

Kōkua Kaiāulu: Keeping the Native Hawaiian Community in Waimānalo Fed

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Abstract

Recent data suggest that similar to other minority communities in the U.S., Native Hawaiians are more likely to contract and suffer from COVID-19, thereby exacerbating existing health and social disparities. Additionally, the COVID-19 pandemic has led to significant disruptions in employment and economic insecurity, both of which are intertwined with food insecurity. This paper describes the efforts of Ke Kula Nui O Waimānalo, a grassroots Native Hawaiian organization, to meet both the immediate and long-term needs related to food insecurity in the Waimānalo community. Numerous organizations from multiple sectors collaborated to provide over 24,000 prepared healthy meals and 3,550 fresh produce boxes as well as seeds and plant starters to over 6,500 Waimānalo families and community members who are vulnerable to food insecurity. In addition to meeting the immediate needs of the community, community resilience is being built by creating

permanent areas of food sources in the community to teach community members a variety of ways of growing their own food. Using a land-based and community-driven approach, Native Hawaiian worldview of health and healing need to be the foundation of promoting health and resilience in Native Hawaiian communities.

Introduction: Native Hawaiian History, Communities, and Practices

Native Hawaiians are the Indigenous people whose ancestors settled in the islands of Hawai‘i over 1,600 years ago. Living in one of the most remote island chains in the world, these ancestors developed sophisticated food cultivation systems that sustained a thriving and robust population for centuries (Kame‘eleihiwa, 2016). These food systems included loko i‘a, which are fishponds used to grow and cultivate fish, and lo‘i, which are irrigated terraces for planting kalo (taro), a spiritually significant plant and traditional staple of the Hawaiian diet. These systems were designed through a land division system known as an ahupua‘a. Each ahupua‘a, which is a strip of land that extends from the mountain to the sea, was stewarded by the konohiki appointed by the ali‘i (chief) and other community members living in the community. Various community members and practitioners collectively played a role in ensuring animals and plants were cultivated in a manner that was sustainable and did not deplete the natural resources. For Native Hawaiians, this deep and intimate dependence on the land was built upon the belief that the health of the ‘āina (land) was imperative to the health of the people. Thus, the value of mālama ‘āina, or land stewardship, was ingrained in every part of their living (Kame‘eleihiwa, 1992).

This intimate, spiritual, and practical connection to the land was disrupted at the start of western colonization in 1778 with the arrival of Captain James Cook. As western influences changed the societal structures of the islands, the illegal overthrow of the Hawaiian Kingdom in 1893 and the U.S.’s subsequent and ongoing illegal occupation worked to marginalize Hawaiians from positions of power. Driven by missionaries and American political figures with imperialist ideals, traditional and cultural practices of Native Hawaiians, such as the Hawaiian language, lā‘au lapa‘au (traditional medicine), surfing, hula, and many others, were banned (Marshall, 2006; Pukui et al., 1974). Land was privatized, which was a foreign concept counter to the Native Hawaiian belief that land was a living entity, not a property to be owned (Kame‘eleihiwa, 1992). Although the ali‘i at the time generally supported land privatization with the intention to encourage Native Hawaiians to claim their traditional family lands, land privatization largely benefited foreigners who acquired large tracts of land. Much of the land was used to develop a profitable

plantation system (ie. sugar, pineapple, etc.) that uprooted the traditional ahupua‘a system and severely limited Hawaiians from accessing traditional food sources (Kame‘eleihiwa, 2016). In addition, this upheaval disrupted their spiritual relationship with the ‘āina and the practice of mālama ‘āina. In addition, infectious diseases, which Native Hawaiians had no immunity against, decimated the population, leading to a 90% population decline within a century (Blaisdell, 2001).

Native Hawaiian Health and Conditions Today

Today, Hawai‘i is often portrayed as the healthiest state in the U.S. However, Native Hawaiians disproportionately suffer from health disparities and food insecurity in their homeland (Kaholokula et al., 2009). As highly processed and high-fat western diets quickly replaced the high-protein and nutritious diets of pre-western contact Native Hawaiians, Native Hawaiians of the present day have one of the highest rates of cardiovascular diseases among all major ethnic groups (Look et al., 2013; Mau et al., 2009). Additionally, Native Hawaiians are 68% more likely to die from heart disease and have a 20% higher incident of strokes compared to the State average (Johnson et al., 2004). Native Hawaiians also suffer from mental health conditions, such as depression, anxiety, and suicidal behaviors (Hishinuma et al., 2017) and tend to live in areas with high levels of poverty with limited healthy food options and high concentrations of fast food (Lee et al., 2012; Mau et al., 2008). In addition, Hawai‘i’s residents face the highest food costs in the U.S. as 85-90% of the food supply is imported (Office of Planning Department of Business Economic Development & Tourism, 2012).

Recent data suggest that similar to other minority communities in the U.S., Native Hawaiians are more likely to contract and suffer from COVID-19, exacerbating the aforementioned health and social challenges (Kaholokula et al., 2020). Additionally, the COVID-19 pandemic has led to significant disruptions in employment and economic insecurity, both of which are intertwined with food insecurity, which leads to poor mental and physical health, obesity, diabetes, asthma, and arthritis (Kromer Baker et al., 2001). Many Native Hawaiians work in the tourism industry and in other service jobs that pay low wages (Department of Business, Economic Development and Tourism, 2017). As a result of the COVID-19 pandemic, the tourism industry, a major economic engine in Hawai‘i, has been devastated. Coupled with the State’s current travel restrictions stemming from COVID-19 safety precautions, many Native Hawaiians have become unemployed.

Ke Kula Nui O Waimānalo: Revitalizing Native Hawaiian Cultural Practices

Despite the current health and social challenges that Native Hawaiians face, Native Hawaiian communities have demonstrated resilience and strength. Since the 1970s, the Native Hawaiian Renaissance Movement has made tremendous efforts and strides in revitalizing Native Hawaiian cultural practices, such as the Hawaiian language, oceanic voyaging, food cultivation, and land and ocean restoration (Goodyear-Ka'ōpua et al., 2014). Numerous Native Hawaiian immersion schools have been established, thereby dramatically increasing the number of Native Hawaiian speakers. Communities across the islands have come together to restore land devastated by invasive species. Many rural communities that are predominately Native Hawaiian have been instrumental in retaining and promoting cultural practices, including the community of Waimānalo. Waimānalo is a rural community located on the eastern side of the island of O'ahu. It is home to 7,000 residents, of which approximately one-third are of Native Hawaiian descent (U.S. Census Bureau, 2015). It is recognized as a medically-underserved population with a primary care health professional shortage (Healthcare Association of Hawaii, 2013) and has one of the highest percentages of food insecure households (36.2%) in the state of Hawai'i (Kromer Baker et al., 2001). Despite these challenges, many strengths reside in this close-knit community. Waimānalo is known for its natural resources, a history of community advocacy and organizing, and a large number of Native Hawaiian grassroots organizations.

One of these organizations, Ke Kula Nui O Waimānalo (KKNOW), is a grassroots community-based non-profit 501(c)3 organization established in 2017 by individuals from diverse backgrounds, all of whom are from the Waimānalo ahupua'a. The backgrounds of the Board of Directors include Hawaiian Studies, social work, complementary medicine, agriculture, public health, art therapy, education, and business. The organization's vision is Kūkulu Kaiāulu, meaning building community. Their mission is to provide a community of practice through collaboration of Kānaka (people) to promote a strong and healthy ahupua'a. They aim to support the Waimānalo community to become self-sustainable in every way, from the mountain to the sea, with the belief that the 'āina and kai (ocean) can provide for the community as it did years ago. KKNOW is built upon on the early efforts of God's Country Waimānalo (GCW), which was also a grassroots organization founded in 2005 with the mission: Ho'oulu a me Ho'ōla Lāhui, which means to propagate & perpetuate the race. The organization is rooted in cultural preservation and community partnerships, and connects the Hawaiian culture to other aspects of health and wellness

(Ho-Lastimosa, 2014). GCW strives to incorporate four key Native Hawaiian values of kuleana (responsibility), mālama (to care for, to protect), ‘ike pono (intellect), and ha‘aha‘a (humility, humbleness). These traditional values help shape culturally-grounded programs to preserve culture, strengthen community partnerships, and promote health and wellness.

KKNOW is accomplishing its vision through several culturally-grounded and community-driven programs, including Waimānalo Limu Hui (WLH), OLA KINO, MALAMA Aquaponics (Ho-Lastimosa et al., 2019), Waimānalo Pono Research Hui (Chung-Do et al., 2019; Keaulana et al., 2019), and others that are offered to over 1,000 Waimānalo community members from keiki (children) to kūpuna (elderly) at no charge to participants. Most participants are of Native Hawaiian ancestry and are from Waimānalo. The program embraces the educational pedagogy that Hawaiian knowledge is best acquired through experiential and multi-generational learning (Meyer, 2001). All programs are culturally-grounded in Native Hawaiian values and practices, are community-driven, and promote the connections between ‘āina, food sovereignty, and emphasize ‘ike kūpuna (ancestral knowledge). For example, WLH is a community-driven initiative to bring back limu (native seaweeds and grasses) to the shores of Waimānalo. The kūpuna recalled abundant limu found in Waimānalo’s beaches, which have greatly decreased today because of environmental degradation and climate change. Because limu plays an important role in Native Hawaiian culture in terms of diet and lā‘au lapa‘au, WLH holds regular limu planting days on Waimānalo’s shores as well as wall-building days to restore the kuapā, or rock wall, of Pāhonu, the only known pre-contact turtle enclosure in Hawai‘i. Another program is MALAMA Aquaponics, which began as a community-based initiative in Waimānalo in 2009. In 2018, KKNOW partnered with the University of Hawai‘i (UH) to start a clinical health study to examine the ways a backyard aquaponics program can impact family wellness (Ho-Lastimosa et al., 2019). The study innovatively merges the modern technology of aquaponics with traditional Native Hawaiian practices to create a “mini ahupua‘a” system in families’ backyards to provide constant access to fresh fruits, vegetables, and fish. Through multiple hands-on workshops, families learn to create ‘ai pono (healthy foods) meals and lā‘au using the produce grown in their aquaponics systems. They also work together as a hui (group) to help each other build and maintain an aquaponics system in their backyard.

Many of the KKNOW programs are hosted by The Waimānalo Learning Center (WLC) at the College of Tropical Agriculture and Human Resources’ Waimānalo Research Station, with

support provided by the WLC Community Coordinator. The Waimānalo Research Station is an agricultural research facility located on a 128-acre piece of land in Waimānalo since 1955 to promote diversified agriculture. The WLC was initiated in 2012 to support broader community engagement by the station, with a Community Coordinator position created and hired in 2014. Consequently, the period 2014-2020 saw an explosion in programming (Chung-Do et al., 2019; Ho-Lastimosa, 2019), with the total annual community engagements supported by WLC exceeding 9,000 community members in 2019.

COVID Food Distribution

The COVID-19 pandemic hit Hawai‘i in March 2020, shutting down schools and businesses, which led to a sudden increase in unemployment rate and exacerbating food insecurity issues, especially among vulnerable populations. KKNOW sprang to action to garner resources and partners to meet both the immediate and long-term needs of the Waimānalo community. To meet the immediate needs of food insecure community members, families, elderly, and the houseless community, KKNOW partnered with numerous organizations from multiple sectors including non-profit and for profit businesses, and governmental agencies to provide prepared meals and fresh produce. Since mid-March, 24,000 prepared healthy meals and 3,550 fresh produce boxes (milk, eggs, bread, etc.) as well as seeds and plant starters (especially Hawaiian traditional staples like kalo (taro), ‘uala (sweet potato) have been distributed to over 6,500 Waimānalo families and community members who are vulnerable to food insecurity, economic instability, and other social challenges.

KUPU Hawai‘i, which is a non-profit youth empowerment program that connects youth to themselves, families, and communities through service-learning and environmental stewardship, coordinated the preparation of healthy meals by the chefs and students from their culinary training program. Aloha Harvest, one of approximately 50 recognized food rescue non-profit organizations across the nation, coordinated the delivery of the meals to the food distribution site in Waimānalo with ReUse Hawai‘i. Communities by Altres, the philanthropy arm of Simplicity by Altres, saw the need to help our rural communities on the island of O‘ahu and eagerly supplemented the ongoing effort with 3,550 boxes of fresh produce, bread, milk, eggs and protein. Ham Produce & Seafood, a wholesale distributor of fresh fruits, vegetables, and seafood, provided fresh produce boxes that included milk, eggs, bread, vegetables, for example for distribution. WLC provided

fresh fruits, vegetables, seedlings, and starter plants to the community. The Department of Hawaiian Homelands, which governs the Hawaiian Homes Commission Act of 1920 to protect and improve the lives of Native Hawaiians, and the Waimānalo Market Co-Op, a local co-op that brings locally-grown food and Native Hawaiian medicinal plants and herbs to the community, provided the sites for the daily food distribution.

The meals were distributed Monday to Friday over 14 weeks from late-March to end of June through the efforts of long-time volunteers and program participants of KKNOW, as well as other volunteers from Hawaiian Civic Club of Waimānalo, 808 Cleanups, O‘ahu Hawaiian Canoe Racing Association, and Windward Community College Trio, totaling 1,507 volunteer hours. Safety Systems & Signs Hawaii, a local business that deals in safety products and services, donated personal protection equipment, including gloves and masks, and safety equipment, such as traffic cones and signage, for the volunteers. Financial support for these efforts came from Hawai‘i Community Foundation, Hawai‘i People’s Fund, NDN Collective, First Nations Development Institute, Harold K.L. Castle Foundation, Community Change Leadership Network of Robert Wood Johnson Foundation, and Papa Ola Lōkahi.

Build Community Capacity and Community Resilience

In addition to meeting the immediate needs of the community, KKNOW’s goal was to also build community resilience by teaching Native Hawaiians how to grow their own food before another disaster or disruption strikes. Funding was acquired to build permanent areas of food sources in the community to encourage community members to learn a variety of ways of growing their own food, especially among vulnerable populations, such as the houseless community. To serve the houseless community, KKNOW worked with Hui Mahi‘ai Aina, which is a part of the Waimānalo Kauhale, Inc. The Waimānalo Kauhale, Inc. is Hawai‘i’s first community-driven kauhale for chronically houseless members. The kauhale concept is a traditional, cultural model of housing consisting of tiny homes clusters and communal areas for restrooms, cooking, and gathering. Kauhale are meant to foster a sense of community and ownership among their formerly houseless residents. These master-planned communities consist of permanent, supportive housing units and a small amount of rent will be collected based on personal income. Through a partnership with Alu Like, KKNOW, and UH CTAHR, the WLC Community Coordinator and volunteers trained 8 Native Hawaiian ‘ōpio (youth) leaders aged 14-24 years from Waimānalo in a variety of

food production methods, including aquaponics, food forestry, fruit orchard, and banana circle. The ‘ōpio leaders then implemented these food production methods at Hui Mahi‘ai Aina with the residents and staff.

In addition, two large aquaponic systems (each with four 4’x8’ grow beds and two 300-gallon fish tanks) were installed and are expected to produce at least 1000 lbs of produce and fish annually. Many community members are drawn to aquaponics technology because it mimics the Native Hawaiian traditional ahupua‘a system (Beebe et al., 2020). By effectively combining hydroponics (soilless horticulture) and aquaculture (raising fish stock), families can grow fresh fruits, vegetables and fish in a contained, sustainable, food production system that uses a fraction of the water and nutrients of traditional terrestrial systems (Tokunaga et al., 2013). Compared to gardens, aquaponics vegetables and fruits mature in a shorter time span and require minimal maintenance with fewer demands on time and skills. The result is a largely self-contained food production system that effectively illustrates the traditional natural resource management model of the ahupua‘a. Aquaponics systems can be easily constructed on a small scale to provide families and communities a consistent source of staple Native Hawaiian foods in a system that models traditional natural resource management. Aquaponics is an innovative way to merge Native Hawaiian values, practices, and foods with modern agricultural technology. In addition to the efforts at the Waimānalo Kauhale, the MALAMA Aquaponics program also helped 10 Native Hawaiian families install backyard aquaponics systems at their respective homes.

A food forest, fruit orchard, and a banana circle were created at the Waimānalo Kauhale to emphasize traditional staples. The food forest, which includes a variety of vegetables such as kalo, papaya, ‘ulu (breadfruit), ‘uala, and beans, is expected to produce 500-1000lbs of food annually. A fruit orchard that includes lychee, orange, tangerine, coconut, and mountain apple trees will also be grown on site and is expected to produce 500-1000lbs of food per year. The banana circle will have native varieties of bananas as well as kalo, ‘uala, and other plants preferred by the Kauhale residents, and is expected to produce 700lbs of food. Before these food sources are built, residents of Kauhale will be surveyed to ask what types of fruits and vegetables they want to plant and eat.

Discussion

To address the needs and priorities among vulnerable populations that are exacerbated by disasters, innovative collaborations among public, private, and non-profit organizations need to be

promoted. To respond to the impacts of the COVID pandemic on the community, KKNOW was able to anticipate the needs and leverage existing resources and relationships in Waimānalo and the surrounding communities to create synergies that resulted in trans-disciplinary partnerships among farms, wholesalers/distributors, certified kitchens, academics, and community members that have the history and trust in the community. Partnering with agencies outside the community that possess resources, such as a certified kitchen, not readily available within the community not only allowed for immediate distribution of prepared meals, but also allowed for the opportunity to develop proposals for establishing these resources in the community.

It was also important to meet immediate community needs as well as build capacity and resilience. KKNOW and its partners and volunteers used a two-pronged approach to meet the immediate needs of the community and to build capacity and resilience in the long-term. Coupling meal distribution with home food production training builds self-provisioning capacity that provides individuals with some control over their food security (Colby & Kennedy, 2017). These individuals then have credibility among their peers, exceeding that of professionals and can then become effective advisors to other community members (Bezold, 1989). In addition, including young community leaders in food distribution and food security activities provides professional development opportunities that have the potential to pay big dividends in the future.

One critical factor in this successful implementation and collaboration is KKNOW's trust and history in the community. Although KKNOW was founded fairly recently, KKNOW is community-driven with members who are either from the community or have long-standing relationship with the community. This is an example of the power of the community members as primary actors. Efforts to address the pervasive health disparities have historically used western-centric methods that have failed to produce long-lasting results among Indigenous peoples, including Native Hawaiians. Therefore, there has been a call for place-based and culturally-grounded interventions, which are demonstrating promising results with Indigenous peoples. To restore the health of Native Hawaiians, community leaders, cultural practitioners, and researchers are calling for interventions that revitalize cultural practices and identity, and recognize the impacts of historical trauma and the existing strengths and resilience of the community. Using a land-based and community-driven approach, the Native Hawaiian worldview of health and healing, which is deeply rooted in the 'āina, needs to be the foundation of promoting health and resilience in Native Hawaiian communities (Antonio et al., 2020; McGregor et al., 2003).

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