

Addressing Health Disparities by Building Organizational Capacity in the Community: A Case Study of the Wai'anae Coast Comprehensive Health Center

May Okihiro MD; Vija Sehgal MD, PhD; Tiana Wilkinson MPH; Kelli-Ann Voloch MD; Rachelle Enos MPH; and Joyce O'Brien MPH

Abstract

Native Hawaiians and other residents living in economically disadvantaged communities suffer disproportionately from many health conditions, especially chronic diseases. Reversing this trend requires a comprehensive approach encompassing more than just improvement in healthcare delivery. Indeed, societal changes at multiple levels must occur, including environmental, systems, and policy change, in order to bring about sustainable improvements in community health and wellness. A key strategy to accomplish these upstream changes is an increase in the capacity of community-based organizations to provide leadership in health advocacy, support community health promotion, prioritize resource allocation, and participate in community health research. In disadvantaged communities where health disparities are the most severe, community health centers (CHC) are well positioned to take a pivotal role in these efforts. This report is a case study to describe processes taking place at Hawai'i's largest CHC to build organizational capacity and bring about upstream changes that improve community health and wellness. Ongoing processes at the CHC include (1) Institutional: commitment to address health disparities, expand the CHC research infrastructure, and develop a comprehensive worksite wellness program (2) Collaborative: development of a network of community partners committed to the common goal of improving the health and wellness of community residents, and (3) Systems and Policy: activities to strengthen the CHC's and community's ability to influence systems changes and policies that reduce health disparities. Preliminary results are encouraging although the processes and timelines involved require a long-term commitment in order to affect tangible results that can be measured.

Background

Native Hawaiians, other Pacific Islanders, and residents of economically disadvantaged communities suffer disproportionately from many health conditions, especially chronic diseases such as diabetes and cardiovascular diseases.^{1,2} To address health disparities, health care organizations and physicians have long focused on changing individual behavior since many of the serious chronic disorders are at least partially preventable. Improving access to appropriate and timely medical services is an equally important factor in preventing and treating chronic medical conditions that lead to health disparities. Indeed, optimal, patient-centered care that improves disease outcome, while reducing healthcare costs, is now a focus of President Obama's Affordable Care Act.

However, in high-risk communities, disease burden begins early in life with the development of risk factors, such as overweight and obesity,³ and are linked to complex psychosocial, geopolitical and economic factors that also lead to long-term financial and educational inequity.⁴ Experts now recognize the critical need to address health disparities, not only through improvements in healthcare delivery, but through comprehen-

sive changes, at multiple levels of society, in order to affect environmental, systems, and policy changes that promote community health and wellness^{4,5} and make healthier lifestyle choices accessible, appealing and easier for residents to make.

A key strategy to bring about these upstream changes is to build organizational capacity and empowerment within community-based organizations (CBOs) as a means to improve community health through research, community engagement and mobilization (Table 1).⁵ Organizational capacity involves structures, programs and practices of an organization needed to influence community health status, and social determinants of disease including: (1) Intra-organizational components that relate to function, expertise, leadership, and credibility to effectively take ownership in addressing the health disparities in the community the CBO serves; (2) Inter-organizational components that enable CBOs to effectively network and build trust with other partners, including community, private, academic and governmental organizations, to share resources and develop complementary partnerships, while reaching shared goals through consensus and collective impact (3) Extra-organizational components or those activities by CBO's that impact community residents and systems through local and national government policy change.^{5,6}

In disadvantaged communities where health disparities are the most severe, federally qualified community health centers (FQCHC) are well positioned to assume a significant role in reversing these trends through initiatives at the clinical, community, and policy level.^{5,7} To be sure, FQCHC's are located within medically underserved populations, are open to all community members regardless of income and ability to pay, and are governed by a Community Board with strong community ties. To date, very little has been written about strategies to enhance the empowerment and organizational capacity of FQCHCs to reduce and/or eliminate health disparities in the communities they serve.

This report is a case study that describes the multifaceted approach currently taking place at the largest FQCHC in Hawai'i, the Wai'anae Coast Comprehensive Health Center. It is a comprehensive approach to build organizational capacity in order to address health disparities by; (1) participating and leading health disparities research, (2) engaging with the community to foster health promotion and community action, (3) networking with other community based organizations in order to realize shared goals in community health and wellness, and (4) participating in advocacy efforts in order to influence

Table 1. Building Organizational Capacity at WCCHC Logic Model			
Goal: Improved health of community residents and reduce chronic disease health disparities			
Strategies	Activities	Short term Changes	Longer Term Changes
Intra-organizational Change			
Institutional commitment	<ul style="list-style-type: none"> • Commitment of CHC Administration and Board of Directors to community based health research, programming, and policy 	<ul style="list-style-type: none"> • CHC funding to expand community health activities • Greater awareness among CHC Administration and community leaders about community health 	<p>Extra-organizational Change:</p> <ul style="list-style-type: none"> • Stronger community and CHC partnerships • Stronger academic community partnerships <p>↓</p> <ul style="list-style-type: none"> • Increase in organizational and community capacity to bring about sustainable individual and community level change including interventions, policies, practices and programs • Development of more-effective, sustainable community-based strategies to improve health • More community members engaged in health and wellness activities
Develop research infrastructure	<ul style="list-style-type: none"> • Establish CHC Research Committee, IRB, and Community Research Advisory Council • Establish research policies and procedures 	<ul style="list-style-type: none"> • Interventions and research that align with local/community beliefs, norms, culture and practices • Expanding pool of CHC trained clinicians • Shared learning between academia and community • Research that community understands and can act upon 	
Develop CHC based researchers	<ul style="list-style-type: none"> • Research training of CHC-based healthcare providers and community members • Trainings led by CHC-based healthcare providers and community members 		
CHC Worksite Wellness	See Table 3	<ul style="list-style-type: none"> • Healthier, more satisfied employees • Increased numbers of community role models and community health promotion champions 	
Inter-Organizational Change			
Community-based CHC programs to improve access to healthier lifestyles (foods, physical activity, etc)	<ul style="list-style-type: none"> • Community Farmer's Markets • Community based presentations, health fairs and screenings 	<ul style="list-style-type: none"> • Increased access to and consumption of healthier foods by residents • Increased trust in CHC within the community 	
Building sustainable community partnerships	<ul style="list-style-type: none"> • Dissemination of CHC based research results • Dialogue and planning with community-based organizations, State/County government about issues related to community health 	<ul style="list-style-type: none"> • Shared learning between community based organizations including CHC • Development of shared goals/objectives, research and action 	

the development and implementation of policy and legislation that brings about systems change and improves the health and wellness of residents.

Community Setting

The Wai‘anae Coast Comprehensive Health Center (WCCHC) is Hawai‘i’s largest FQHC. WCCHC has five clinical sites and provides health care services to the majority of residents of two rural communities on the western side of O‘ahu, Hawai‘i’s most populated island. These communities are impoverished: per capita income is among the lowest in the State and unemployment is almost double that of the State overall.⁸ In 2011 WCCHC provided health services to 28,775 patients: 52% were Native Hawaiian, 11% were Other Pacific Islanders, 15% were Asian, 42% were younger than 20 years of age, and 76% had incomes at or below 200% of the US federal poverty level.⁹

Intra-organizational Capacity: Building research infrastructure and community mobilization capacity

Research Infrastructure

Academic researchers have long targeted WCCHC and the Wai‘anae Coast area as a potential community to conduct research studies because of their large indigenous patient base, its proximity to Honolulu, and the known heavy burden of chronic disease. In 1985, the WCCHC Board of Directors was approached to participate in a longitudinal study on cancer prevention. Prior to agreeing to participate, the Board considered previous negative experiences with academic researchers and the need for a research approach that considered Native Hawaiian concepts and values.¹⁰ In response, the WCCHC Board took its first steps to independently develop a CHC research infrastructure.

With input from community members and health center staff, WCCHC research principles and guidelines were developed, embodied as a new community-based participatory research (CBPR) model.¹¹ Published in 1992, these guidelines and principals continue to frame the research process within the Wai‘anae community and at WCCHC (Table 2).^{10,11} The 5-year Wai‘anae Cancer Research Project, based on the participatory research model developed at WCCHC, was successfully funded by the National Cancer Institute and conducted with participation of WCCHC staff and patients.

Since that time, WCCHC has developed its own research infrastructure including (1) the WCCHC Research Committee, (2) WCCHC Institutional Review Board, (3) the WCCHC Community Research Advisory Council to advise researchers, (4) the WCCHC Research Committee on the development and approval of studies, and (5) a research policies and procedures manual that provides guiding principles for research—based both at the health center and within the community. The WCCHC research policies and processes continue to evolve to streamline processes, meet new federal and state legislation and policy related to health information privacy and security, and support the evolution and implementation of community-based participatory research. WCCHC’s research infrastructure has become a national model for CHC-based research, which has led to affiliations and partnerships with organizations and academic institutions in Hawai‘i and from across the country.¹⁰

Homegrown Researchers

The WCCHC Medical Administration recognizes the value of research to advance its mission, build health center capacity and create mechanisms to build partnerships. The Administration also recognizes the need to foster and support community researchers, especially Native Hawaiian community members and WCCHC’s own healthcare providers, who understand the strengths and challenges of the community and its residents. In doing so, the WCCHC Administration has supported advanced training in research for clinicians and staff members, providing them with flexibility in clinical shift assignments and responsibilities, in order to take advantage of academic research training opportunities, especially those based at the University of Hawai‘i (UH).

In partnership with UH, research training has included: (1) project specific instruction in data collection, data management, measurement, subject recruitment, community engagement, and qualitative techniques such as focus groups; (2) general research topics such as research design, grant writing, and biostatistics; and, (3) formal multi-year fellowship programs in clinical and community-based research.

Community members and WCCHC staff including medical assistants, community outreach workers, registered dietitians, and social workers, many of whom live in the community, have also actively engaged in WCCHC sponsored research training opportunities. Subsequently, the WCCHC has participated in health disparities research studies involving women’s stress and mental health, breastfeeding, cancer, intimate partner violence,

Table 2. Principles and Guidelines for Participatory Research (Excerpts) ¹⁰
Guidelines for Research
<ul style="list-style-type: none"> • The community participates in planning the research • Research is sensitive to culture • There are direct and immediate benefits for community residents and participants • Research participants are active participants rather than passive subjects • Minority members are represented in research projects targeting minority populations • Data are owned by both community and research agency • An increased share of resources flows to the community
Procedures for Use of Information and Data
<ul style="list-style-type: none"> • Established guidelines for publications, public presentation, and newspaper articles of research findings • Identified a Publications Committee Review process • Described the use of data for program planning

cardiovascular disease, diabetes, and adolescent metabolic syndrome.

More recently, WCCHC Research Staff, providers and Wai‘anae residents have led training seminars at UH on community-based participatory research, evidence of the growing research expertise at the health center. In addition, the expansion in WCCHC’s research capacity, the active participation by community members in research training and studies, and engagement of the community research advisory council in the research development and approval processes, emphasize the central role of the Wai‘anae community in framing the research process.

The training and support by WCCHC has also led to the development of a growing pool of trusted, experienced clinicians involved in and/or leading clinical research activities based at WCCHC and in the community (Table 3). This includes three Native Hawaiian physicians who have completed a two-year fellowship at the UH John A. Burns School of Medicine (JABSOM) Native Hawaiian Center of Excellence—a faculty development program that focuses on health disparities research to improve Native Hawaiian health. Moreover, four WCCHC physicians have academic appointments at UH JABSOM and receive a portion of their salary directly from the UH. Although not all of these clinicians are currently leading independent research projects, all are participating in some community and/or clinic-based research projects that are outside of the scope of their clinical practice duties and responsibilities. This work strengthens WCCHC’s ties with community partners thereby increasing its visibility and credibility, while simultaneously addressing health disparities among Native Hawaiians and other Pacific Islanders.

Community Champions and Employee Health and Wellness WCCHC has over 600 employees, the majority of whom are from the community. The employees are the face of the health center. The employees also represent a potential pool of community health and wellness champions who can mobilize the community through a consistent health promotion message that capitalizes on their influence both at WCCHC and in the

Table 3. WCCHC Community-based clinical researchers associated with JABSOM			
WCCHC position, employment date	Training	Research and Community Engagement Focus	Current academic position
Pediatrician 1, 1999 to present	UH JABSOM Community Pediatrics Fellowship, Masters of Science Clinical Research	Childhood obesity among Native Hawaiians and other Pacific Islanders	Assistant Professor, UH JABSOM
Pediatrician 2, 2000 to present	UH JABSOM NHCOE ^a	Native Hawaiian health career development	Assistant Professor, UH JABSOM
Obstetrician-Gynecologist, 2005 to present	UH JABSOM NHCOE ^a , UH JABSOM Dept. of Ob-Gyn Family Planning Fellowship	Family planning among Native Hawaiian and other Pacific Island Women	Assistant Professor, UH JABSOM
Family Medicine Physician, 2000 to present	UH JABSOM NHCOE ^a	Mental health screening and depression among Native Hawaiian teens	
Psychologist 1, 2007 to present	UH JABSOM RMATRIX ^b	Impact of maternal stress in women from low-income communities	
APRN ^c 1, 2013 to present	UH JABSOM RMATRIX ^b	Obesity in adolescents	
APRN ^c 2, 2013 to present	UH JABSOM RMATRIX ^b	Improving access to healthcare for adolescents	

^aUniversity of Hawai'i, John A. Burns School of Medicine Department of Native Hawaiian Health, Native Hawaiian Center of Excellence; ^bUH JABSOM – Multidisciplinary and Translational Research Infrastructure Expansion; ^cAdvance practice registered nurse.

Table 4. WCCHC Employee Wellness Program
Employee Wellness Services (provided free to all employees)
<ul style="list-style-type: none"> • Health screening • 52 Weeks To A Healthier You—A communication and engagement campaign to inspire employees to participate in their personal wellness through weekly health challenges • Free gym membership and personal fitness training • Group Fitness Classes • Behavioral health services including stress management and time management • Caregiver's Support Group • Tobacco Cessation • Asthma Education • Weight Management including nutrition counseling and medical management
Employee Wellness Time
<ul style="list-style-type: none"> • Full time employees are given 1.5 hours of work time per week for exercise and wellness activities (Subject to the prior approval from their supervisor)

community. Nevertheless, WCCHC employees carry a similar disease burden as other community members; many are impacted by chronic disease such as diabetes and obesity. Like other community members, they also face difficult challenges in making healthier choices.

The WCCHC Administration recognizes the need to support the health and wellness of their employees in order to: (1) maximize productivity; (2) reduce healthcare costs; (3) support individuals taking responsibility for lifestyle choices, and; (4) develop community health champions and role models. As such, the WCCHC recently committed to a comprehensive employee wellness program that supports health and wellness at work (Table 4). The program, run by the WCCHC Preventive Health Department, has improved employee access to healthier foods through a well-utilized clinic-based Farmer's Market as well as enhanced opportunities for physical activity and stress management through the WCCHC Fitness Center. In addition, new policies have been developed and implemented to motivate employees to participate in health programs and to insure that

they have time during work hours to access WCCHC wellness programs.

Like many organizations, improving and maintaining employee health is difficult—participation in employee health programs can be inconsistent, service to employees in satellite clinics is challenging, and funding for larger, more intensive programs is limited. Still, the WCCHC's Preventive Health Department and Administration are committed to working with WCCHC's staff to discover the most robust methods to enhance, maintain and measure employee health and well-being.

Inter-organizational and Extra-organization Capacity

Research dissemination and the WCCHC Board of Directors
Clinical reports and research studies performed at the WCCHC continue to document that community members experience significant health disparities, especially in chronic diseases (ie, obesity, diabetes and metabolic syndrome) despite major improvements in healthcare delivery in the State of Hawai'i

Age Group	Diabetes Prevalence (vs Hawai'i State BRFSS 2009)*
25-34 years	6.6% (2.2%)
35-44 years	15.8% (4.1%)
45-54 years	23.4% (9.4%)
55-64 years	29.2% (12.9%)
65 years and older	32.4% (18.2%)

*BRFSS: Behavioral Risk Factor Surveillance System¹²

(Table 5).¹² Diabetes, cardiovascular disease and childhood obesity are common conditions at the WCCHC.^{12,13} Prediabetes and other precursors of chronic disease are developing at an earlier age. Among the children attending WCCHC, over 50% of children from 6 years of age are overweight or obese and 17-20% are severely obese.

These reports have been disseminated to WCCHC clinicians, administrators, the WCCHC Research Advisory Council, the WCCHC Board of Directors, and community members through presentations and meetings. In 2012 due to the dissemination of data and the challenges residents face trying to change behavior in a community that does not easily support healthy choices, the WCCHC Board of Directors made “Diabetes Prevention” a strategic priority of the health center. This established an institutional commitment by the Board to broaden the health center’s scope to address diabetes, one of most important chronic conditions impacting the Wai’anae Coast community. In doing so, the WCCHC Board and Administration supports efforts by the WCCHC staff and researchers to become actively involved in strategies that improve the health, not only of individuals through clinical services, but the community as a whole. While only in its infancy, this programmatic commitment focuses resources on initiatives that will enhance the development and implementation of policies and systems changes in the community to support wellness, healthier eating and physical activity of the Wai’anae Coast residents.

Community Health

WCCHC is facilitating improved access to healthier foods. The health center has established weekly Farmer’s Markets, with a wide selection of fruits and vegetables, at three sites in the WCCHC community. The markets are accessible and growing in popularity, provide educational training and outreach, and enable use of the electronic benefit transfer (EBT) card program of the federal Supplemental Nutrition Assistance Program (SNAP), formerly known as the Food Stamp Program for low-income families. To further improve access to healthy foods, the WCCHC recently received a grant to pilot test an EBT “Double Bucks” program at the markets in which \$10 in EBT benefits can be doubled each week and used towards the purchase of produce, including traditional Native Hawaiian foods such as *pa'i'ai* (pounded taro). These initiatives complement the health

education programs provided to patients at WCCHC and support the development of environments that make it easier and more affordable for residents to make healthier choices.

Community Partnerships and Policy

WCCHC is now working with several key community leaders and the Wai’anae Wellness and Place-Based Learning Alliance (the Alliance), a collaborative association of community-based organizations dedicated to addressing education, health, and wellness along the Wai’anae Coast. The Alliance was created not just for a specific grant application, but to realize long-term community change. The Alliance recognizes the key role of culture, history, family, and Native Hawaiian values in the health and wellness of community members. It acknowledges the wealth of untapped community resources and the inherent strengths of the community. The Alliance aims to maximize resources, build on established programs, leverage partnerships, and pool data in order to augment the collective impact on improving the health and lives of Wai’anae residents. In doing so, WCCHC and its partners, aim to progressively expand their capacity to support social change, community health, and public policy initiatives.

For example, the Alliance is working with public schools in the community to understand the role of chronic absenteeism in student underachievement and how WCCHC and community-based organizations can help schools, and their students, address the issue through policy and programs based in the community.

WCCHC is now also working with the Alliance to understand the community needs and perceptions surrounding the issues of diabetes and chronic disease prevention and discussing community-based solutions. This information will help WCCHC and the Alliance to plan next steps in chronic disease prevention within the community.

Other target areas include strengthening community partnerships to support the implementation of the Hawai’i Department of Education Wellness Policy, school based health delivery, improvement in the community’s built environment (human-made surroundings that provide the settings for resident activities such as streets, parks, and buildings), and enhancing strategies to influence state and federal legislation that address community health. These include early childhood education, student health, and price differentials for foods and beverages. To determine how to most effectively approach these complex issues, WCCHC is working with several community partners such as the Hawai’i Department of Education, the Department of Health, and other organizations working with Wai’anae Coast schools, to better understand current State and County policies that may offer to expand the potential list of interventions and remedies to the broad Wai’anae Coast community members.

Discussion

Strong organizational leadership to build capacity and commitment enables community-based organizations to fulfill their mission, effectively capitalizing on opportunities to meet the needs of the communities they serve. Building strong orga-

nizational capacity cultivates innovative programs, internal structures and networks that enhance expertise, trust, credibility, and effectiveness.^{6,15}

This case study provides documentation that a FQCHC, such as WCCHC, can, with a sustained mission build organizational capacity and play a pivotal role in reducing and/or eliminating health disparities in the community it serves. Other FQCHC in Hawai'i, such as the Kokua Kalihi Valley Health Center, have also been involved in a wide-variety of efforts to address the social determinants of health within the communities they serve.¹⁶ Today there are over 1,000 FQCHC nationwide, however, the extent to which they are involved in efforts to improve the health of their communities is varied. A recent report documented the work of 52 CHCs to address the social determinants of health and wellness in their community.¹⁶ For WCCHC, efforts to reduce health disparities are grounded in a commitment by the health center leadership to make it a priority. This is not just through the provision of high quality primary care services, but through ongoing processes and programs, targeting multi-level changes within the organization and community as well as resources external to the WCCHC. The ultimate goal is to make health and wellness attainable for all patients and community members.

While the preliminary results are encouraging, the processes and timelines set in motion require a long-term commitment by the WCCHC leadership to affect tangible results that can be measured over time. WCCHC will need to establish benchmarks and work with partners to determine how capacity building measures relate to organizational performance in improving community health outcome. WCCHC must also determine the best strategies to leverage and prioritize funding of these community initiatives and balance them with the ever-increasing demand for expanded, high-quality healthcare service delivery. Finally, while this report is a documentation of one CHC's commitment and progress, we realize that other smaller capacity FQCHCs may not have the resources to invest in such programs and activities. Nevertheless, we believe that building FQCHC organizational capacity to improve community health and wellness, even in partnership with other CHCs, has the potential over time, to significantly reduce and/or eliminate health disparities in the other high-risk communities across the United States.

Conflict of Interest

None of the authors identify any conflict of interest.

Acknowledgments

This work was supported by the National Institutes of Health, National Institute on Minority Health and Health Disparities Grant No. U54MD007584 and Grant No. P20 MD000173. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of NIMHD/NIH. The authors would also like to express their gratitude to Dr. David Easa for his editorial contributions to this paper and to the residents of the Wai'anae Coast.

Authors' Affiliations:

- Department of Pediatrics, John A. Burns School of Medicine, University of Hawai'i, Honolulu, HI (MO)
- Department of Native Hawaiian Health, John A. Burns School of Medicine, University of Hawai'i, Honolulu, HI (K-AV)
- Wai'anae Coast Comprehensive Health Center, Wai'anae, HI (MO, VS, TW, K-AV, RE)

Correspondence to:

May Okihiro MD, MS; Department of Pediatrics, John A. Burns School of Medicine, University of Hawai'i, 1319 Punahou St., Honolulu, HI 96826; Ph:(808) 255-5915, Email: okihirrom@hawaii.edu

References

1. Crook ED, Peters M. Health disparities in chronic diseases: where the money is. *Am J Med Sci.* 2008;335(4):266-270.
2. Mau MK, Sinclair K, Saito EP, Baumhofer KN, Kaholokula JK. Cardiometabolic health disparities in Native Hawaiians and other Pacific Islanders. *Epidemiol Rev.* 2009;31:113-29.
3. Ogden CL, Flegal KM, et al. Prevalence and trends in overweight among US children and adolescents, 1999-2000. *JAMA.* 2002;288(14):1728-1732.
4. Iton AB. The ethics of the medical model in addressing the root causes of health disparities in local public health practice. *J Public Health Manag Pract.* 2008;14(4):335-339.
5. Griffith DM, Allen JO, et al. (2010). Community-based organizational capacity building as a strategy to reduce racial health disparities. *J Prim Prev.* 2010;31(1-2):31-39.
6. Gilbert KL, Quinn SC, et al. The urban context: a place to eliminate health disparities and build organizational capacity. *J Prev Interv Community.* 2011;39(1):77-92.
7. Israel BA, Coombe CM, Cheezum RR, Schulz AJ, McGranaghan RJ, Lichtenstein R, Reyes AG, Clement J, Burris A. Community-based participatory research: a capacity-building approach for policy advocacy aimed at eliminating health disparities. *Am J Public Health.* 2010;100(11):2094-102.
8. Hawaii Department of Health, Family Health Services Division. State of Hawaii Primary Care Needs Assessment Data Book, Sixth Edition 2009. Available at: <http://hawaii.gov/health/doc/pca2009datatbook.pdf>.
9. The Hawaii Primary Care Association. Community Health Center Profiles. Available at: <http://www.hawaiipca.net/10/who-are-chcs>.
10. Oneha MF. Community Health Centers: Why Engage in Research and How to Get Started: National Association of Community Health Centers; 2012. Available at: <http://www.nachc.com/client/WhyDoResearch.pdf>.
11. DeCembra H, Enos R, Matsunaga DS, Hammond OW. Community involvement in minority health research: participatory research in a native Hawaiian community. *Cancer Control Res Rep Public Health.* 1992;October.
12. Hawaii Department of Health. Hawaii Behavioral Risk Factor Surveillance Survey 2009. Available at: <http://www.hawaii.gov/health/statistics/>.
13. Okihiro M, Pillen M, Ancog C, Inda C, Sehgal V. Implementing the Obesity Care Model at a Community Health Center in Hawaii to Address Childhood Obesity. *J Health Care Poor Underserved.* 2013 May;24(2 Suppl):1-11.
14. Okihiro M, Mau M, Davis J, Easa D. Evidence for cardiometabolic risk begins in early adolescence in Native Hawaiian and other Pacific Islanders. Poster presentation (Abstract #752906) May 2, 2012, Pediatric Academic Society Meeting, Boston, MA.
15. de Groot FP, Robertson NM, et al. Increasing community capacity to prevent childhood obesity: challenges, lessons learned and results from the Romp & Chomp intervention. *BMC Public Health.* 2010;10:522.
16. Community Health Centers Leveraging the Social Determinants of Health. Institute for Alternative Futures. Available at <http://www.altfutures.org/pubs/leveragingSDH/IAF-CHCsLeveragingSDH.pdf>.