS than other public schools on O‘ahu and, in fact, were among the lowest in the state.^{7,8} In response, Dr. Voloch developed a JABSOM community health elective called Kuaola. Operating out of Big Brothers/Big Sisters (BBBS), she brought the first cohort of first year medical students (MS1s) to mentor eighth graders enrolled in NHIS’ college preparatory class called AVID (Advanced Via Individual Determination). With the high density of Native Hawaiians in Nānākuli, the initial intent was for MS1 mentors to inspire Native Hawaiian youth to become physicians by developing meaningful mentor relationships, discussing relevant adolescent health topics, encouraging high school completion, and exploring college pursuit and health careers.

In 2012, the funding support for Kuaola shifted from BBBS to NHCOE and a grant from Kamehameha School’s Community

Investing helped start the Nānākuli Pathways to Health NHIS Medical Student/Teen Mentoring Program. With the new funding, a second MS1 community health elective group Healthy Keiki Can! (now known as *Na ‘Ōpio o Nānākuli* • Youth of Nānākuli) joined Kuaola to provide additional medical student mentoring support for the NHIS health academy. NHIS’ Global Health and AVID college preparatory classes serving 7-12th graders enrolled in the NPH mentoring program. MS1s provided service to the classes while they cultivated their own skills in mentoring, professionalism, teaching, curriculum development, communicating with adolescents, and cultural understanding.

Curriculum Objectives

A 10-month community health elective is a required course for JABSOM MS1s. As described in the JABSOM Community Health Handbook, the objectives of the community health elective are to “explore methods for promoting health and improving the quality of life for patients by working with a community organization throughout the entire first year.” These objectives were further expanded to include the activities and objectives of the NPH program such as developing skills in lifelong learning, teaching, communication, and professionalism, introducing students to rural Native Hawaiian community and adolescent care, and expanding their understanding of cultural humility and patient/public health advocacy. Figure 1 describes the formative and summative skills proposed for participating MS1s.

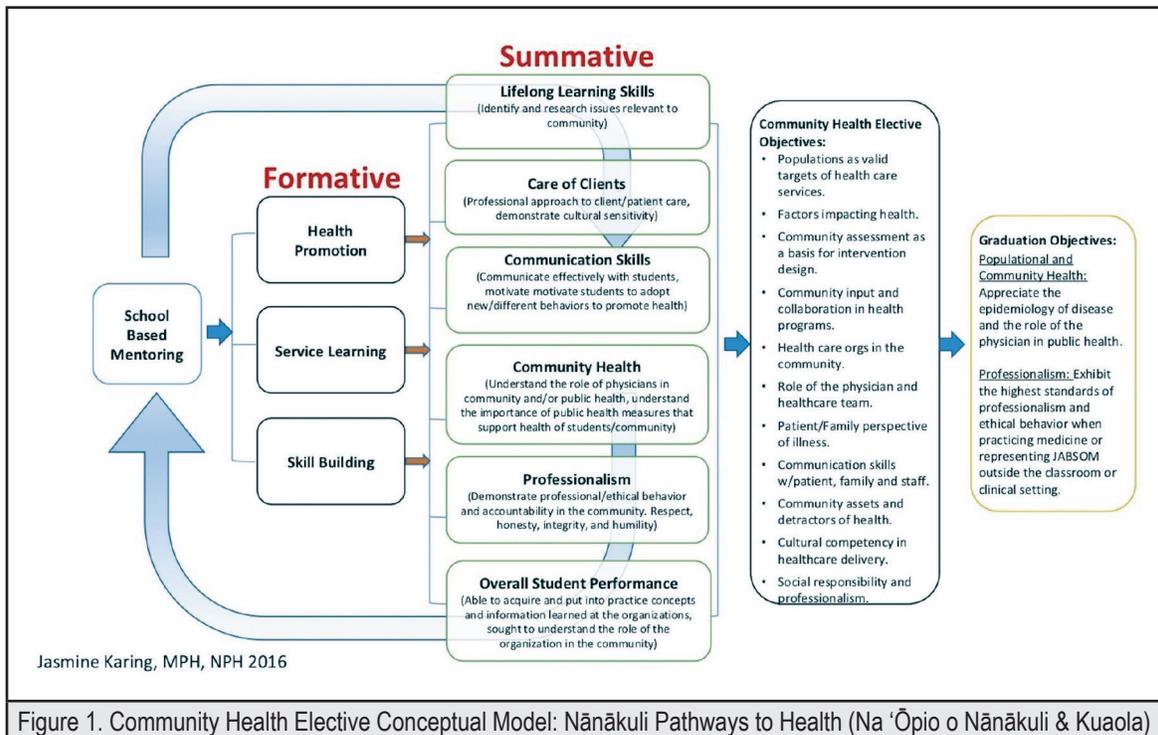


Figure 1. Community Health Elective Conceptual Model: Nānākuli Pathways to Health (Na ‘Ōpio o Nānākuli & Kuaola)

Location

Less than 40 miles west of Honolulu, the Nānākuli community is largely underserved with a high school demographic of nearly 71% Native Hawaiian students, disproportionate levels of high school retention, and low graduation rates.^{9,10} In 2013, Hawai‘i state reported NHIS had a high school dropout rate of 20.1% and an on-time graduation rate of 76%.⁸ Native Hawaiians makeup about 26% of the entire state population and remain underrepresented, and often disadvantaged, minority within their own homelands. The native people of Hawai‘i are defined in the Native Hawaiian Homes Commission Act (NHHCA) of 1921 as those who inhabited the island of Hawai‘i prior to the arrival of Captain James Cook in 1778 and the aboriginal settlers are thought to have arrived in the islands between 300 and 800 AD from the Polynesian islands.¹¹ Designed by the US government, the NHHCA is a program intended to “aid Native Hawaiians in rehabilitation and economic self-sufficiency” through very low cost leasing of residential property at a rate of \$1 per year. Those with an ability to prove Native Hawaiian blood quantum levels greater than 50% are eligible.¹² NHIS is located in a designated homestead area.

The setting of Nānākuli High and Intermediate School (NHIS) was chosen as an ideal site for the community health elective due to its make-up of over seventy percent Native Hawaiians and the additional opportunities the pathway program would provide to students from a remote, rural, public intermediate/high school. In Nānākuli, medical students are positioned to learn about the health and socioeconomic challenges that may contribute to health disparities while sharing their own pathway stories, teaching NHIS students about health professions, encouraging high school completion, and performing Saturday, off-campus, cultural, ‘āina (land)-based service-learning community projects.

Methods

Student Selection

The two NHC OE community health electives, named Kuaola and Na ‘Opio o Nānākuli, require MS1s to mentor high school and/or intermediate students while encouraging communication, healthy lifestyles, and the pursuit of higher education and health careers. Potential MS1 mentors are selected during a community health fair where a variety of elective programs are showcased. The MS1s learn details about the different electives from former mentors and/or mentees and lead faculty, then rank the community health electives they are most interested in. The community health sites select the MS1s based on student ranking and familiarity with the applicants. Between 5-7 students are selected for each elective every year. Ideal applicants are those with an interest in working with adolescents who are open to experiencing knowledge exchange and professional growth within the community.

Curriculum

MS1s meet up to four times a month; two meetings with mentees occur, once in the NHIS classroom and another at a Saturday, off-campus, service-learning site; and 1-2 meetings at JAB-SOM allow for preparation of classroom presentations as well as debriefing and reflection upon encounters with mentees. A “kick-off” event is held early in the year to allow for mentor and mentee introductions and the natural selection of MS1 mentors with at least one NHIS mentee. Large group activities are held at least twice a year to expose other NHIS students to NPH program benefits. Throughout the year, NHC OE lead faculty also discuss topics with MS1s such as humanism, mindfulness, spirituality, professional well-being, professionalism, and Native Hawaiian history and health disparities.

Orientation

Orientation to Native Hawaiian Cultural, Sense of Place, and the Wai‘anae Coast Tour activities are described in Table 1. Native Hawaiian cultural experts and social workers, introduce MS1s to the concepts of Native Hawaiian protocol practices, sense of place, language, historical trauma, and cultural values. Sense of place exercises encourage students to reflect on where they came from in relation to their childhood, hometown, upbringing, parental and ancestral influences. The cultural orientation also includes a bus tour of Nānākuli and the surrounding Wai‘anae coast on O‘ahu, as well as a discussion about regional stereotypes, myths, legends, and misconceptions about the area. Monthly, off-campus, culture-/land-based community service-learning projects using traditional native Hawaiian practices that once sustained the communities (such as fishing, farming, foresting) allow students to develop relationships through teamwork, cooperation, *kuleana* (responsibility), and *mālama ‘āina* (caring for the land).

Adolescent Safety Training

To prepare for mentoring adolescents, MS1s are briefed by faculty and specialists on adolescent development, current issues facing teens in the community, and professional behaviors expected throughout the elective. Adolescent safety training covers mandated reporting for known or suspected abuse or harm, methods of building rapport, the importance of maintaining professional boundaries, confidentiality, appropriateness of social media, challenges in communication, and tips to finding common ground. Introductions to mindfulness concepts, local environment and foods, age appropriateness, and perceptions of outsiders are also discussed.

Classroom Presentations

MS1s are challenged to create lessons that are innovative, meaningful and engaging. Students are briefed by NHIS teachers of global health and AVID classes on how to create appropriate

NHCOE Community Health Curriculum Overview	Students and faculty introductions, program origins, structure, objectives, and syllabus are reviewed
Hawaiian ways of learning	A session with a well-respected Native Hawaiian cultural expert introduces Native Hawaiian historical trauma, health disparities, the practice of 'Oli (Hawaiian chant), and the purpose of protocol
Sense of Place trainings	A workshop on genealogy, legends and myths, history of Nānākuli is presented by a community expert and a bus tour of the Wai'anae coast is given
Adolescent Safety Training	Establishing Rapport, professional boundaries, confidentiality, social media, communication tips, age appropriate behavior and attire, reporting suspected abuse or harm
Instructions for creating health presentations and communicating with adolescents	Students are briefed on key elements of curriculum development including the importance of understanding learning styles, classroom management, topics relevant to adolescents, consideration of educational core standards, and teacher suggestions and feedback.

	Discussed in Reflection	% (N=40)
Engaged in meaningful conversation(s)	28	70
Aware of having made a positive impact on the mentee	28	70
Established a rapport with their mentee(s)	25	63
Felt mentee demonstrated trust in mentor	21	53
Expressed having a better understanding of students in rural community	17	43
Mentee was able to discuss significant concerns or questions	13	33

presentations in accordance with the Department of Education guidelines, learning styles, curriculum development, and classroom management. NHIS curriculum plans are relayed to the MS1s through NHCOE faculty liaisons. Presentation topics have included understanding stress and vital signs, exploration of health careers, healthy food alternatives, exercise and meditation, bullying/cyber bullying, coping with stress, decision making, college life, college readiness, writing personal statements, interviewing skills, and college financial aid.

Evaluation

At midyear, MS1s participating in the ten-month NPH program are asked to complete a reflection essay on one or more areas of professionalism that they felt were enhanced or developed during the community health elective. Post-event surveys from adolescents and debriefings with NHCOE and NHIS faculty are used to enhance curriculum development and are not reported in the scope of this article.

Results

Forty medical student reflections were deidentified, themed and independently reviewed for content relating to 1) mentoring and 2) professional character development. Subthemes on mentoring included engaging in meaningful conversation, establishing a strong relationship, having a positive impact, mentee demonstrating trust, and mentee discussing significant concerns or

questions. Subthemes in professional character development included self-reflection/self-evaluation, communication, excellence in teaching, compassion, leadership, listening, altruism, empathy, respect, positive attitude, gratitude, integrity, and understanding students from an underserved community.

Mentoring experiences described in student reflections (Table 2) indicate that seventy percent of students had meaningful conversation(s) with their mentee, 63% indicated that they were able to establish rapport with their mentee(s), and (70%) felt they had made a positive impact on their mentee. Fifty-three (53) percent described establishing a trusting relationship with their mentee(s) and 33% discussed significant concerns or questions with their mentees.

In regards to professional character development (Table 3), reflections indicate that overall 90% of students had increased their knowledge, understanding, or skills in professionalism in medicine through adolescent mentoring. Subtheming identified the top three skills developed as self-reflection/self-evaluation (90%), communication (70%), and teaching (63%). Fifty (50) percent or more of students also described how compassion, accountability, and positive attitude played an important role in their mentoring experience. Others described how mentoring helped them to develop or improved skills in leadership, listening, altruism, empathy, and respect, as well as a better understanding of adolescents in an underserved community.

Table 3. Medical Student Professional Character Development While Mentoring Teens in Community Health		
	Discussed in Reflection	% (N=40)
Increased understanding/knowledge/skills of professionalism in medicine	36	90
Developed skills in self-reflection/self-evaluation	36	90
Developed skills in communication	28	70
Identified developing skills in/striving for excellence in teaching	25	63
Developed understanding of how they can be accountable for their actions	20	50
Valued developing or maintaining a positive attitude in mentoring	20	50
Experienced compassion	20	50
Experienced empathy	19	48
Learned more about respect for others in their community	19	48
Improved skills in listening	18	45
Demonstrated a role in leadership	16	40
Altruism: was able to put the needs of others over my own	15	38

Discussion

Historical trauma and sense of place exercises helped students gain a better understanding of Native Hawaiian culture, protocol, and traditions. Medical students also learned about physician wellness and life balance during the exercises on *lokahi* (unity and balance) that took place during the sense of place exercises. In addition, the service learning events and adolescent mentoring enhanced MS1s' understanding of cultural humility, native Hawaiian rural student life, professionalism, humanism in medicine, responsibility, empathy, communication, compassion, and the need for self-reflection.

- “the presentations from cultural experts helped me to understand how social determinants of health contribute to Native Hawaiian health disparities.”
- Some students described how they were able to utilize what they learned about social determinants of health in classroom presentations.

Service learning activities helped MS1s to know more about the cultural resources available in Hawai'i.

- “We went to a lot of places that I've never gone to and I've lived here for twenty something years.”
- “I get to go out and do things like hiking or these team building activities which I probably wouldn't have done at all had it not been for those Saturdays ... it forced me to be more active, which is a really positive thing because I wouldn't have been that active if I wasn't given the opportunity. It was really important to have something else besides going to school and studying.”

Others felt humbled and described feeling compassion for the adolescents noting the following:

- “...the lack of access to resources on the west side”
- “how outside perceptions (of Nānākuli) can influence personal perception in Nanakuli.”

While mentoring, some MS1s felt that it was their *kuleana* (responsibility) to adopt healthier living choices, to strive for work-life balance, and to deliver their presentations with integrity.

- “(The elective) has helped me to be healthy, too, because now (I'm) trying to better the community and (I) have to do the same thing.”
- “[I have] someone looking up to me, telling them to eat healthy, and all this stuff. And I'm telling myself, you know, I have to practice what I preach.”
- One medical student learned the importance of being a source of kindness, and another felt the importance of having a “... positive attitude, and it's like, they (Nanakuli students) don't necessarily get those affirmations and that's where we're supposed to come in.”

Stronger communication skills were developed through mentoring where students felt they were able to:

- “address personal and reserved issues with Nānākuli students.”

Empathy for mentee(s) is expressed in the following reflections;

- “I thought my life was hard, but they went through way more than what I could have ever experienced. I think that that was one thing as a medical student that kind of opened my eyes...”
- “learning about where they (the adolescents) come from, what they've been through...made me realize the bounds of human resilience are just so much greater. They've been through so much and are so resilient...”
- “...(it) makes me realize the capacity of people.”

Medical students learned to look beyond the surface of barriers and health issues and to approach relationships with adolescents without judging.

- “...recognizing the back story and how it's not necessarily noncompliance that's a barrier to people's health,

but it can also be their aunts or uncles who are really the barriers, physical barriers, from going to the Comp, or seeking a women's health doctor . . . Just to recognize that as a physician, to not pass that judgement. You see something. . .to just dig deeper than, you know, that they don't care.”

For some students communicating with an adolescent meant going beyond their comfort zone.

- “Prior to this experience, I had never worked with students and was actually afraid to do so.”
- “I learned more about how I adapt to new environments and ways to adjust my speech/actions to be more relatable.”

A second-year medical student reflects on how his own sense of responsibility was enhanced through this rotation; “The opportunity to work with the NPH program has provided me with an invaluable experience that has and will continue to influence my career as a physician. Many of the youth that participated in the program were of Native Hawaiian ancestry, like me. Working and interacting with (the NHIS) students served as a reminder of my humble upbringing and all the obstacles and hardships that I faced as a young Native Hawaiian navigating through a western world. Participating in this program has solidified my *kuleana* as a doctor, as a Native Hawaiian, and as a member of a larger community. The experiences afforded to me through the NPH program will continue to shape the way I practice medicine. NPH has shown me the power (that) role models and positive influences (can) play in the foundation of our futures. When I begin to practice medicine, I will be sure to engage with my community outside of the typical clinical setting, working to remain connected and visible with the next generation. I will strive to be someone that my community can look towards as not only just a doctor, but also as a leader and role model.”

Conclusion

The NPH program is an innovative program model for medical schools interested in linking medical student development with health career pipeline programs. Mentoring of middle and high school students in Nānākuli has enhanced medical student understanding of professionalism in medicine and adolescent mentoring while supporting academic achievement and health career interest. Interactions with adolescent mentees provides MS1s with experiences that they relate to the development of skills in professionalism including self-evaluation, self-reflection, teaching, and communication. Some students also noted that their ability to develop trusting and comfortable relationships with adolescents enhanced their ability to establish stronger patient relationships.

Conflict of Interest

None of the authors identify a conflict of interest.

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A Review of the Literature on Native Hawaiian End-of-Life Care: Implications for Research and Practice

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Abstract

The need for cultural understanding is particularly important in end-of-life (EOL) care planning as the use of EOL care in minority populations is disproportionately lower than those who identify as Caucasian. Data regarding the use of EOL care services by Native Hawaiians in Hawai'i and the United States is limited but expected to be similarly disproportionate as other minorities. In a population with a lower life expectancy and higher prevalence of deaths related to chronic diseases such as cardiovascular disease, diabetes, and obesity, as compared to the state of Hawai'i as a whole, our objective was to review the current literature to understand the usage and perceptions of EOL care planning in the Native Hawaiian population. We searched ten electronic databases and after additional screening, seven articles were relevant to our research purpose. We concluded that limited data exists regarding EOL care use specifically in Native Hawaiians. The available literature highlighted the importance of understanding family and religion influences, educating staff on culturally appropriate EOL care communication, and the need for more research on the topic. The paucity of data in EOL care and decision-making in Native Hawaiians is concerning and it is evident this topic needs more study. From national statistics it looks as though this is another health disparate area that needs to be addressed and is especially relevant when considering the rapid increase in seniors in our population.

Keywords

Hawaiian, End-of-Life

Abbreviations

AAPI = Asian-American and Pacific Islanders

EOL = End-of-Life

NHPI = Native Hawaiian and Pacific Islander

POLST = Physician Order for Life-Sustaining Treatment

NH = Native Hawaiian

Introduction

Cultural respect is necessary in providing quality healthcare and reducing health care disparities. The values, beliefs, and customs of diverse patients influence their views on illness, disease, health, wellness, and health care services. It is critical for health care professionals to understand and respect the culture and beliefs of patients in order to meet and respond to their needs in a culturally sensitive manner.¹ The need for cultural understanding is particularly important in end-of-life (EOL) care planning and is one of the domains listed in clinical practice guidelines for palliative care published by the National

Consensus Project for Quality Palliative Care.² According to the National Institute on Aging, EOL care is the term used to encompass medical care and support provided during the period surrounding death³ and may include palliative care, hospice, and usage of advanced directives and the Physician Order for Life-Sustaining Treatment (POLST) form.⁴

The use of EOL care in minority populations is disproportionately lower than those who identify as Caucasian, as seen in the 2016 data from the National Hospice and Palliative Care Organization in which 86.5% of Medicare hospice patients were Caucasian.⁵ Reasons for these differences between ethnic groups are unclear though EOL researchers have proposed possible contributing factors include religious or cultural differences, caregiver respect for patient autonomy, barriers to access, and knowledge of EOL care options.⁶

Data regarding the use of EOL care in American Indian/Alaska Native and indigenous Australians is limited.⁷⁻⁹ Similarly, data regarding the use of EOL care services by Native Hawaiians in Hawai'i and the United States is limited but expected to be similarly disproportionate as other minorities. In a population with a lower life expectancy and higher prevalence of deaths related to cardiometabolic diseases as compared to the state of Hawai'i as a whole,¹⁰ our objective was to review the current literature to understand the usage and perceptions of EOL care planning, including advanced care planning and palliative care, in the Native Hawaiian population.

Methods

Ten electronic databases were searched (Academic Search Complete, Alt HealthWatch, CINAHL with Full Text, Health Source—Consumer Edition, Health Source: Nursing/Academic Edition, Legal Collection, Legal Information Reference Center, MEDLINE, Psychology and Behavioral Sciences Collection, and Social Work Abstracts). MeSH search terms included “advanced directive,” “advanced care planning,” “end-of-life care,” “provider orders for life-sustaining treatment,” “palliative care” or “hospice,” and “Native Hawaiians” or “Hawaiians.” Articles were assessed for quantitative data regarding hospice, palliative care, POLST, or advanced directive utilization or qualitative data regarding influences on EOL care usage (eg, socioeconomic, cultural, religious, access, workforce development).

Results

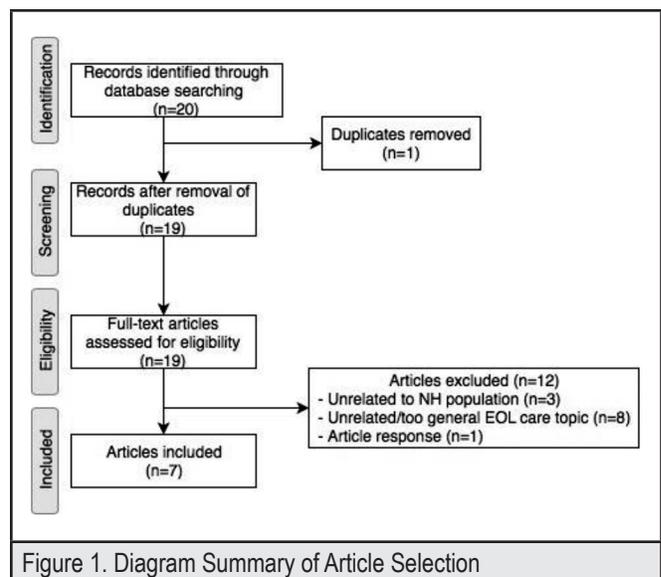
Our methods revealed twenty articles. Articles were excluded for the following reasons: duplicate article, unrelated to Native Hawaiian population, or too general EOL care topic. After screening, seven articles were relevant to our research purpose. Six articles focused on populations including Native Hawaiians in Hawai‘i,¹¹⁻¹⁶ one article included Native Hawaiians in the larger Asian-American and Pacific Islanders (AAPI) population in the United States.¹⁷ The process of article selection is outlined in Figure 1.

Three articles had quantitative measures of EOL care use or preferences in patients. The first article, analyzing a nationwide database in the United States, found lower rates of hospice care in minority groups, including Native Hawaiian,¹⁷ while the two other articles based on data from Hawai‘i found increased or comparable rates to national estimates of advanced directive, living will, and/or hospice use.^{11,12}

Ngo-Metzer, et al,¹⁷ conducted a retrospective review of the last year of life of AAPI as well as white Medicare beneficiaries diagnosed with cancer and registered with the Surveillance, Epidemiology, and End Results Program. They found every ethnic subgroup of AAPI (Chinese, Japanese, Filipino, Hawaiian/Pacific Islander, and other Asians) studied had lower rates of hospice use than white patients after adjusting for patient demographic (sex, race or ethnicity, birthplace, marital status, residence in urban or rural area, median household income of ZIP code of residence, type of insurance) and clinical characteristics (stage at diagnosis and type of primary cancer).

Braun, et al,¹¹ added questions regarding advance directive completion and preference for in-home death and hospice in two state-wide telephone surveys (1998 Behavioral Risk Factor Surveillance System, 1999 OmniTrack health survey) in Hawai‘i and found living will and healthcare power of attorney completion rates of Native Hawaiian (22%) and Filipino (13%) in Hawai‘i were lower than those of local Japanese (34%), Chinese (36%), and Caucasian (36%) ancestry but comparable to national estimates (15%-25%). Of note, these results differed from the lower advanced directive completion rates experienced on the mainland among other minority Americans groups like African Americans and Hispanic Americans. They speculated higher completion rates by certain minority groups in Hawai‘i may be related to higher levels of income and education in local Japanese, Chinese, and Caucasians as compared to Filipino and Hawaiian groups. Higher respect for the medical field by Asian cultures may also have been a factor.

Fernandes, et al,¹² studied symptom relief, quality of life, resource utilization, and satisfaction with a home-based palliative care program offered at Kokua Kalihi Valley, a federally qualified community health center in urban Honolulu serving low-income, immigrant populations from Asia and the Pacific Islands. They



NH = Native Hawaiian

found an increased advanced directive completion rate (90%) and hospice enrollment for eligible patients (85%) in a group of patients in which all except one were a minority (including Samoan, Filipino, Japanese, Micronesian, Hawaiian). They attributed the increased rates, which differ from other research on minority Americans, to be related to the staff developing trusting relationships with patients and families, incorporating bilingual case managers to explain EOL concepts, and aiding with family-based decision-making when desired by patients.

The remainder of the articles discussed topics related to factors which may influence patient and family reception and understanding to EOL care services. There were three articles related to the development of a culturally knowledgeable workforce^{13,15,16} and one article regarding the role of the Christian church in EOL care.¹⁴

Three articles focused on the important role of cultural understanding by health professionals in order to improve communication with families.^{13,15,16} Anngela-Cole, et al,¹³ highlighted the complexities with providing EOL and palliative care services to the people from the Pacific Basin who come to Hawai‘i. They emphasized the importance of understanding how historical trauma and cultural beliefs regarding death impact patients’ and families in palliative care situations. Kataoka-Yahiro, et al,¹⁵ conducted focus groups with Asian and Native Hawaiian families in two nursing homes in Hawai‘i and found a need to improve culturally appropriate approaches and communication for palliative and EOL care services in these ethnic groups. Flavin¹⁶ studied pre- and post-test measures of a research-based Cross-Cultural Training program for their home care nurses, a majority who were white. This program aimed to educate about beliefs, values, and practices relating to illness and dying in Filipino, Hawaiian, Japanese, and gay-Caucasian groups. Although the results of the program were statistically

Table 1. Articles Reviewed: Native Hawaiian (NH) End-of-Life (EOL) Care				
Author(s), year	NH specific?	Design/Study	Location of study	Findings/recommendations
Ngo-Metzer, et al, 2008 ¹⁷	No – included within AAPI	Retrospective review	United States	Every ethnic subgroup of AAPI studied had lower rates of hospice use than white patients after adjusting for patient demographic and clinical characteristics.
Braun, et al, 2001 ¹¹	Yes	Quantitative, questions added to two state-wide surveys	Hawai'i (state-wide)	Living will and healthcare power of attorney completion rates of NH (22%) and Filipino (13%) in Hawai'i were lower than those of local Japanese (34%), Chinese (36%), and Caucasian (36%) ancestry but comparable to national estimates (15-25%).
Fernandes, et al, 2010 ¹²	No – included within group of minorities	Retrospective review of outcomes with a home-based palliative care program offered at Kokua Kalihi Valley	Kalihi, in urban Honolulu on O'ahu in the state of Hawai'i	Found an increased AD completion rate (90%) and hospice enrollment for eligible patients (85%) in a group of patients in which all except one were a minority.
Anngela-Cole, et al, 2010 ¹³	Yes	Qualitative, focus groups of Hawai'i residents	Hawai'i	Emphasized the importance of understanding how historical trauma and cultural beliefs regarding death impact patients' and families in palliative care situations.
Kataoka-Yahiro, et al, 2016 ¹⁵	No – included within Asians and native Hawaiians	Quantitative survey and qualitative interviews	2 nursing homes in Hawai'i	Found a need to improve culturally appropriate approaches and communication for palliative and EOL care services in these ethnic groups
Flavin, 1997 ¹⁶	Yes	Cross-cultural training program outcomes	Maui in the state of Hawai'i	The results of the program were statistically insignificant based on learning measures, however the program helped increase the staff's skills at interacting with the cultures based on participant comments.
Braun, et al, 2001 ¹⁴	No – included within Pacific Islanders (Hawaiian and Samoan)	Focus groups with Christian church members and clergy in Honolulu	Honolulu, on O'ahu in the state of Hawai'i	Church can have a major role in EOL care by helping congregants and their families prepare for death.

insignificant based on learning measures, the program helped increase the staff's skills at interacting with the cultures and highlighted an instrument that may be used to provide nursing education about cultural values.

Braun, et al,¹⁴ held focus groups with Christian church members and clergy in Honolulu to discuss death and dying. Twenty three percent of the sample identified as Pacific Islander. They concluded the church can have a major role in EOL care by helping congregants and their families prepare for death in ways such as preparing spiritually and practically, helping with conflict and forgiveness, providing comfort to ill members and their families, and clarifying how church theology may guide decisions related to death and dying.

Discussion

Limited data regarding usage of EOL care specifically in Native Hawaiians exists as the majority of articles group Native Hawaiians within larger categories such as Pacific Islanders, AAPI or Asian/Pacific Islanders. According to the 2010 US Census, Native Hawaiians comprised 43% of the 1.2 million of the total Native Hawaiian and Pacific Islander (NHPI) population. A projected 2.6 million Americans will identify themselves as NHPI by 2050.¹⁸ The paucity of the data regarding the use of EOL care in the growing population of Native Hawaiians

makes it evident more research needs to be conducted on Native Hawaiians specifically so as not to miss possible disparities which may be masked by the larger NHPI category.

With the aging population and increasing cost of healthcare, EOL care discussions are imperative for improving the quality of life for patients and creating a sustainable healthcare system with significant cost-savings.¹⁹⁻²¹ Additional research in this topic will fill in the gaps of knowledge and provide the information necessary to support the development of culturally appropriate tools and clinical guidelines to initiate and facilitate the process of advanced care planning with Native Hawaiian patients and families.

The importance of EOL care discussions in the medical setting can be introduced in the medical education system.^{22,23} Training future physicians early in their careers about beliefs of different cultures and how to facilitate culturally-sensitive EOL care discussions in clinical practice may lead to increased comfort and less hesitation in holding these types of conversations with patients. Increased cultural competence has also been shown to be associated with positive health outcomes.^{24,25} Furthermore, the continued promotion of developing a Native Hawaiian health care workforce will potentially increase the number of Native Hawaiians delivering health care to Native Hawaiians. In addition, providers who are more familiar with Native Ha-

waiian culture and values could contribute by sharing effective strategies with their colleagues about how to have EOL care discussions with Native Hawaiian patients.

This is the first literature review specifically on Native Hawaiians and EOL care usage. Limitations to this literature review include the low number of relevant research articles. The conclusions drawn from the available articles may not be reflective of the current state of affairs regarding EOL care especially as the majority of the articles were published over ten years ago. Future research on the topic is imperative.

Conclusion

EOL care discussions are an important component of clinical practice and are especially relevant when considering the rapid increase in the seniors in the population. In the setting of an increasing Native Hawaiian and NHPI population, the paucity of research in the topic surrounding EOL care and Native Hawaiians is concerning and needs to be addressed in order to develop culturally appropriate tools and guidelines to assist in what can be difficult conversations for families and patients to have.

Conflict of Interest

None of the Authors identify a conflict of interest.

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The Pacific Region Indigenous Doctors Congress Medical Student Track Report

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Abstract

The 2018 Pacific Region Indigenous Doctors Congress (PRIDoC) conference featured a student track curriculum that was developed by students at the John A. Burns School of Medicine. Activities were designed around the student track theme, *ho'oku'ikahi*, meaning "unity" or "unify," as well as the overarching conference theme *'Oi Ola Wai Hōnua* meaning "life is better while the earth has water." Following the conference, surveys were distributed among the trainees who had participated in the student track. The survey feedback was used to evaluate the student track curriculum, as well as its execution. Learning objectives developed for the Student Track were (1) to build formal professional networks, (2) to build a knowledge economy with shared knowledge among participants, and (3) to engage in cultural experiences. Analysis of qualitative data suggest that all learning objectives were satisfactorily fulfilled through planned conference activities. The data will be used to facilitate student tracks at future PRIDoC conferences. The student track at PRIDoC aims to establish and contribute to an ever-growing international network of indigenous students that will extend into professional practice.

Abbreviations

AAIP = Association of American Indian Physicians
AIDA = Australian Indigenous Doctors Association
HPMG = Hawai'i Permanente Medical Group
IPAC = Indigenous Physicians Association of Canada
MAIPT = Medical Association of Indigenous People of Taiwan
PBMA = Pacific Basin Medical Association
PRIDoC = Pacific Region Indigenous Doctors Conference
Te ORA = Maori Medical Practitioners Association
UH JABSOM = University of Hawai'i John A. Burns School of Medicine

Introduction

The Pacific Region Indigenous Doctors Congress (PRIDoC) originated in 2002 with three indigenous physician organizations in the Pacific; 'Ahahui o nā Kauka (the Association of Native Hawaiian Physicians); Te Ohu Rata o Aotearoa or Te ORA (the Maori Medical Practitioners Association); and the Australian Indigenous Doctors Association (AIDA). Since organizing, they have been joined by the Indigenous Physicians Association of Canada (IPAC), the Medical Association of Indigenous People of Taiwan (MAIPT), and the Association of American Indian Physicians (AAIP). The Pacific Basin Medical Association (PBMA) is invited to participate in the gatherings as an affiliate member.

PRIDoC holds a bi-annual conference that is hosted by one of the member organizations. The conference is attended by physicians, medical students, researchers, and other health professionals who exchange collective knowledge and discuss pertinent issues regarding indigenous health and wellness. PRIDoC provides a vehicle for indigenous Pacific physicians and medical students to network, discuss scientific and professional issues of mutual interest, and to share scientific advances with a focus on issues of medical and public health significance to the various peoples of the Pacific region.¹ The conferences strive to help indigenous communities throughout the Pacific "thrive physically, emotionally, spiritually, socially, and culturally."²

Nearly every PRIDoC conference since 2006 (with the exception of 2010 and 2012) has had a *lālā haumāna* (student track) that focuses on fostering relationships between indigenous medical students. The *lālā haumāna* is a collection of student-focused activities and organized discussions designed to enhance indigenous student networking, education, and development. It provides an avenue for participants to meet and network with other indigenous students and trainees from around the Pacific. Participants are afforded opportunities to foster friendships, to share experiences and knowledge, and to build relationships. All the activities are focused on enriching student learning and development, and emphasize the importance of indigenous student participation in advocating for indigenous health in ways that are appropriate to meet the needs and realities of the indigenous populations from which they belong.³ Furthermore, indigenous students need to navigate challenges such as integrating contemporary and traditional knowledge bases while functioning within dominant mainstream institutional cultures.³⁻⁶ Previous research demonstrated that students' positive attitudes toward health and research endeavors may be cultivated through interactions with cultural leaders, role models, and diverse peer groups within professional conference settings.⁶

The 2018 student track curriculum and learning objectives were established by members of *Ka Lama Kukui* (the indigenous medical student interest group at the University of Hawai'i John A. Burns School of Medicine [UH JABSOM]), as well as members of the 2018 PRIDoC conference host organization, 'Ahahui o nā Kauka. The benefit of a student-led conference

includes a non-intimidating environment for professional networking as well as a program tailored to students' needs and topics of interest.⁷ Inclusion of cultural experiences of the host culture help to facilitate knowledge sharing, personal connection, and pride in culture that is beneficial to the well-being of the knowledge holders.⁸⁻¹¹ The goal of establishing learning objectives and a curriculum for the student track is to provide resources for future PRIDoC conference organizers to create similar student tracks at their conferences.

2018 Student Track Background

The 2018 PRIDoC conference was hosted by 'Ahahui o nā Kauka and held on Hawai'i island. The theme for the conference was 'O*i Ola Wai Hōnua*, (life is better while the earth has water). The theme was chosen by Native Hawaiian cultural practitioner Pualani Kanahele to remind participants of the importance of caring for natural resources as well as individuals who function as resources for their people.²

The 2018 PRIDoC student track co-advisor, Dr. Marcus Iwane shared his thoughts regarding the theme; "This year's theme reminds us of how we, as indigenous *kauka* "physicians" and *kauka haumāna* (medical students,) need to take care of ourselves before we can care for others. *Mālama ola* (self-care / wellness) speaks of caring for our resources, including mind, body, and soul."

The first two PRIDoC student tracks occurred in 2006 and 2008 followed by a hiatus until 2014. Due to the meaningful impact this experience has had on JABSOM students including three of this article's authors, Drs. Kong, Beckwith and Witten, the 2018 PRIDoC conference organizers invited prior student track participants to work with medical students in *Ka Lama Kukui* to create the 2018 curriculum. Having taken part in the first student track in New Zealand, in 2006, Dr. Kehau Kong was chosen as a co-advisor for the PRIDoC 2018 student track.

In 2007, after being inspired at PRIDoC 2006, then medical students, Dr. Iwane and Dr. Kong founded Ka Lama Kukui as a special interest group for indigenous medical students and like-minded fellow medical students to gather and share ideas. Since its inception, *Ka Lama Kukui* has facilitated opportunities for indigenous medical students and those interested in indigenous health to attend PRIDoC and to benefit from the fellowship and networking provided through the student track.

The theme for the 2018 PRIDoC student track was *ho'oku'ikahi* "to unite or unify." Dr. Iwane remarks that *ho'oku'ikahi* "speaks of bringing indigenous physicians, providers, and students together to promote health and wellness and discuss indigenous issues in medicine. The PRIDoC conference gives us the opportunity to build relationships and unify together to help uplift the health of our people by discussing medicine in a culturally-relevant way."

Methods

Curriculum Development

The Student Track curriculum was developed by medical student members of Ka Lama Kukui, and past participants in PRIDoC student tracks. The 2018 PRIDoC student track co-advisors held multiple meetings leading up to the 2018 PRIDoC conference with the goal of establishing a purpose, learning objectives and the curriculum for the 2018 conference.

The purpose of the 2018 student track was to enhance student and trainee learning, development, and leadership in the indigenous health community; to provide a space for students to foster professional relationships; to build and contribute to a fund of knowledge; and to engage in cultural experiences with the visions of a diverse group of indigenous leaders who strive to improve the health and well-being of indigenous peoples. The overall goal was to inspire students and trainees to broaden their understanding of indigenous health and to integrate the knowledge and skills gained at the conference into their educational experiences and clinical practices within their home indigenous communities.

The student track curriculum was formulated around three learning objectives (shown in Figure 1): (1) to build formal professional networks, (2) to build a knowledge economy with shared knowledge among participants, and (3) to engage in cultural experiences. In addressing and exploring these learning objectives, the intent was that the student track would *ho'oku'ikahi* (unify) the different groups of indigenous medical students and trainees with each other as well as with their respective communities. The planning team designed specific elements of the curriculum to address each learning objective. The first learning objective would be met with activities centered around student engagement and included opportunities to foster professional relationships in a safe, professional environment where indigenous values and ways of knowing were discussed, honored, and respected. Opportunities for participants to discuss indigenous health as a group addressed the second learning objective. Activities focused around the third learning objective would engage participants in various cultural practices, protocols, and processes in regard to the Native Hawaiian, hosting, indigenous culture for the 2018 PRIDoC conference. Participants would be asked to demonstrate traditional practices, protocols, and processes during the conference, and to identify how these things might enhance clinical competence when working in indigenous health.

Social and cultural activities included casual visits to Wailuku River State Park and the Hilo Farmers Market allowing students time to explore on their own, while organized trips to Hale o Lono Fishpond, Makali'i at Kawaihae, and Maunakea were designed to provide a more structured learning experience. Although not exhaustive, the selected sites and activities show-

cased a variety of cultural experiences important to Hawai'i. Specifically, these sites were chosen to demonstrate different land and water resources throughout the island. Activities included in the PRIDoC 2018 student tract curriculum are listed in Table 1, whereas Table 2 lists activities as they relate to the learning objectives.

In order to evaluate the curriculum activities an evaluation tool was distributed to all student track participants, in both electronic and paper forms, at the end of the conference, as seen in Appendix 1. Paper copies of the form were collected at the conference and electronic forms were collected through

December 2018. Student demographic information was collected and the curriculum was evaluated using Likert rating scales to assess the applicability of the activities to their training programs, and qualitative feedback to assess the overall program. Survey data was deidentified, digitized and analyzed to determine if the participants viewed the student track as a meaningful and worthwhile endeavor. Thematic analysis of the qualitative responses was done by four individuals on the 2018 PRIDoC student track leadership team. Once individuals identified primary or prominent themes from the open-ended or qualitative feedback items, the group was able to reach consensus over the primary themes.

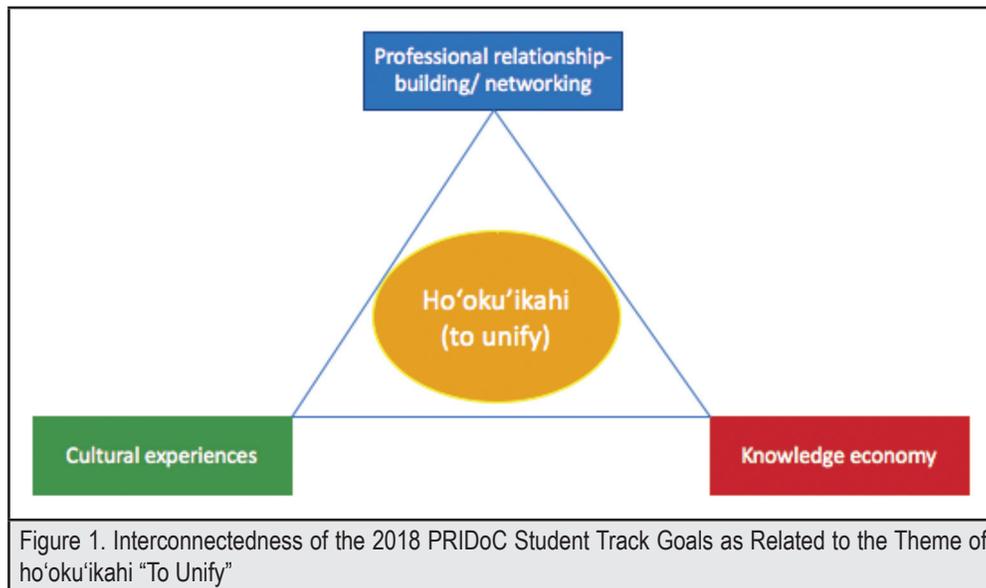


Table 1. 2018 PRIDoC Student Track Curriculum Activities	
Student Specific Social Activities	<ul style="list-style-type: none"> ● Morning field trip around Hilo area, Wailuku River, Hilo farmers market ● Student housing at UH Hilo with informal time to build professional networks. ● HMPG sponsored dinner for students (casual meet/greet with students and providers) ● Welcome dinner; HMPG sponsored for students
PRIDoC Conference Activities	<ul style="list-style-type: none"> ● Opening day reception dinner; HPMG sponsored for JABSOM students only. ● Cultural night lū'au ● Closing banquet
Traditional Native Hawaiian Cultural Activities	<ul style="list-style-type: none"> ● Protocol training ● Hula Halau activities (Hula as healing, learn to dance, learn to make ho'okupu) ● Hale o Lono to learn about traditional loko i'a (fish pond) ● Makali'i visitation (traditional navigation) ● Pu'uhuluhulu at Mauna Kea visitation
Breakout Sessions	<ul style="list-style-type: none"> ● Burnout ● Indigenous Leadership ● "Hawaiian Culture 101" brief history of Hawai'i
Mentoring	<ul style="list-style-type: none"> ● Medical student panel for Aspiring Doctors of Hilo

Table 2. 2018 PRIDoC Student Track Curriculum Learning Objectives and Corresponding Activities.					
	Student Social Activities	PRIDoC conference Activities	Traditional Cultural Practices	Break out sessions	Mentorship
Objective 1 – To build formal professional networks					
Objective 1a: to engage in opportunities that foster professional relationships	X	X	X		X
Objective 1b: To contribute to a safe, professional environment where indigenous health values and ways of knowing were valued and respected.		X		X	
Objective 1c: To engage in opportunities to identify appropriate mentors/mentees and attributes for future professional relationships.	X	X			X
Objective 2- To build a knowledge economy					
Objective 2a: To engage in opportunities to discuss indigenous health				X	X
Objective 2b: To engage and contribute to activities that support an indigenous health knowledge economy			X	X	
Objective 3- To engage in cultural experiences					
Objective 3a: Identify how cultural practices, protocols, & processes can enhance clinical competence when working in indigenous health.			X	X	X
Objective 3b: To demonstrate an ability to enact appropriate cultural practices, protocols, and processes when required during the conference.		X	X		

Results

A total of 99 students and trainees participated in the student track including 39 residents, 55 medical students, and 5 non-medical university students. Due to participants being from both American and British style academic settings, all those trainees in post medical school training programs (eg, registrars and above in the British system) were grouped together under the American graduate medical education term “resident.” Thirty-four percent of participants in the student track completed the survey. Of the 34 completed surveys, 11 were completed by residents, 21 by medical students, and 2 by non-medical university students. Of the 55 surveys distributed to the medical students, 21, 38.2%, completed surveys were returned.

Quantitative Analysis: Learning Objectives and Participant Impressions

The questions asked in the evaluation tool aimed to assess if the learning objectives were supported through student track activities. Based on the survey, the majority of respondents either agreed or strongly agreed with the first 8 questions in the survey instrument, as seen in Table 3; no respondents strongly disagreed with any of the first 8 questions. The majority of respondents also felt that their participation in the student track was applicable to their medical training and that they would recommend it to students at future PRIDoC conferences, as seen in Table 4. None of the participants felt that the student track was too short; although 20% felt it was too long, as seen in Table 5.

Qualitative Analysis:

Thematic analysis of the results revealed three major themes; professional networking, unity and camaraderie, and cultural engagement.

1. Professional Networking

Qualitative reflections from the students highlighted their appreciation for the opportunities for participants to expand their social, clinical, and professional networks. Participants described enjoying being able to build connections with other indigenous students in the medical field. Many participants also expressed gratitude toward Hawaii Permanente Medical Group (HPMG) for sponsoring the welcome dinner for students and providing a casual meet and greet with Native Hawaiian HPMG providers throughout the state. One respondent stated, “I appreciated connecting with other indigenous medical students from around the world. I developed new friendships that I plan to take advantage of when I plan to travel around to various indigenous communities.”

2. Unity and Camaraderie

Participant reflections described feelings of unity and camaraderie that resulted in connecting with other students and trainees from indigenous backgrounds. The gathering allowed for the sharing of ideas and experiences concerning diversity in the medical field, advocacy for indigenous health, and reflecting

Table 3. Post-Conference Survey Results Evaluating Fulfillment of Curriculum Learning Objectives. *Frequency of Response Followed by the Percentage (%) of the 30 Participants Who Provided an Answer for the Following Items.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I was provided the opportunity to:	Frequency n = 30 (%) *				
Engage in opportunities that foster professional relationships	15 (50%)	11 (37%)	3 (10%)	1 (3%)	0 (0%)
Contribute to a safe, professional environment where indigenous health paradigms are normed	23 (77%)	6 (20%)	0 (0%)	1 (3%)	0 (0%)
Engage in opportunities to identify appropriate mentors/mentees and attributes for future professional relationships	14 (47%)	8 (27%)	7 (23%)	1 (3%)	0 (0%)
Engage in opportunities to discuss indigenous health	21 (70%)	6 (20%)	2 (7%)	1 (3%)	0 (0%)
Engage and contribute to activities that support an indigenous health knowledge economy	19 (63%)	9 (30%)	1 (3%)	1 (3%)	0 (0%)
Engage in cultural opportunities, including cultural practices, protocols, and processes with a special focus on Native Hawaiian culture	25 (83%)	5 (17%)	0 (0%)	0 (0%)	0 (0%)
Demonstrate an ability to enact appropriate cultural practices, protocols, and processes when required during the conference	19 (63%)	10 (33%)	1 (3%)	0 (0%)	0 (0%)
Identify how cultural practices, protocols, and processes can enhance clinical competence when working in indigenous health	18 (60%)	11 (37%)	1 (3%)	0 (0%)	0 (0%)

Table 4. Post-Conference Survey Results Evaluating Execution and Relevance of the Student Track.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
	Frequency, n = 30 (%) *				
I would recommend the student track to other students in future years	20 (67%)	7 (23%)	2 (7%)	0 (0%)	1 (3%)
The student track was applicable to my medical training	13 (44%)	9 (30%)	7 (23%)	0 (0%)	1 (3%)

Table 5. Post-Conference Survey Results Evaluating the Length of Student Track Activities.

	Too Short	Appropriate Length	Too Long
	Frequency, n = 30 (%) *		
The student track activities were:	0 (0%)	24 (80%)	6 (20%)

on indigenous identity in one’s practice. Although numerous indigenous groups from across the Pacific Basin were represented, participants were able to find common ground through shared experiences as indigenous people with great pride in their culture.

One participant detailed, “One thing I appreciated most [about the student track] was the camaraderie with other students from indigenous cultures and hearing about their personal experiences that may have been similar to mine.”

Another stated, “I enjoyed being able to facilitate and participate in discussions on indigenous issues and appreciated those who shared specific challenges they have faced thus far in their careers.

I valued being able to brainstorm solutions and hear from the perspective of other students with an indigenous background.”

3. Cultural Engagement

The most prominent theme was an appreciation for other indigenous cultures and for the opportunity to learn about the Hawaiian culture through various student track activities. The student track provided an experiential learning opportunity to learn about and engage in Hawaiian cultural practices and protocols. Some of these activities included learning ‘oli (chants), hula (traditional dance), hei (string figures), and how to prepare ho‘okupu (tribute) and makana (gifts). Additionally, participants visited several sites that taught about different cultural practices.

One of these sites was Hale o Lono Fishpond in Honohononui, Keaukaha where students and trainees participated in a service-learning project. Many of the survey responses included positive feedback regarding the Hale o Lono activity and described the workday as a rewarding and unforgettable experience.

A participant response stated, “The fishpond day was amazing. It was both interesting and rewarding to do something different and to help out the community, particularly the indigenous people. Awesome!”

Another participant wrote, “I loved all of the cultural learning. The fishponds were my favourite experience, being a part of working Hawaiian lands was an honour, I am grateful to have been invited to restore the fishponds.”

In another student track activity, participants were also able to sail on Hawai‘i Island’s voyaging canoe, Makali‘i. In addition to experiencing sailing on the Makali‘i in Kawaihae, participants were also taught how to tie knots and how to preserve food for voyages. A participant remarked that “One of the most valuable experiences was getting to sail on the voyaging canoe and learn from prominent crew members. This experience has made me appreciate indigenous knowledge and our ancestor’s ingenuity.”

Finally, participants were asked to provide suggestions on how the student track could be improved for future PRIDoC conferences. Answers ranged from asking for more integration with the main conference as well as increasing the time available to network with senior health care providers in attendance.

Discussion

The responses received from the post-conference student surveys were overwhelmingly positive and contained valuable feedback that will be considered for the improvement of future PRIDoC conference student tracks. The quantitative data collected indicated that the majority of respondents felt that the learning outcomes were addressed through various activities throughout the conference. Furthermore, narrative feedback expressed success in providing networking opportunities and exposure to the Hawaiian culture through experiential learning.

Much of the success of the 2018 PRIDoC conference student track stemmed from the opportunities for professional networking with other indigenous students and students interested in indigenous health. Connecting with other indigenous students and trainees that are incorporating their culture into their profession as well as others who are interested in promoting indigenous health allows for the development of both personal and professional relationships that may be beneficial in the future. Through a shared background and interest in indigenous health, attendees could facilitate meaningful conversations around indigenous topics related to navigating the healthcare field.

An overarching theme of appreciation for the host culture was emphasized by the participants. Having a cultural and historical understanding of place helped to orient students to their surroundings. However, having a very dense schedule with little to no passing time between activities presented some challenges of time management throughout the 2018 PRIDoC conference. Although time allotted for each activity in the student track was optimized to fit as many quality experiences as possible, the lack of adequate time to transition activities made students feel rushed to move to the next activity. Despite this, leadership and participants adapted well to a flexible schedule that allowed students to partake in a wide variety of experiences.

When considering the suggestions for improvement of the student track for future PRIDoC conferences, we looked at the issues around increasing integration with the main conference as well as dedicating more time to network with the physicians and other senior health care providers in attendance. Aside from plenary speakers and evening events, the student track activities occurred at the same time as other scheduled events of the main conference. Although student track participants were not restricted from participating in main conference events, it may have been unclear if they were required to attend all student track activities. Participants also expressed the desire for clinical skills workshops and exposure to more specialty medicine vs. primary care, which is the general focus of the PRIDoC conference. Additionally, participants requested more information on career opportunities for those interested in focusing on indigenous health. Finally, participants wished for more leisure time to explore the host community independently.

Limitations

This study is not without limitations. Limitations of the study included the number of completed and returned surveys included in the analysis. Furthermore, four of the surveys that were returned only provided qualitative feedback through comments and an additional two surveys were returned with only demographic information completed and, thus, were not included in the analysis. The study was also limited since there was no pre-survey to collect data regarding participants’ knowledge and attitudes of professional networks, shared fund of knowledge, and cultural experience prior to the conference.

Conclusion

The 2018 PRIDoC conference student track overall appears to have been a successful venture with the curriculum learning objectives fulfilled through various programming. The student track at PRIDoC was created to foster relationships between indigenous medical students and to promote student-focused activities and organized discussions with the mission to enhance student and trainee learning, development, and leadership in

the indigenous health community by providing a space to foster professional networks, contribute to a shared fund of knowledge, and to engage in cultural experiences. It is the authors' intention that this report will serve as a tool for future PRIDoC student track organizers to perpetuate the vision of growing a diverse group of indigenous leaders in their respective communities who strive to improve the health and well-being of indigenous people. Through continuous progress and change, the student track at PRIDoC conferences will continue to establish and contribute to an ever-growing international network of indigenous students that will extend into professional practice.

Future Directions

Having considered both the quantitative and qualitative feedback from student track evaluation, the following should be considered for inclusion in future PRIDoC conference student tracks:

1. Indigenous space for health professional students to discuss shared issues concerning the well-being of the many indigenous communities in the Pacific Basin;
2. Education about the traditions, protocol, and practices of the host culture: this may include but is not limited to chant, dance, song, art, food, and other traditional practices;
3. Exploration of other cultures represented by the student population through a cultural exchange;
4. Lectures, skills-workshops, or other activities that enrich conference material: this may include discussion surrounding indigenous health in practice and career development;
5. Service-learning or volunteer activity that will directly benefit the community in which PRIDoC is being hosted (eg, fishpond workday, beach clean-up, blood drive);
6. Formal and informal opportunities to network with other students as well as physicians, researchers, and other health professionals in attendance at PRIDoC; and
7. Pre- and post-conference evaluations to record the progress of the student track and to provide both quantitative and qualitative feedback: feedback should be compiled into a formal report and shared with participants as well as future PRIDoC conference student track planning leadership.

Conflict of Interest

None of the authors identify any conflict of interest.

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Appendix 1

2018 PRIDoC conference student track survey instrument. Qualitative Questions

1. What did you most appreciate or enjoy about the student track?
2. Is there anything you wish you had more exposure to during the student track?
3. Is there anything that you wish you had more exposure to?
4. Are there other areas for improvement?

Hawai'i Journal of Health & Social Welfare

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Aim:

The aim of the Hawai'i Journal of Health & Social Welfare is to advance knowledge about health and social welfare, with a focus on the diverse peoples and unique environments of Hawai'i and the Pacific region.

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In 1941, a journal then called The Hawai'i Medical Journal was founded by the Hawai'i Medical Association (HMA). The HMA had been incorporated in 1856 under the Hawaiian monarchy. In 2008, a separate journal called the Hawai'i Journal of Public Health was established by a collaborative effort between the Hawai'i State Department of Health and the University of Hawai'i at Mānoa Office of Public Health Studies. In 2012, these two journals merged to form the Hawai'i Journal of Medicine & Public Health, and this journal continued to be supported by the Hawai'i State Department of Health and the John A. Burns School of Medicine.

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