



Mauli Ola
Strategic Result Multi-Program
Evaluation Report
January 2015



EXECUTIVE SUMMARY

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Obesity is a growing public health threat in the United States and in Hawai`i. According to the Centers for Disease Control and Prevention, more than one-third of U.S. adults (34.9%) suffer from obesity (BMI of 30 or higher in adults), versus being overweight (BMI between 25 and 29.9). The Office of Hawaiian Affairs' (OHA) *2012 Obesity Indicator Sheet* reports that there is a 39.8% prevalence of obesity among Native Hawaiian adults compared to the statewide total of 21.2%- putting the Native Hawaiian adult population 4.9% above the national average and 18.6% above the statewide average.

OHA's health priority, Maui Ola, in the *2010-2018 Strategic Plan* aims to improve the quality and longevity of life of Native Hawaiians through the promotion of healthy lifestyles, reducing the onset of chronic diseases, and reducing the obesity rate among Native Hawaiians from 49.3% to 35% by 2018.

To measure the progress towards achieving reduced obesity and the promotion of healthy lifestyles, the following four grant programs funded within Fiscal Year 2012 and 2013 are the subject for this comprehensive health priority evaluation:

- I Ola Lāhui, Inc. Weight Management Program
- University of Hawai`i Office of Research Services' PILI `Ohana Project
- Queen's Medical Center's Hāna Ulu Pono Project
- North Hawai`i Community Hospital's Ho`omalule Project

Each program incorporated different types of education and physical activities aimed at promoting healthy lifestyle choices and obesity reduction.

Purpose of the evaluation

Although each of these programs were evaluated individually, the purpose of this summative evaluation is to determine the collective progress that OHA-funded obesity management programs have made in obesity reduction and the promotion of healthy lifestyles and outcomes



and to identify best and promising practices used by these programs that can be applied in future obesity management programs. This evaluation is intended to provide internal stakeholders within OHA with contract monitoring, reviewing, and funding responsibilities in making decisions regarding the future development and implementation of obesity management programs.

Methodology

The evaluation integrates both quantitative and qualitative information derived from documents such as the grant contracts, program budgets, progress reports, closeout reports, and previous individual grant evaluations. Coinciding outputs and outcomes that spanned across the four programs were selected for inclusion and analyzed in the quantitative and qualitative results of the evaluation.

Findings

Because each provider had completed their first contract period for the programs that they provided, their actual performance results relative to the proposed performance measures fluctuated with several measures having been achieved while others not. This report covers contract periods ranging from December 1, 2011 to January 31, 2014. While evaluating the programs individually, a common reason cited for the quantitative goals in the performance measures was that the providers based their proposed results on other health-related services that they provide, thereby having inconsistent results.

In reviewing the programs' results compared to the proposed measures, there are limitations to the current data reported that if addressed can assist in future evaluations and further development of health and obesity-focused programs. Specifically, these limitations include:

- Lack of de-identified data provided.
- Inconsistency among performance measures across programs.
- Some performance contracts did not provide clarity as to what defined certain measures.
- The service contracts were not written to include the provider's program proposal specifications in the contract's Attachment 1. Scope of Services.

Each program included the following best practices in the structure and implementation of their respective programs:

- Including feedback from participants, staff, community partners, and OHA.
- Addressing the health and well-being of Native Hawaiian Pacific Islanders.
- Utilizing a form of behavioral intervention with varying amounts of sessions at different



points in each program.

Each program included the following emerging and promising practices in the structure and implementation of their respective programs:

- Using culturally-based physical activities.
- Including the participant's primary care physician in the participant's program participation and progress.
- Including family members as part of the participant's natural support network.

Recommendations

Based on reviewing the results of each program, the following recommendations would improve the administration and efficacy of health programs funded by OHA in the:

- Provide a consistent core set of performance measures in the service contract. If necessary, additional measures may be included to provide enhanced measurements for the program. The measures should include averages at program intake and completion for BMI, weight, cholesterol, and blood pressure.
- Provide defining language in either the request for proposals or service contract for performance measures to ensure that there no will be no ambiguity as to what will constitute a specified result.
- Incorporate language in the service contract to define the scope of program services instead of deferring to the program proposal. By not including the specific language in the contract, the possibility of deviation from reporting requirements or service activities can occur during the project period.
- Collect de-identified data from the providers. By collecting de-identified data, further performance and trend analyses can be conducted with an accurate determination of the progress of the program in relation to their performance measures and OHA in relation to their strategic results.
- In programs that include non-Native Hawaiian participants, request program data for the Non-Native Hawaiian participants. By having this data, a comparative sample analysis can be done to determine how the Native Hawaiian participants are progressing compared to Non-Native Hawaiian participants.
- Encourage providers to incorporate more interaction between the program and the participant's primary care physician. This will allow for the program staff and physician to have clarity on the progress and medical needs of the participant.
- Encourage providers to incorporate an element of the program to include the support of friends and family members to ensure a stronger support system for the participant.
- Incorporate a mental health management element to the program activities that would identify, control, and reduce the impact of depression among participants.



MAULI OLA
STRATEGIC RESULT MULTI-PROGRAM EVALUATION
INTRODUCTION

Obesity is a growing public health threat in the United States and in Hawai`i. According to the Centers for Disease Control and Prevention, more than one-third of U.S. adults (34.9%) suffer from obesity (BMI of 30 or higher in adults), versus being overweight (BMI between 25 and 29.9). The Office of Hawaiian Affairs' (OHA) *2012 Obesity Indicator Sheet* reports that there is a 39.8% prevalence of obesity among Native Hawaiian adults compared to the statewide total of 21.2%- putting the Native Hawaiian adult population 4.9% above the national average and 18.6% above the statewide average.

OHA's health priority, Maui Ola, in the *2010-2018 Strategic Plan* aims to improve the quality and longevity of life of Native Hawaiians through healthy lifestyles and experiencing reduced onset of chronic diseases, and specifically reducing the obesity rate among Native Hawaiians from 49.3% to 35% by 2018.

Obesity management programs included. To measure the progress towards achieving the intended obesity reduction, four grant programs funded within Fiscal Year 2012 and 2013 were evaluated individually to determine if the provider met the goals of the program and identify any recommendations that could be incorporated to enhance the effectiveness in the program going forward. Each program incorporated different types of education and physical activities aimed at promoting healthy lifestyle choices and obesity reduction. The following four programs were evaluated and provide a basis for this evaluation:

I Ola Lāhui, Inc. Weight Management Program. I Ola Lāhui provided a model that integrates culturally-minded behavioral health services into primary care health centers. The integrated behavioral health model is a collaborative inter-disciplinary model where psychologists and trainees work in collaboration with primary care physicians, nurses, medical assistants, and community outreach workers to assist with chronic disease management (i.e. diabetes, obesity, cardiovascular disease), psychopharmacology consultation, and developing coordinated care plans, while treating other mental health concerns.

Collaborative consultation between psychologists, physicians, nurse practitioners, residents, specialty physicians, community health workers, and traditional healers is the hallmark of the primary care psychology model and serves various functions. The collaborative consultation is broken down into the following three activities:



- Communication among providers is enhanced due to co-location of psychologists in the primary care setting, and/or, clearly delineated referral systems. Psychologists consult with other health care providers on a daily basis and offer immediate recommendations regarding the assessment and management of behavioral aspects of patient care.
- If patients require more sessions with the psychologist, treatment plans are discussed with, and agreed upon, by the psychologist and primary care physician to ensure an appropriate treatment focus and seamless delivery of health care services. Psychologists will review treatment progress with the medical provider regularly to facilitate continued consultation, and provide physician education regarding specific behavioral interventions that appear to work for a particular patient and problem.
- Collaborative consultation within this model stimulates ongoing information sharing between providers regarding medical and behavioral interventions and related treatment efficacy. Providers work collaboratively with primary care providers, as well as providers in other health specialties, to identify, recruit, develop care plans, and essentially manage patients with obesity to increase initiation and maintenance of weight loss throughout the duration of the project.

Providers were trained to administer psychological treatments, such as motivational interviewing and cognitive-behavioral therapy (CBT) to engage patients in focusing on their health and behavior changes, as well as on alleviating problems associated with physical, emotional, and social issues. Behavioral health providers assisted patients by instilling hope that positive change is possible, enhancing patients' confidence that they could overcome challenges to living a healthier life, and helping patients shift their mindset from being self-critical to being solution-oriented to managing their chronic condition(s). CBT interventions were delivered in individual and group formats and often include problem solving, goal setting, stress management, cognitive restructuring, self-monitoring, behavioral activation, and relaxation techniques that are applicable across a range of chronic health conditions to include diabetes, obesity, cardiovascular disease, as well as, at-risk health behaviors.

University of Hawai'i Office of Research Services' PILI `Ohana Project. The PILI `Ohana Project was a partnership-driven program administered by the University of Hawai'i partnering with four other organizations and service providers who in turn provided training and mentoring to five new community partners to deliver the program activities in their respective communities.

The program was implemented in four overlapping activities over the contract period:

- The first activity- the Obesity Intervention Delivery- was done in two phases. The first phase involved face-to-face group sessions delivered over three months. These sessions focus on behavioral strategies for healthy eating, physical activity, and the management of stress,



negative emotion, and time. The second phase involved an additional six months of a weight loss maintenance intervention by expanding on the strategies from phase one by including family/friends and community resources into the participants' healthy lifestyle goals.

- The second activity ran concurrently with the first activity. In the first year, the five founding partners assisted the five new partners in building capacity to deliver the program by providing training in the program, activities facilitation, behavioral reinforcement, and evaluation. In the second year, the five new partners delivered and evaluated the interventions with the guidance and support of the original five partners.
- The third activity was a community assessment conducted by the five new partners in the first year, with assistance from the five original partners. The purpose of this activity is to prepare the five new partners to deliver the first activity. Here, they identified and evaluated their community resources to support the program's activities.
- The fourth activity was to develop a sustainability and dissemination plan aimed to reduce obesity disparities in Native Hawaiians. Based on the lessons learned from the program, the faculty of the Department of Native Hawaiian Health conducted a series of meetings to identify the strengths and challenges of offering the Program after completion of the OHA funding period. A dissemination plan was also created that identified the means by which the program can be implemented to other Native Hawaiian communities.

Queen's Medical Center's Hāna Ulu Pono Project. The Hāna Ulu Pono Project was created to join efforts to build a resilient Hāna by implementing a community-based intervention program- developed and run by the people of Hāna- to reduce the rate of obesity. This program built on the current knowledge of the community, which promoted sustainability, ultimately increasing physical activity and improving diet.

Community coordinators performed a brief health assessment at intake, halfway, and at the end of the one-year project period, which is accompanied by a series of weekly health and nutrition education classes that run throughout the year. The program activities were broken down into the following four steps:

- In step one, participants underwent a health assessment by the Program Coordinator who obtained the participant's past medical history; vital signs; general, weight-related, and health-related quality of life information; food diary; and peak expiratory flow to screen for risk of reactive airway diseases such as Chronic Obstructive Pulmonary Disease (COPD) and asthma.
- In step two, the program Coordinator provided health and nutrition education. The Program Coordinator offered at least two classes per week to maximize participation. After six months, when the educational program has been completed, the program Coordinator reviewed



other clinical topics selected by the community members. The educational content for the sessions was developed by the QMC team members, who were also responsible for reviewing with and training the Program Coordinators.

- In step three, the Program Coordinator made specialist referrals to Hāna Health or to the participant's primary care physician based on predetermined criteria or upon a patient's request.
- In step four, participants selected and joined an activity. Participants may have joined one or more of the following activities:
 - ◇ Ho`olei `Upena (to throw net): Participants would learn traditional methods, and fish at least twice weekly.
 - ◇ Holo Mua (to walk forward; progress): Participants would walk together at least three times weekly.
 - ◇ *Mālama `Āina* (to care for the land): Participants could choose to work at Mahele Farm twice weekly or work in the Kuailani Lo`i from one to five days a week.
 - ◇ *Mālama Kūpuna* (take care of the kūpuna): Participants would go for walks to pick lauhala, and then weave lauhala to, make hats, mats, bracelets, and other items.

North Hawai`i Community Hospital's Ho`omalule Project. Within the North Hawai`i Community Hospital (NHCH) is the Kaheleaulani Clinic, a Native Hawaiian Health Program which provides culturally-appropriate medical and behavioral health services for Native Hawaiian families. Within the Clinic is the Ho`omalule Project which offers Native Hawaiians and supportive family members an opportunity to improve behavioral health, reduce obesity, diabetes, and other chronic ailments through lifestyle changes. The Project focused on nutrition, exercise, working with their primary care physician, initiating positive behavioral changes, engaging in huaka`i (cultural field trips/site visits) in their area, education, and encouraging family support.

Ho`omalule began with a pre-registration checklist for each participant to ensure their readiness and commitment to engage in the project activities with the endorsement of their physician and family. Each participant was asked to set their goals for each activity which involved nutrition and cooking demonstrations, exercise with a personal trainer, health education, behavioral intervention sessions with a therapist, weekly shopping for fresh fruits and vegetables at the farmer's market, and huaka`i to cultural sites. Support plans were developed weekly and later monthly for each participant after setting goals for each activity. At the beginning of the 7th week, each participant identified their goals and progress for the month and checked in once a month during the rest of the project period. Participants were called by staff each week to check on their progress and record any positive changes they made and to determine if they required additional support. Individualized physical fitness plans were created by Five Mountain Fitness Center for each



participant based on their needs and abilities after being cleared by their physician. Cooking demonstrations and nutrition classes were conducted once a week. NHCH created a website attached to their main page and designed exclusively for program participants and their families to check for scheduled activities and access recipes from the cooking demonstrations. Participants were also given rewards and incentives throughout the phases of the program through food provisions, which consisted of \$25 worth of food scripts per week for six weeks to be redeemed at the Waimea Farmer’s Market on Saturdays.

Program budgets. The following budget information in table 1 provides a brief overview of how much funding was provided by OHA in both fiscal year 2012 and fiscal year 2013, which totaled \$1,389,282.

Table 1. Total operating budget amounts

Grantee	Fiscal Year	
	2012	2013
I Ola Lāhui, Inc.	\$250,000	\$250,000
PILI `Ohana Project	\$250,000	\$250,000
Hāna Ulu Pono Project	—	\$148,500
Ho`omalule Project	—	\$240,782
Total	\$500,000	\$889,282
Total OHA Funding		\$1,389,282

Note: Both the Hāna Ulu Pono and Ho`omalule Projects were only funded in FY2013.

Purpose of the evaluation. The purpose of this evaluation is to determine what impact the activities and services of the four programs had in achieving the strategic result and to identify what best and promising practices were incorporated in the program that can be used in future obesity management programs. To do this, this evaluation will consider the quantitative and qualitative results of the individual programs and the applicability of the performance measures in the contract.

Scope of evaluation. This is a summative evaluation concentrating on the progress that OHA-funded obesity management programs are making in obesity reduction and promoting healthy lifestyles and outcomes.

This evaluation is intended to provide internal stakeholders within OHA with contract monitoring, reviewing, and funding responsibilities in making decisions regarding the future development and implementation of obesity management programs.



METHODOLOGY

The evaluation integrates both quantitative and qualitative information derived from documents such as the grant contracts, program budgets, progress reports, closeout reports, and previous individual grant evaluations. The programs' activities and goals were stated in various areas of the contracts including the scope of services and in the grant proposals. The documents that made up the contract files included the original contract; program budget and amendments; proposal narrative; organization chart; funding award/commitment letters confirming matching support; commitment/support letters from partnering community organizations; resumes of key personnel and community partner leaders; consolidated financial statements; IRS Letter of Determination; project budget and funding information forms; quarterly progress reports; and the final grant closeout report.

Quarterly progress reports identified key activities, issues or challenges impacting project implementation, budget expenditures, progress in achieving the goals of the program, and the accumulated successes of the program.

Output and outcome measure selection. In determining which outputs and outcomes were selected in this evaluation (see Appendix A. Logic Model), each performance measure outcome and output from the *Performance Measures Table* for each individual contract was collated and then all duplicate and similarly-worded measures were overlapped and the remaining measures were separated into 'outputs' and 'outcomes'. Outputs represent the measures that can be considered to be short-term results whereas outcomes represent healthy long-term lifestyle measures. After the list of measures was shortened, two columns were created in the logic model- coinciding outputs and non-coinciding outputs. The coinciding outputs were present across the four programs, whereas the non-coinciding outputs were specific only to the individual program.

While BMI is the primary measure of obesity across the four grants, additional measures are considered in this evaluation because secondary research verifies that additional measures should be taken into consideration with BMI. The Centers for Disease Control and Prevention states that although BMI correlates with the amount of body fat, it does not directly measure body fat, and furthermore that BMI is just one indicator of potential health risks associated with being overweight or obese and that other risk factors the individual has for diseases and conditions associated with obesity- such as high blood pressure or physical inactivity- should be considered. Focusing on other health indicators, such as blood pressure, glucose, and cholesterol levels, is also an important aspect of clinical care, and may be an effective way for providers to address weight



with patients. Moreover, by connecting improvements in health indicators to weight loss, providers may help patients better appreciate health benefits of overall weight management (Ferguson, Langwith, Muldoon, Leonard, & Lopez, 2010).

Data analysis. A quantitative data analysis of the data submitted in the *Performance Measures and Outcomes Table* for each program was done by comparing the data submitted to the desired results as previously specified. A qualitative data analysis was done by reviewing prior evaluations, additional activities done during the project period, and secondary research.

Limitations of data available. The performance data submitted in the quarterly progress reports- with the exception of the Ho`omalule Project- were summarized or averaged as necessary instead of providing individualized data. Another limitation to data available was that not all performance measures were included consistently in each of the four programs, therefore making further detailed analyses and interpretation of the data limited and possibly inconclusive. Limitations of data will be discussed further in the *findings* section.

RESULTS

Over the course of the programs' contract periods, all programs have achieved positive results, based on their performance relative to the prescribed performance measures in their contract, as well as additional activities that occurred during the contract period. The *Quantitative Results* section discusses the results based on the selected performance measures reported by the grantees and the *Qualitative Results* section summarizes the additional activities incorporated in the programs. The *Financial Impact Comparison* section uses the cost-per-unit formula used in financial accounting to determine how much OHA funding is used to achieve certain performance measures that were taken from the *Quantitative Results* section.

Quantitative results

Table 2 shows the performance results of the individual programs versus the proposed measures using the coinciding outputs and outcomes taken from the logic model. The numbers reported below were reported quarterly by the providers during their contract period. A "--" indicates that the data was either not reported or that the measure was not included in the contract.



Table 2. Programs' results

	I Ola Lāhui, Inc.	Hāna Ulu Pono Project	PILI `Ohana Project	Ho`omalule Project
Measure	Proposed / Actual	Proposed / Actual	Proposed / Actual	Proposed / Actual
Number of participants	359/449 (125%)	150/165 (110%)	600/417 (69.5%)	100/81 (81%)
Number who completed an Individual Service Plan/ Assessment	500/449 (89.9%)	150/165 (110%)	500/417 (83.4%)	80/81 (101.3%)
Average BMI at intake	--/38.33 ^a (N/A)	--/31-40 ^b (N/A)	--/38.17 (N/A)	--/38.08 (N/A)
Average weight at intake	--/231.16 (N/A)	--/225 (N/A)	--/232.39 (N/A)	--234.08 (N/A)
Number identified with asthma	--/-- (N/A)	50/27 (54%)	--/-- (N/A)	--/17 (N/A)
Number identified with diabetes	--/19 (N/A)	70/64 (81.1%)	--/-- (N/A)	50/34 (68%)
Number who received educational materials	500/449 (89.8%)	150/165 (110%)	--/217 (N/A)	100/81 (81%)
Number with reduced weight	360/210 (58.3%)	125/NR ^c (N/A)	--/204 (N/A)	80/54 (67.5%)
Number with reduced BMI	360/209 (58.1%)	100/70 (70%)	--/157 (N/A)	80/52 (65%)
Number with improved blood pressure control	360/150 (41.7%)	125/65 (52%)	--/141 (N/A)	80/16 (20%)
Number with improved eating/dietary habits	--/-- (N/A)	135/90 (66.7%)	--/96 (N/A)	80/81 (101.3%)
Number with improved physical functioning	--/14 (N/A)	135/145 (107.4%)	--/82 (N/A)	80/81 (101.3%)
Number with improved physical activity levels	--/36 (N/A)	135/145 (107.4%)	--/82 (N/A)	80/81 (101.3%)
Number who ceased and/or decreased smoking	--/-- (N/A)	75/25 (33.3%)	--/-- (N/A)	--/9 (N/A)
Blood pressure at intake	--/-- (N/A)	--/Systolic BP >150 ^d	--/-- (N/A)	--/Systolic BP 133.90 over Diastolic BP 83.31 ^{e,f,g}

Note. ^aAn N/A indicates that a percentage could not be determined due to either a measure not being proposed. ^bThe Hāna Ulu Pono Project reported a stratified grouping with BMIs of 25-30 (22%), 31-40 (46%), and >40 (27%), and therefore the mode was selected. ^cNR indicates that the data was not reported. The Hāna Ulu Pono Project reported a stratified grouping of only systolic blood pressure of 120-140 (32%), 141-150 (18%), and >150 (35%), and therefore the mode was selected. ^dThis blood pressure reading was the average of all recorded blood pressure entries at intake. ^eOf 81 participants, 79 blood pressure readings were reported. ^fThe diastolic and systolic reading was rounded to the nearest hundredth.



Qualitative results

Throughout the course of each program, the grantees have conducted additional activities that aided in the delivery and additionally enhanced the effectiveness of each program.

I Ola Lāhui, Inc. Weight Management Program. In the fourth quarter of the first year, topics of chronic pain management and managing healthy habits during the holiday season were added to the group sessions as well as an increase in fitness classes made available each week.

There were several advertising and community outreach activities done to increase the exposure of the program and recruitment. During the contract period, articles about the program were featured in *Ka Wai Ola* and *Island Scene Magazine*. Television ads were run during the Merrie Monarch Hula Festival and the Nā Hoku Hanohano Awards, and an interview was featured on the KHON2 Morning News. Informational material about the program was distributed at the Papakolea Health Fair, HMSA Team Healthy Hawaiian Fair, and the Prince Kuhio Festival. And finally, two presentations were given at the American Psychological Association Annual Convention in 2013 to gain national exposure.

Due to participant attrition from the program, an internal quality improvement process was initiated to determine what factors caused attendance issues and to determine where workflow improvements could be made to maintain a higher attendance rate. Improvements that were implemented included making reminder and follow-up phone calls for participants who did not show up for an activity and revising the informed consent and motivational interviewing content of the first session to emphasize the importance of regular attendance.

University of Hawai'i Office of Research Services' PILI `Ohana Project. The PILI `Ohana Project community partners had achieved individual successes in the communities they worked in and completed a comprehensive community assessment. Examples of the additional activities included the following:

- Community partners found opportunities to join activities with other health promotion programs and organizations in their respective communities.
- Combined the PILI `Ohana Program with Ho`oikaika exercise programs.
- Taking groups of participants to farmers markets and planning workdays at a lo`i.
- Using Facebook to connect participants and share information about supporting healthy lifestyles.
- Submitting an abstract to the International Symposium on Minority Health and Health Disparities to take place in December 2014.



In the first year a community assessment was done. The original intent for the assessment was to ask the new partners to conduct the assessments as a preparatory step for implementing the program. The assessment examined the availability, accessibility, safety and utility of resources in the community that promoted healthy lifestyles, and the community's readiness to address the problem of obesity. Questions asked in the community readiness survey focused on community concerns or climate surrounding the issue of obesity, community knowledge of obesity, leadership support for addressing obesity, resources related to obesity prevention and the influence of stress on efforts to prevent obesity.

The Community Assessment questionnaire was adapted from the *Neighborhood Assessment* tool developed as part of the YWCA's *Community Healthy Living Index*. The questionnaire had five sections additional to the general questions about the community parameters and population. The five sections were community design, physical environment related to physical activity, physical environment related to food and nutrition, safety, and collaborative capacity/community engagement.

Results of the survey showed that the Pana`ewa/Keaukaha Homestead communities differed significantly from other community types in terms of their overall readiness and specifically in the level of perceived community support for healthy living, physical activity and resources to promote and support healthy lifestyles. This lower level of community resources was confirmed by the community assessment which showed low scores in the areas of physical environment related to nutrition and physical environment related to physical activity.

Queen's Medical Center's Hāna Ulu Pono Project. The program staff from QMC placed additional focus and effort on the community partnership-building with the people of Hāna. These activities included:

- Holding monthly screenings and mentoring visits in Hāna.
- Encouraging participant involvement in the pre-planning, planning, implementation, and evaluation of program activities.
- HUPP team being certified in CPR and First Aid with additional training in blood pressure and the use of the Tanita Scale which captures weight, height, BMI, and electrocardiogram (EKG) testing.
- Holding nutritional workshops.
- Forming partnerships with the Hāna Youth Center, Hale Hulu Mamo, Travassa Hotel, Mahele Farms, County of Maui Parks and Recreation Hāna, Hāna Art Barn, Hāna Dialysis Center, and the Hawai'i Soccer Club.

The program staff identified that relationship-building and trust-fostering were important in learning about the community's sense of identity and what they represent. In solidifying a



relationship with the community, those conducting the assessments and implementing the service were able to create a strong programmatic infrastructure.

North Hawai`i Community Hospital’s Ho`omalule Project. Participants were administered the Patient Health Questionnaire-9 (PHQ-9) and the General Anxiety Disorder-7 (GAD-7) tests during the course of the program. The PHQ-9 is a nine item depression scale that can assist clinicians with diagnosing depression and monitoring treatment response (*IMPACT*, 2012). Kroenke, Spitzer, Williams, Monahan, and Lowe (2007) discovered that the GAD-7 was originally developed to diagnose generalized anxiety disorder, the GAD-7 also was able to screen for panic, social anxiety, and post-traumatic stress disorder. Prior to the program, it was discovered that three of the project participants were encountering suicidal tendencies and during the program were no longer experienced those feelings or have reduced them.

Financial impact comparison

In order to provide a perspective of how effective the financial resource allocation has been in obesity-reduction, table 3 below illustrates an average of how much individual program funds were spent on average per participant enrolled in each program. The formula used in this comparison is based on the cost per unit formula used in financial accounting that is the total costs divided by the total units produced. In this comparison, the formula used is the total contract value divided by the amount of participants.

Table 3. Financial impact

	Total Contract Value	Total Number of Participants	Total Cost Per Participant
I Ola Lāhui, Inc.	\$500,000	449	\$1,113.59
PILI `Ohana Project	\$500,000	417	\$1,199.04
Hāna Ulu Pono Project	\$148,500	165	\$900.00
Ho`omalule Project	\$240,782	81	\$2,972.62
OHA	\$1,389,282	1,112	\$1,249.35

FINDINGS

Because each provider had completed their first contract period for the programs that they provided, their actual performance results relative to the proposed performance measures fluctuated with several measures having been achieved while others were not. While evaluating the programs individually, a common reason cited for the quantitative goals in the performance measures was that the providers based measures was that the providers based their proposed



results on other health-related services that they provide, thereby having inconsistent results.

In reviewing the programs' results compared to the proposed measures, there are limitations to the current data reported that if addressed can assist in future evaluations and further development of health and obesity-focused programs. Specifically, these limitations include:

- Lack of de-identified data provided. Because of this, only averaged data are reported, and the grant monitor and program evaluator are unable to further analyze the data to identify trends and calculate a more accurate financial impact to accurately determine where progress is being made within the programs, and to raise additional questions that will give rise to more findings and recommendations.
- Inconsistency among performance measures across programs. Michels, Greenland, and Roner (1998) concluded that the use of BMI alone does not adequately capture the joint relation of body composition and body size to health outcomes and that it has displaced weight, height, and other measurements of body composition. The National Heart, Lung, and Blood Institute advises that in addition to BMI, health care providers should also evaluate a patient's risk factors, such as higher blood pressure, cholesterol, and waist circumference. Because each service contract had certain coinciding measures, there were several other measures that were either exclusive towards one program or was not as clearly-defined as similar measures in other contracts.
- Some performance contracts did not provide clarity as to what defined certain measures (e.g. physical activity versus physical functioning, and improved self-management of a condition).
- The service contracts were not written to include the provider's program proposal specifications in the contract's *Attachment 1. Scope of Services*. Instead, the contract refers to the program proposal. By not including specific language in the contract that defines the activities and provides definitions for performance measures or other potentially ambiguous service activities, the potential for deviation in the service activities relative to the specifications of the contract exist and may not provide clear guidance on the performance measure reporting requirements. In one instance, the service provider was reporting data for the *Performance Measures Table* whereas the contract requirement was to report data for the previously approved *Managing for Results* (MFR) table.

Best practices. Flynn, McNeil, Maloff, Mutasingwa, Wa, Ford, and Tough (2006) concluded that one of the best practices in program development includes involving stakeholder input at every step in program development, implementation, and evaluation. By this measure, each of the four programs did so by including feedback from participants, staff, community partners, and OHA. In the case of the PILI `Ohana Project, the community assessment was able to collect and



factor in more community feedback through their program partners in their respective communities. Kaholokula, Kekauoha, Dillard, Yoshimura, Palakiko, Hughes, and Townsend (2014) concluded that addressing the health and well-being of Native Hawaiian Pacific Islanders has become best practice because of the use of sustainable community-based participatory research, innovations, and discoveries of the PILI `Ohana Project, and the community capacity building with other community-based organizations.

LeBlanc, O'Connor, Whitlock, Patnode, and Kapka (2011) found that behaviorally-based treatment resulted in high weight loss with interventions showing more weight loss with more sessions. Each program utilized a form of behavioral intervention with varying amounts of sessions at different points in each program. The behavioral intervention methods across the four programs include one-on-one counseling, support groups, individual and group education, and physical fitness activities.

The Association of Maternal & Child Health Programs (AMCHP) defines best practices as having been through a process of peer review and evaluation that indicates effectiveness in improving public health outcomes for a given population and that has gone through the following:

- Has been reviewed and substantiated by experts in the public health field by pre-determined standards and empirical research.
- Is replicable and produces desired results in various settings. And
- Links positive effects to the program/practice being evaluated and not to other external factors.

Emerging and promising practices. While physical fitness activities as a category by itself are considered to be a best practice, the type of activities is what would qualify for consideration as a promising practice. In the course of each program, the physical activities varied across the programs (e.g. hula dancing, net throwing), but at the core were culturally-based. Because the effectiveness of traditional exercise programs including weight training, walking, or jogging may be subject to research review and in turn become evidence-based, extensive research regarding the effectiveness of culturally-specific physical activities used among the four programs does show to have at least assisted in achieving the positive results of these programs.

The importance of working closely with the participants' primary care physicians also has a place in an effective obesity management program. While the program structure incorporates a degree of clinical oversight, the primary care physician will be able to accurately understand the true progress of the participant during the time of their participation in the program due to having served as the participant's physician and knowing their complete medical history and needs beforehand.



The participants' families also play a critical role in the progress of the participant by serving as an emotional support system. Verheijden, Bakx, van Weel, Koelen, and van Staveren (2005) found that among other groups involved in a participant, family members are part of the participant's natural support network and by providing social support, provides value to participants and increases program effectiveness. An example of how the element of family as a support system was utilized took place during the Hāna Ulu Pono Project, the family "family night" activity provided an opportunity for the participants to include their families in their progress.

The AMCHP defines emerging practices as having the following characteristics:

- Incorporates the philosophy, values, characteristics, and indicators of other positive/effective public health interventions.
- Is based on guidelines, protocols, standards, or preferred practice patterns that have been proven to lead to effective public health outcomes.
- Incorporates a process of continual quality improvement that:
- Accumulates and applies knowledge about what is working and not working in different situations and contexts;
- Continually incorporates lessons learned, feedback, and analysis to lead toward improvement or positive outcomes.
- Has an evaluation plan in place to measure program outcomes, but it does not yet have evaluation data available to demonstrate the effectiveness of positive outcomes.

Promising practices have the same criteria as emerging practices, however, promising practices either have been or are being evaluated and have strong quantitative and qualitative data showing positive outcomes, but lacks enough research or replication to support generalizable positive public health outcomes. Because the distinction between what constitutes an emerging practice versus a promising practice in the context of the service activities can be subject to interpretation and other research conducted in public health is not housed in a centralized venue, activities that fall into either of these two categories will be considered together.



RECOMMENDATIONS

Based on reviewing the results of each program, the following recommendations would improve the administration and efficacy of obesity reduction programs funded by OHA in the future:

- Performance measures
 - ◇ Provide a consistent core set of performance measures in the service contract. If necessary, additional measures may be included to provide enhanced measurements for the program. The measures should include averages at program intake and completion for BMI, weight, cholesterol, and blood pressure.
 - ◇ Provide defining language in either the request for proposals or service contract for performance measures to ensure that there no will be no ambiguity as to what will constitute a specified result.
- Contract administration
 - ◇ Incorporate language in the service contract to define the scope of program services instead of deferring to the program proposal. By not including the specific language in the contract, the possibility of deviation from reporting requirements or service activities can occur during the project period.
 - ◇ Also collect de-identified data from the providers. By collecting de-identified data, further performance and trend analyses can be conducted with an accurate determination of the progress of the program in relation to their performance measures and OHA in relation to their strategic results.
 - ◇ In programs that include non-Native Hawaiian participants, request program data for the Non-Native Hawaiian participants. By having this data, a comparative sample analysis can be done to determine how the Native Hawaiian participants are progressing compared to Non-Native Hawaiian participants.
- Program activities
 - ◇ Encourage providers to incorporate more interaction between the program and the participant's primary care physician. This will allow for the program staff and physician to have clarity on the progress and medical needs of the participant.
 - ◇ Encourage providers to incorporate an element of the program to include the support of friends and family members to ensure a stronger support system for the participant.
 - ◇ Incorporate a mental health management element to the program activities that would identify, control, and reduce the impact of depression among participants.



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APPENDIX



APPENDIX A. LOGIC MODEL

Grantee	Resources	Data Available	Coinciding Activities/Services	Non-Coinciding Activities/Services	Coinciding Outputs	Non-Coinciding Outputs	Outcomes
I Ola Lahui	<ul style="list-style-type: none"> Grantee staff Participants Community partners Sub-contractors Program funds 	<ul style="list-style-type: none"> Quarterly progress reports Grant monitor's report Performance measures tables Prior program evaluations Program budgets 	<ul style="list-style-type: none"> Health assessment One-on-one counseling Support groups Individual and group education Physical fitness activities Cultural activities and site visits Community partnerships 	<ul style="list-style-type: none"> Advertisements Internal quality improvement Initiation Conference presentation Makes specialist referrals for participants Monthly screenings Mentoring visits Additional staff training Create sub-contracts Community assessment Develop a sustainability / dissemination plan Social media Conference abstract submission NHCH website for activity schedules and recipes Scripts for farmer's market 	<ul style="list-style-type: none"> Number of participants Number who completed an Individualized Service Plan/Assessment Participant/Average BMI at intake Participant/Average weight at intake Number identified with asthma Number identified with diabetes Number who received education materials 	<ul style="list-style-type: none"> N/A Number of participants who ceased and/or decreased smoking Blood pressure at intake Two-phase program structure incorporating the Coinciding Outputs Number of participants who ceased and/or decreased smoking Blood pressure at intake 	<ul style="list-style-type: none"> Reduced weight Reduced BMI Improved blood pressure control Improved eating/dietary habits Improved physical functioning Improved physical activity levels
Queen's Medical Center (QMC)							
University of Hawai'i (UH)							
North Hawaii Community Hospital (NHCH)							