

# LESSONS FROM THE FIELD

## Guam Salt Reduction Campaign

Ruby Gonzales; Lawrence Alam; Al Silverio; and Dioreme Navasca MPH

### Abstract

*To lessen the salt-intake of people in Guam for the prevention of non-communicable diseases (NCD) associated with a high sodium diet, the Racial and Ethnic Approach to Community Health (REACH) program and NCD Consortium of the Guam Bureau of Community Health Services (BCHS) formed strategies that encourage healthier eating behavior. Project stakeholders, like restaurants, food services establishments, and vendors, removed salt products from dine-in tables, including saltshakers, soy sauce, and finadene. Combined programmatic efforts resulted in support by 47 restaurants out of 140 restaurants that were approached for the salt reduction initiative: the removal of saltshakers and other high sodium-containing condiments from tables, made available only upon a customer's request.*

### Issue

Guam is an unincorporated and organized territory of the United States (US). Located in the northwestern Pacific Ocean, Guam has a population of about 160,000 people.<sup>1</sup> Guam is the largest and southernmost of the Mariana Islands and the largest island in Micronesia. According to the World Health Organization (WHO) 2017 report, rates of non-communicable diseases (NCDs) have increased with about a third of deaths in Guam attributed to heart disease (31%).<sup>2</sup> Guam declared a state of health emergency in 2010 due to the NCD epidemic, along with five other United States Affiliated Pacific Islands (USAPI).<sup>3</sup> Reliance on imported and processed foods has been a trend in the Pacific, including Guam, and has mirrored the increasing rates of NCDs such as obesity and cardiovascular diseases.<sup>4</sup> These diseases are the result of unhealthy lifestyles, the consumption of inexpensive, energy-dense foods high in fat, sugar and salt, as well as the relative inaccessibility of healthier food options in food establishments in Guam.<sup>5</sup> The Guam morbidity and mortality data laid the groundwork for this nutrition intervention.<sup>5</sup>

### Guam Bureau of Community Health Services

Within the Guam Department of Public Health and Social Services (DPHSS), the Bureau of Community Health Services (BCHS) mission is to improve the health and quality of life of the people in Guam. The department's goal is to eliminate health disparities by increasing access to health care, early disease detection, disease prevention, and healthy lifestyle promotion through policy development, implementation, surveillance and social services.<sup>6</sup>

Services provided by the BCHS programs include:

- Trainings and seminars that educate the community on better nutrition and healthier lifestyles through local events and media campaigns
- Support for health screening events
- Health campaigns that raise public awareness

The BCHS also collaborates with local and international partners that promote community health, NCD prevention and sustainability of programs and other initiatives that complement the mission of the BCHS.

### Racial and Ethnic Approach to Community Health

In 2014, the Guam DPHSS received funding from the Centers for Disease Control and Prevention (CDC) to implement the Racial and Ethnic Approaches to Community Health (REACH) grant, a 4-year initiative that used tailored community-based participatory approaches (CBPA) to identify and develop effective and culturally grounded strategies to address health disparities. This CBPA strengthened the existing collaboration between local coalitions, health departments and associated stakeholders from various sectors in the community and promoted action in addressing NCD-related risk factors. The overall goal of the Guam REACH program was to increase access to healthier environments and encourage healthy behavior as the default behavior of choice.

### Description

Due to the lifestyle and convenience, many Guamanians purchase meals from restaurants, stores and other fast food services where the types of food available generally contain high levels of salt. The salt reduction initiative specifically aimed to improve eating habits and food options by encouraging restaurants to offer healthier food alternatives and reduce opportunities for people to add more salt to their meals. The NCD Consortium, the REACH program, and partners collaborated and recruited food establishments, such as restaurants, caterers and businesses that supply food, to remove salt products (saltshakers, soy sauce, and finadene—an all-purpose sauce primarily made of soy sauce, onion, chile peppers, and vinegar used as a marinade or poured over rice or cooked meat) from dine-in tables, to be made available only upon request.

## Methods

Four activities were developed and implemented under the salt reduction initiative:

Activity #1: Baseline data was collected through policy, systems, and environmental (PSE) scans. Visual scans for salt products assessed a restaurant's feasibility for the REACH project. Convenience sampling identified the busiest and most popular restaurants, based on project partners' anecdotal accounts and observations. Target settings for the salt reduction initiative were restaurants that mostly cater to the local population of Guam and serve condiments with high salt content. Pre and post intervention scans monitored the restaurants' compliance with the salt reduction initiative and ensured the removal of saltshakers from dine-in tables. The REACH staff conducted 50 pre-intervention scans of the 140 target restaurants in Guam to gather baseline information and gauge restaurant interest in participating in the REACH project's salt reduction initiative. When possible, the project staff conducted interviews and brief impromptu educational sessions with restaurant owners and staff during pre-scan visits.

Activity #2: Organizational policies were developed and adapted by participating food establishments in Guam. The project staff presented to restaurants and chefs' associations on objectives of the REACH project. The NCD Consortium also provided educational sessions about the project with the 33rd Legislature's Senator and Chairman of the Committee on Health to the Mayor's Council of Guam as part of an awareness campaign. Additionally, the Salt Reduction Action Team (SRAT) wrote a letter to the Guam Hotel and Restaurant Association on behalf of the REACH project as an appeal for support for the salt reduction initiative.

Activity #3: Education and materials were created and disseminated for the population in Guam. Flyers, handouts, brochures, television campaigns, commercials, posters, and banners on salt-reduction were created, reproduced, and distributed to the community and the project partners (food establishments, restaurants, and supporting organizations). Media communications promoting the salt reduction initiative, such as the Guam Memorial Hospital Health Talk Radio Show, newspaper articles and a television appearance on KUAM, were utilized for the dissemination of health messages reinforcing the goals and objectives of the salt reduction campaign.

Activity #4: Monitoring and evaluation of the salt reduction initiative were completed by random visual scans of the 47 restaurants that pledged to support the salt reduction initiative. At the conclusion of the project period, the REACH project partners took an active role in project sustainability by conducting quarterly visits of the restaurants to ensure salt products were kept off of dining tables.

## Results

In 2015, Guam's REACH project conducted two salt reduction pledge signing ceremonies with the participating restaurants. The salt reduction pledge signing events were public ceremonies proclaiming the restaurants' commitment to the salt reduction initiative by removing the saltshakers, soy sauce and other high sodium condiments from dine-in tables and making them available only upon customer request.<sup>7</sup> Restaurants that were unable to attend the pledge signing events were approached and recruited separately. By the final year of the REACH project, 47 local food establishments in Guam completed the salt reduction intervention.

The REACH project leveraged project activities with other partner programs that share the same objectives and aims of reducing the NCD burden in Guam and making the healthier PSE approach the default option for the community. The Guam Lifestyle Disease Prevention and Control Program sponsored printing costs for the salt reduction trifolds. The trifolds were printed materials displayed at tables and checkout counters of participating restaurants, educating the patrons and restaurant staff about the harmful health effects of a high sodium diet. At least 500 salt reduction trifolds were provided to participating restaurants as well as 2,000 more for replenishing purposes during project monitoring and sustainability.

By the end of the project period, the project published 100 nutrition messages to the public via social media and distributed 27 messages including project success stories to project partners. At the September 2018 NCD Consortium meeting, the Local Project Assistant provided updates on the progress along with the sustainability plan of the REACH salt reduction initiative. The NCD SRAT agreed to monitor restaurants every quarter, provide additional or replacement trifolds when requested by management, as well as report progress and lessons learned to the consortium at the monthly meetings.

## Conclusions

Continued health campaigns are important to increase public awareness and sustain the positive momentum of healthy eating behaviors among target populations.<sup>8</sup> The NCD Consortium has a strong collaboration with the organizations, leaders, and stakeholders in the community that helped develop and advocate a restaurant policy to remove saltshakers (and other salt products) from dine-in tables, making them available upon request only.<sup>6,9</sup>

In January 2016, the BCHS conducted the NCD Consortium's meeting with project partners as well as local and national public health agencies, such as the WHO, CDC, Pacific Island Health Officers Association, the Pacific Community and the Guam BCHS team. With the recommendation of partners and endorsement from the Guam BCHS, the state added the follow-

ing questions to the Guam Behavioral Risk Factor Surveillance System survey: (1) Are you currently watching or reducing your sodium intake? (2) How many days, weeks, months, or years have you been watching or reducing your sodium or salt intake? (3) Has a doctor or other health professional ever advised you to reduce sodium or salt intake?<sup>6</sup>

The salt reduction initiative was a useful introduction to health messages and leveraged other nutrition initiatives, such as the Healthy Menu Labeling and Healthy Menu Option projects. The project activities facilitated the recruitment of partners and the development of other related initiatives that encourage healthy lifestyles in Guam such as the Menu Labeling and Healthy Food Options projects.<sup>10</sup>

## Lessons Learned

Occasional monitoring of restaurants is necessary to keep staff and owners reminded and motivated about complying with the salt reduction initiative. In addition, restaurants need occasional replenishment of the dwindling supplies of trifold displays due to weathering and customers taking or disposing of the trifolds.

The REACH project was one of Guam's salt reduction PSE change interventions to improve nutrition and there were many lessons learned in its implementation. The SRAT is instrumental in sustaining the success of the intervention and exploring other funding sources to continue project activities now that the REACH funding cycle has ended.

From anecdotal accounts of the participating restaurants, food establishments and other businesses in the food industry that were approached expressed values towards the health of the consumers and patrons. Despite limitations of the project being a novel initiative and never implemented in the USAPI before, competing priorities for the project staff between responsibilities and project deadlines, as well as language barriers between the project staff and some of the restaurant owners or points of contact, most restaurant owners were generally cooperative and very willing to promote health and wellness if they were properly informed and guided in their role for a healthier Guam.<sup>5,10</sup>

## Conflict of Interest

None of the authors identify a conflict of interest.

## Acknowledgements

Made possible with support from the Department of Family Medicine and Community Health at the John A. Burns School of Medicine, University of Hawaii, which was funded by the Centers for Disease Control and Prevention, Grant Number 1U58DP005810-01.

### Authors' Affiliations:

- Department of Family Medicine and Community Health, John A. Burns School of Medicine, University of Hawai'i at Manoa, Honolulu, HI (RG, DN)
- Guam Comprehensive Cancer Control Program, Guam Department of Public Health and Social Services, Mangilao, GU (RG, LA)
- Guam Office of Minority Health, Guam Department of Public Health and Social Services, Mangilao, GU (AS)

### Correspondence to:

Ruby Gonzales and Lawrence Alam; Guam Department of Public Health and Social Services, 123 Chalan Kareta, Mangilao, Guam 96913;  
Email: Ruby.Gonzales@dphss.guam.gov and lawrence.alam@dphss.guam.gov

## References

1. United States Census Bureau. 2010 Guam Demographic Profile Data. [https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC\\_10\\_DPGU\\_GUDP1&prodType=table](https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC_10_DPGU_GUDP1&prodType=table). Accessed 02/25/2019.
2. World Health Organization. Guam-WHO: Country Cooperation Strategy 2018-2022. 2017. <https://apps.who.int/iris/rest/bitstreams/1096356/retrieve>. Accessed 02/25/2019.
3. Kuartei S. NCD Regional Health Emergency 2015. <http://www.pihoa.org/initiatives/policy/ncds.php>. Accessed 01/30/19.
4. Snowdon W, Raj A, Reeve E, et al. Processed foods available in the Pacific Islands. *Globalization and Health*. 2013;9(1):53. <http://www.globalizationandhealth.com/content/9/1/53>. Accessed 02/21/2019.
5. Jackson SL, VanFrank BK, Lundeen E, Uncangco A, Alam L, Coleman King SM, Cogsell ME. Sodium in store and restaurant food environments—Guam, 2015. *MMWR Morbidity and Mortality Weekly Report*. 2016;65(20):510-513. <https://www.cdc.gov/mmwr/volumes/65/wr/mm6520a2.htm>. Access 02/22/2019.
6. Mummert AG, Camacho CD, David AM. *The Non-Communicable Disease Strategic Plan 2014-2018*. In: Live Healthy Guam 2013. <https://bsp.guam.gov/sites/default/files/Guam%20Non-Communicable%20Disease%20Strategic%20Plan%202014-2018.pdf>. Accessed 02/25/2019.
7. Baza I. Event aims to drive-down Guam's salt intake. In: KUAM News; 2015. <http://www.kuam.com/story/29560171/event-aims-to-drive-down-guams-salt-intake>. Accessed 2/21/19.
8. Government of Guam. STATE OF THE ISLAND: Healthcare Revolution. In:2014. <https://pacificnewscenter.com/governor-calvo-state-of-the-island-address-full-text/>. Accessed 01/31/19.
9. McHenry TB, Romanes R. 'Healthy Island Healthy People' will look to reduce Guam's salt intake. In: Pacific News Center; 2015. <https://pacificnewscenter.com/healthy-island-healthy-people-will-look-to-reduce-guam-s-salt-intake/>. Accessed 02/25/2019.
10. Ridgelle C. NCD Consortium Launches Healthy Menu Labeling Pilot Program. In: Pacific News Center; 2016. <https://pacificnewscenter.com/ncd-consortium-launches-healthy-menu-labeling-pilot-program/>. Accessed 02/25/2019.