## LESSONS FROM THE FIELD

# **Going Local—Everybody Wins**

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#### **Abstract**

Pacific Islanders suffer from chronic diseases attributed largely to an overconsumption of processed foods. As a response, the CDC-funded Racial and Ethnic Approaches to Community Health (REACH) Go Local Project in Yap, Federated States of Micronesia (population: 12,000) sought to create a food intervention that would not only increase access to fresh, local foods, but benefit food vendors as well for a sustainable effect. For this program, a number of markets were chosen for selling any fresh local produce, meat, and catch. These markets agreed to allow purchasers of healthy local food of a minimum amount to be entered into a monthly raffle. Monthly winners received fresh food gift certificates while participating markets received a gift upon certificate redemption. REACH and partners distributed healthy island recipes and nutrition information at these partner markets. Formative evaluation examined customer and vendor satisfaction through interviews and surveys, and tracking of healthy food purchases and customer demographics were garnered via raffle information. Brief interviews with customers and vendors revealed favorable reactions to the Go Local Project. People enjoyed winning and vendors found satisfaction in promoting health through their businesses.

### **Keywords**

REACH, Pacific Islander health, Federated States of Micronesia, Yap, nutrition, fresh food, local

#### Introduction

Non-communicable disease is rapidly taking hold of the state of health in the Pacific. The World Health Organization reports that at least 10 Pacific Island countries are over 50-90% overweight, due largely to the popularity of convenient imported foods. Yap State of the Federated States of Micronesia, a nation in the Northwestern Pacific, is no different. Much like the rest of the Pacific in their prime days of health pre-World War II, the average Yapese toiled hard under the sun and was leaner than the typical Yapese today; men would catch food from the sea and women would harvest from the land. The people, both young and old, physically worked to feed their families and labored to maintain order in the social system of the times. They ate fresh food, maintained their village structures, celebrated their culture with dance and local sport, and found pleasure and leisure in nature. Chronic disease was very uncommon then.

Today, many Yapese people suffer from health issues related to a poor diet of processed foods. The last quinquennial Wa'ab Community Health Center Household Survey (2012) revealed that 20% of youth and 61% of adults were overweight or obese. Obesity is linked to cancer, pneumonia, heart disease, and stroke—some of the leading causes of death in Yap. Obesity leads to other chronic diseases such as high blood pressure and diabetes. The same survey showed that 27% of adults (21+ years) had diabetes, an increase from 23% in the previous 2007 survey, and 24% had high blood pressure. Both conditions are linked to kidney failure, blood infections, as well as most of the aforementioned causes of death in the state.<sup>2</sup> As the rates of chronic diseases and their related complications continue to rise, it is important to target and promote healthy behaviors more than ever.

To compete with the copious amounts of imported, preservative-filled, processed foods popularly preferred for their convenience of speedy preparation and long shelf-life, the Wa'ab Healthy Lifestyle Coalition initiated a project called "Go Local" in the fall of 2012. This was a healthy food promotion project designed to motivate people to buy fresh, locally grown fruits and vegetables, as well as local meat and seafood. Feedback from this two-year long project was positive from the markets and vendors that participated and among people who would buy local food or those who would hear about it.

The goal of the Centers for Disease Control and Prevention's Racial and Ethnic Approach to Community Health (REACH) from 2015-2017 was to implement a high impact, population-wide strategy to reduce health disparities. Accordingly, the Yap State REACH branch revived Go Local to increase access to environments with healthy nutrition options, reaching at least 75% of the general population. To accomplish this, Yap REACH would not only reinitiate Go Local to increase healthy food options, but more than double the original number of markets in the past from four to nine by September 2017 to boost the community's accessibility. These markets were defined as stores or vendors that sold fresh food items, either exclusively or inclusively. The purpose of this paper is to share the results of the revival project and how it continued to encourage healthy food consumption while considering Yap's economy.

#### **Methods**

The following concept drove the Go Local Project: buying local food would benefit both people and businesses. In order

to reestablish former vendor partnerships and build new ones, the Local Project Assistant for Yap REACH first visited and spoke to targeted vendor owners and managers to explain the conditions of Go Local and gain commitment. In order to be chosen as a vendor in the project, which could happen at anytime during the project period, a market had to carry any locally grown fruits, vegetables, or fresh local meats and seafood. Once a partnership was formed, each market was provided with a stack of customer surveys and a red box for drop-in of completed surveys. Market cashiers were then instructed to encourage customers to fill out the brief survey and then drop it in the marked box kept at the counter. Only customers who purchased at least \$5.00 worth of only local foods were eligible for a monthly drawing. Customers could enter as many times as desired, so long as they met the purchase criteria for each transaction; 3 winners were drawn monthly. In the previous Go Local project, there was no minimum purchase amount, and not only were the collection and entry of data overwhelming, but sale entries for the raffle ranged in the cents and validity of entries was questioned.

When markets joined, they agreed to give free food to winners (\$25 worth) in exchange for free promotion to help support healthy behaviors. Project progress was tracked through the survey used for the monthly raffles. The following information was collected on the short survey: customer name, customer phone number (to inform winners via phone call or text message), amount sold, vendor, cashier initials (for verification and accountability), customer age, customer municipal residence, and type of food purchased (Appendix A). Surveys were collected from all vendors by the Local Project Assistant the first week of each month. All data were entered into a Microsoft Excel database to calculate frequency, means, and percentages. Entries without sale amounts, cashier initials, vendor, age, village, or food type were excluded from analyses and drawings. Monthly reports of this information were shared with the public via newsletter and e-bulletin, and distributed as one-page printout summaries to market owners and managers.

Many more Yap REACH partnerships went into the mechanics of Go Local. V6AI, the only radio station in the state, played a role in the project by providing free vendor advertisement, airplay of winner-announcements, as well as health education messages about the benefits of eating fresh, local food. Similarly, the Yap Cancer Program offered free space for ads, nutrition and other health information, and announcements on their printed newsletter, which was dropped off at markets, health sites, schools, and other heavy-traffic spots. The Wa'ab Community Health Center assisted in printing and distributing these newsletters, supporting Yap REACH as needed in its efforts to strengthen partnerships. The Yap News Brief, the state government's online and electronic news bulletin, offered to transmit the same information on the newsletter at no cost. Members of the Yap Cancer Program, the Non-Communicable Disease (NCD) Program, the Wa'ab Community Health Center, and the project-conceiver, Wa'ab Healthy Lifestyle Coalition, all played a role in printing the surveys, distributing them to all Go Local markets, collecting the surveys at the end of each month, entering data, and promoting Yap REACH's efforts in the community through reports and outreach presentations.

Brief, intermittent surveys were conducted for qualitative feedback on the community's response to Go Local. The first was a brief interview conducted mid-way through the project with market cashiers, managers, and owners to obtain their perspective on, if and why, they thought people participated in the program and if there was support for it among customers (Appendix B). An intercept survey was conducted in the final year to ask customers about their eating habits and if they had heard or seen any of the REACH market promotion (Appendix C).

There were nine total participating markets, each of which joined at various points throughout the project period.

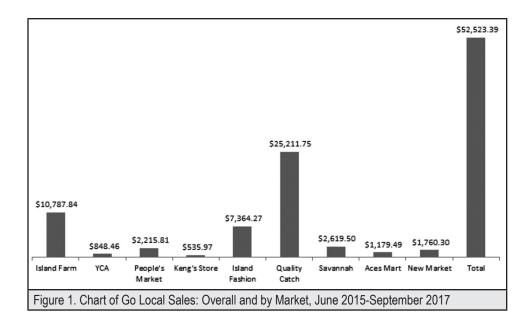
#### **Results**

The results described in this manuscript summarize data collected from June 2015 to September 2017. Table 1 contains information on the breakdown of purchasers by age group. The total number of purchasers was 3,052, with most project participants age 51 and over (n = 1,053), followed by those 41-50 years old (n = 819), 31-40 years old (n = 650), 18-30 years old (n = 365), and finally those age 17 and under (n = 165).

Figure 1 shows totals for how much the markets made individually and collectively. Both Island Farm and YCA joined at the beginning in June of 2015. People's Market, Keng Store, and Island Fashion all joined in July of 2015; People's Market was a farmer's market event held only 2 days per month. Quality Catch joined in September 2015. Savannah Store joined in January of 2016, Aces Mart in October of the same year, and New Market in November, the following month. The market with the most sales was Quality Catch, the seafood market, which joined the project four months into the start.

Figure 2 shows number of purchases for each type of food: fruit (eg, apple, coconut, tangerine, grapefruit, guava, banana, mango, etc.), green vegetables (eg, beans, cabbage, kangkung,

Table 1. Demographic Characterist Participants/Purchasers (N=3,052		Go Local
Respondents' Demographics	n	%
Age (in years)		
≤17	165	5%
18-30	365	12%
31-40	650	21%
41-50	819	27%
≥51	1,053	35%



1,403

1,700

Local Food (1,700)

Fruit (565)

G. Veg. (532)

Meat/fish (1,403)

Figure 2. Chart of Go Local Food Type Purchases

okra, etc), local food (eg, breadfruit, taro, sweet potato, tapioca, yam, or other staple foods that are usually starch roots), and local meat and seafood (eg, crab, fish, pork, etc.). Of the 4,200 total purchases made, respondents bought local food (1,700 purchases, 40%), meat or seafood (1,403 purchases, 33%), fruits (565 purchases, 14%), and green vegetables (532 purchases, 13%).

The brief interviews with several market cashiers, managers, and owners included the following comments to the questions:

Question: Why do people participate in the project at this site?

- "For good health, [to] help [the] economy, [because the] food is fresh."
- "For the raffle."
- "For the prize."
- "Because the cashier encourages filling out the survey."

Question: Do people generally like or support the program? Why or why not?

- 9/9 answered 'yes.'
- "To eat local food."
- "People like to buy food, but sometimes we have no market because our market board is not stable at the moment."
- "People are fine with the cashier's suggestion to participate."
- "Local food is good for health."
- "Healthy food promo is good."

The intercept survey initiated at the start of the final year asked customers about their food-purchasing behavior. When asked how often they bought healthy local food whenever they went shopping, 43% said they **sometimes** did, followed by 28% who said **a lot**, and 26% who said **every time** they went shopping (0% said **never** and 3% did not answer). Another question asked if they had bought more, less, or the same amount of the healthy food types this year compared to the previous year (2016). Of the 1,304 survey participants, 45% indicated buying more of these foods, followed by 39% who said they bought the same amount as the previous year, 13% who said they purchased less, and 3% who left blank responses. The highest positive change was the purchase for more local food.

When asked if they had heard or seen messages about the Go Local Project, 82% of respondents had heard or seen messages, 14% said they had not, and the last 4% either left their responses blank or provided unclear or unreliable responses.

#### **Discussion**

According to the results of the project, most of the survey respondents were in the 51 and above age range. Many adults said they grew up eating fresh, locally grown food, are accustomed to, and tend to prefer it. It is the trend now for younger generations to grow up on and prefer store-bought food, and the data reflects this. Also, it was revealed that some of the names written on the surveys belonged to infants or young children; parents substituted their own names with their children's—a popular practice with raffle participation in Yap. Fewer young people (15-19 years of age) tended to shop for fresh market food because fewer were employed (lowest percentage of members of any age group in the workforce).<sup>3</sup>

Sales information was included in report summaries shared with vendor managers and owners primarily to foster 'friendly competition' between stores, thereby motivating their staff and stakeholders to encourage the filling out of more surveys and higher-value purchases. Figure 1 shows total sales for fresh food, overall and by each market. Vendors were recruited and began their participation at different times of the project period, which explains the large differences between total sales figures. Some of the markets also have special conditions that affected how much money they made compared to the others. For instance, People's Market is held only two consecutive half-days each month (during the last government pay-week of the month), whereas the rest are open at least five days a week and for at least eight hours at a time. Also, not all purchases were counted in the data analyses because qualifying entries into the raffle had to be of \$5 value or above. This would also explain why Quality Catch, the only seafood vendor, had the most sales (the majority of their fish sales ranged well over \$5 each, which would qualify almost all of their transactions for the raffle), as opposed to other markets with much lower value sales. Regardless, it is still evident that people are buying fresh, local food and both customers and vendors are supportive of the project.

As for food type purchased, the most popular were local foods, which are staples that many consumers eat with meat or fish. They are the foods that take the place of white rice or bread in health-conscious meals and are common in older folks' meals. Many have stated that eating these dense foods can sustain oneself throughout the day better than other foods (store-bought or in fresh fruit or vegetable form). Local food won out as most bought despite the \$5 minimum purchase that might have put local meat and seafood at the top of the list. Local meat and seafood came in second. An increase in gasoline prices over the years (currently at over \$4/gallon) has affected people's

ability to catch fish themselves. A fruitful fishing trip can use around 12 gallons of gas, and this does not include the price of oil for the fuel mixture. With modern-day jobs, people find it more worthwhile to buy food than to plant, harvest, or catch their daily sustenance. Fruits and vegetables were last in the purchasing breakdown, in that order. Fruits and vegetables are less hardy and more prone to spoilage in the markets; only one vendor (YCA) kept imported fruits and veggies in a refrigerator as opposed to leaving all fresh local food, fruits, and veggies in the open. Maintaining electrical appliances and availability of electricity in general are important factors in food storage and finances.

As for other similar efforts, US federal nutrition assistance programs served to be environmental interventions in the community to increase access to healthy foods. An article reviewing studies on the effectiveness of these programs showed that with WIC Farmers Market Nutrition Program and Senior Farmers Market Program, consumption of fresh fruits and vegetables generally increased among recipients of food vouchers. Like Go Local, they provided food vouchers and tracked their redemption to observe program success. Another article on a related program called "Fresh To You" also found increased consumption for fresh foods when discounts were offered at participating markets.

In the future, should Go Local be continued, all short purchase surveys could be counted for more complete information on actual sales (ie, remove the minimum purchase cut-off) and collaboration could be done with a local marketing expert and artists to create colorful, eye-catching signage in the markets with nutritional information specific to foods for better education and promotion. The project would be manageable under different programs and organizations, as it used to be operated by the Wa'ab Healthy Lifestyle Coalition with the help of the Yap Cancer Program. Both the Division of Agriculture and the NCD Programs are using the data from the Go Local Project and several other entities are expressing interest in the data for the promotion of local farming and fishing. It will not be difficult to find groups that can sustain the efforts of Go Local, as it showed promising results and change in the community.

#### **Conflict of Interest**

None of the authors identify a conflict of interest.

#### **Acknowledgments**

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GO LO Heal Foo Prome Sun	thy  Custom  Name:	t sold: \$	_ We'll call/txt if you win the raffle What do you win?
Please check the box (and  1. Vendor:    1 Island Farm   2 YCA   3 People's Market   4 Keng's Store   5 Island Fashion   6 Quality Catch   7 Savannah Store   8 Aces Mart   9 New Market  2. Your age:   1 17 and under   2 18-30   3 31-40   4 41-50   5 51 and older	3 fill empty space if necessa  3. Where you live in Yap:  □1 Dalipebinaw □2 Fanif □3 Gagil □4 Gilman □5 Kanifay □6 Maap □7 Rull □8 Rumung □9 Tomil □10 Weloy □11 Don't know	unripe banana, ya □₂ Fruit (apple, coco pandanus, papaya □₃ Green Vegetables □₄ Local meat (crab,  5. When you shop, how □ □Every time □A lo  6. Have you heard or see □ No □ Yes, where	ed: fruit, Honolulu, pumpkin, sweet potato, taro, am) nut, gingang, grapefruit, guava, orange, a, pineapple, ripe banana, watermelon) (beans, cabbage, kangkung, okra) fish, pork) often do you buy healthy, local food?
Appendix B. Brief Intervie  REACH YAP NUTRITIC  Intervention: (Check one)  Market/Business:	DN PSE Scan Evaluator Initials:	or the interview with cashie Date: al (Hospital) Feeding Program	ers, managers, and owners)

	Visi	ible:		Where (e.g. "front of store," etc.)	Comments:
Shelves with Healthy Options	Υ	N	Check all that apply: Local Food _Fruits _Green Vegetables _Fish _Crab, other seafood _Pork _Other:		
Go Local box	Υ	N			
Go Local surveys	Υ	N			
b. Why/why not?			at this site (do they fill out the su	irveys to win prizes? (circle one)	Y N

See The	GO LOCAL Healthy Food Promotion Survey	(\$5 minimum of foo Customer Name:	ods below to qualify)	CASHIER Initials: We'll call/txt if you win the raffle! What do you win? It's a Sur <b>PRIZE!</b>
ease	e check the box (and fill e	mpty space if nece	ssary) by each ans	wer that applies to you.
1.	Vendor:  1 Island Farm 2 YCA 3 People's Market		4 Keng's Store 5 Island Fashion 6 Quality Catch 7 Savannah Store	☐ 8 Aces Mart ☐ 9 New Market
2.	Your age:  1 17 and under		2 18-30 3 31-40	$\Box$ 4 41-50 $\Box$ 5 51 and older
3.	Where you live in Yap: ☐ 1 Dalipebinaw ☐ 2 Fanif ☐ 3 Gagil		4 Gilman 5 Kanifay 6 Maap 7 Rull	☐ 8 Ramung ☐ 9 Tomil ☐ 10 Weloy ☐ 11 Don't Know
4.	banana)	uit, honolulu, pumpk ut, gingang, grapefru	it, papaya, guava, o	ro, unripe banana, yam) range, pandanus, thalrus, watermelon, ripe
	☐ 3 Green vegetables (I☐ 4 Local meat (crab, fi		kung, okra)	
5.	☐ ₄ Local meat (crab, fis When you shop, how off	sh, pork)		s □ <sub>4</sub> Never
	☐ 4 Local meat (crab, fix When you shop, how oft ☐ 1 Every time	sh, pork) ten do you buy healt □ 2 A lot , do you purchase n nonolulu, pumpkin,	thy, local food?	s
	□ ₄ Local meat (crab, fix When you shop, how off □ ₁ Every time  Compared to LAST YEAR Local Food (breadfruit, breadfruit, br	sh, pork)  ten do you buy healt  2 A lot  , do you purchase n tenolulu, pumpkin, te banana, yam)  tingang, grapefruit, tendanus, thalrus,	thy, local food?	me of the following types of food now:  Green vegetables (beans, cabbage, kangkung, okra)  7 Purchased more 8 Purchased less

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