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Supporting Healthier Eating Habits for Monterey County Employees

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November 25, 2019

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### **Abstract**

The Health Promotion Partnership, known as the Monterey County Employee Wellness Program, is committed to the development of programs, services and policy relating to healthy eating, physical activity, tobacco cessation, stress management, overall health, parenting, pregnancy, and breastfeeding. In Monterey County, over half all adults are overweight or obese. Food deserts coupled with lack of knowledge around health concerns that can develop from unhealthy foods, place residents and its employees at an increased risk to become overweight or obese. Some of the most severe consequences of being overweight or obese is the increased risk of developing chronic diseases such as heart disease, diabetes, hypertension as well as some types of cancer. To tackle the growing concern of obesity and lack of healthy snacks and drinks sold in vending machines on county sites, the policy included healthy vending procedures in the new Healthy Food Policy. The project conducted an inventory of snacks and drinks items sold in vending machines at county sites and hosted a Healthy Snack Day tabling event at various county sites to promote the policy. Compared to the baseline, results from the snacks and drinks assessment of vending machine inventory revealed minimal improvement of healthy items. Findings from the survey conducted at the tabling event confirmed employee's high desire for healthy snack and drink vending products at work. It is recommended that the Wellness Program continue to offer support and guidance to the department with the authority to implement the Healthy Food Policy, as well as individual departments as they switch to healthy vending. An assessment of the vending inventory should be conducted per the policy's recommended schedule to document progress as the county works to achieve the purpose of the Healthy Food Policy.

*Keywords:* Monterey County, employee wellness, healthy food policy, vending machines

### **Agency & Communities Served**

The Monterey County Employee Wellness Program was introduced as a county program in 1985. According to the Monterey County Health Department's website, the Wellness Program was developed to create a partnership among management, unions and employees to openly discuss the health and safety concerns of all staff. This collaboration resulted in the Health Promotion Partnership. Early on, it was determined that the health department would be the ideal base for the wellness program because of the department's knowledge and expertise in the development and implementation of programs and services to reduce health risks. The program has one employee tasked to serve over 5,171 employees (About Us, 2019) across 24 county departments or agencies. The Wellness Program's goal is to "improve employee health and well-being, provide health education and lifestyle skill development opportunities that empower employees to achieve optimal well-being, enhance employee morale and job satisfaction, and improve performance and productivity" (About Us, 2018). To do this, the Wellness Program focuses on the development of programs, services and policy relating to healthy eating, physical activity, tobacco cessation, stress management, overall health, parenting, pregnancy, and breastfeeding. Additionally, the program offers other services such as workshops, trainings, and free physicals to staff. To further encourage employee wellness, the program often organizes fun challenges throughout the year. More recently, the program received a grant obtain fitness equipment. Today, staff can enjoy free and 24 hours access at the Schilling Place Fitness Facility.

The Wellness Program highly encourages participation in its services and programs. According to the Monterey County Human Resources website, the county supports the program

by providing staff with 12 hours each fiscal year which may be used to participate in sponsored Wellness Program events (Employee Benefits, 2019). Furthermore, the program invites employees to join the program's Wellness Committee. Ideally, the program would like to have at least one employee from every county department; this would ensure that the program is aware of the health and safety concerns from each department.

### **Problem Description**

Over half of Monterey County adults are overweight or obese. According to the Center for Disease Control and Prevention (CDC), "obesity is common, serious, and costly" (2018). Obesity often leads to other chronic diseases such as hypertension and diabetes. Because of this, healthcare costs increase and the overall health of the person is compromised. Statistics show that Hispanics are at higher risk to suffer from obesity than any other group (CDC, 2018). Data USA reports that Monterey County is home to over 250,000 Hispanic residents, which accounts for nearly 60% of the county's population (2016). Just in the past year, healthcare costs for employees have increased significantly and they are expected to continue to rise over the next few years. These increased costs don't only affect the individual person but the county as a whole because healthcare benefits are paid with public funds. The added financial burden can also affect a person's health, both emotionally and physically.

### **Contributing Factors**

Monterey County is known by many as Home to the Salad Bowl of the World. According to Data USA, the county's agricultural business employs approximately 20% of working adults (2016). Yet, the county's health department revealed that one third of residents are unable to afford fresh and healthy food (2017). Food deserts coupled with lack of knowledge

around health concerns that can develop from unhealthy foods, place Monterey County residents and its employees at an increased risk to become overweight or obese. County Health Rankings estimate that 15% of adults are uninsured; additionally, Monterey County comes in at 31st place statewide in clinical care, with only 1 primary care physician for every 1,700 residents (2016). Consequently, persons in Monterey County face increased challenges in accessing healthcare. Furthermore, county residents and its employees face lack of time to prepare snacks and meals at home to bring to work. Data USA estimates that the average commute time in Monterey County is 22 minutes and a considerable amount of the population may commute for up to 90 minutes (2016). Oftentimes, employees rely on food and drinks purchased from a vending machine and it may be the only food they consume during the work day.

### **Consequences**

There are many consequences of being overweight or obese. Some of the most severe consequences is the increased risk of developing chronic diseases such as heart disease, diabetes, hypertension as well as some types of cancer. The CDC reports these chronic diseases are some of the “leading causes of preventable, premature death” (2018). Obesity is often the onset of many other serious diseases which can cause a lot of damage to a person’s body that can ultimately lead to premature death. Because of obesity related comorbidities, health complications occur with more frequency; consequently, persons with chronic diseases likely spend a considerably higher amount of time at the doctor's office or hospital. County Health Rankings report the average person in Monterey County spends about \$7,588 annually on healthcare costs (2018). A person who is overweight or obese can expect to pay an additional \$1,429 annually in healthcare costs (CDC, 2018). The added expense may prevent a person's

ability to afford necessary treatments such as prevention education, specialized care or even medications. This could result in irreversible physical damage to a person and therefore increase the barriers to achieve overall health and wellness.

### **Problem Model**

<b>Contributing Factors</b>	<b>Problem</b>	<b>Consequences</b>
Food deserts in Monterey County	Over half of Monterey County adults are overweight or obese.	Chronic diseases
Lack of knowledge of health issues that can develop from consuming unhealthy foods		Increased healthcare costs
Lack of time to prepare meals at home		Premature death

## **Capstone Project Description and Justification**

### **Project Description**

The purpose of this project was to address the lack of knowledge of health issues that can develop from consuming unhealthy foods and food deserts at Monterey County. The project revolved around the county's Healthy Food Policy (HFP). In this policy, unhealthy eating was identified as a contributing factor to becoming overweight or obese and it relied on evidence-based research that supported the benefits of creating environments where it is easier to make healthy food choices. The policy intended to provide healthy food and drink choices to Monterey County employees and all those who conduct business in county operated sites. The project assessed snacks and drinks inventory in county vending machines, hosted a tabling event that was promoted as Healthy Snack Day (HSD), and conducted a survey.

**Project Justification**

Monterey County embarked on a mission “committed to supporting healthy living” (Healthy Food Policy, 2018). As an employer, Monterey County and the health department responded to this commitment by creating the Healthy Food Policy (G-120). It is a policy that aligns with the goals of the community. According to a publication in the Health Psychology journal by Wagner et al., (2014) people are, “more likely to choose the healthy food when it was labeled with the subtle health message.” The project was tailored to deliver this type of message with a tabling event to raise awareness of the policy. The CDC reports that “the more programs implemented together as a package or campaign, the more successful the interventions will be” (2016). Since the passing of the Healthy Food Policy was announced, the Wellness Program saw an increase in inquiries about the policy from employees and partners, who mostly voiced concerns about compliance with the policy’s recommended nutrition standards.

**Project Implementation**

One of the stated goals of the policy was that 50% of the items sold in vending machines would be compliant with the policy’s nutrition standards by 2019. To determine if this goal had been met, all vending machines were reassessed during the summer of 2019. During this period, photos were taken and inventory sheets were filled out for each site to further document the progress of the policy. This concluded the second vending machine inventory assessment.

Leading up to HSD, the Health Promotion Partnership disseminated emails to county employees. The email included an invitation with dates, times, sites to attend the event as well as a web link that directed them to the County of Monterey Board Policy Manual. On October 2019, a tabling event was held at six county sites. It focused on distributing snacks approved by



the healthy vending procedures. To promote employee engagement at the event, policy approved snacks were provided. Participants were invited to try out a snack while the hosts queried their knowledge of the policy. During this time, the hosts also invited the employees to fill out a 5 question survey. The purpose of the survey was to measure employee's knowledge of the policy and opinion of current snack and beverage options available in vending machines. A detailed implementation plan and timeline can be seen in the Scope of Work in Appendix A.

### **Project Results**

#### **Expected Outcomes**

The expected outcomes of the project was to obtain updated information on the percentage of vending machines that were in compliance with the policy. This information would establish if there was any improvement since the baseline assessment from October 2018. In addition, the project would help determine if employees were aware of the Healthy Food Policy by administering a survey to participating employees on HSD.

#### **Assessment Plan**

The assessment plan for the project included the following steps:

- To assess snack and drink inventory sold in vending machines located on county sites and present the results to the Board of Supervisors
- To promote wellness and the Healthy Food policy to county employees
- To raise employee awareness of the policy through a tabling event
- To measure employee's rate of satisfaction with current snacks and drinks options through a survey at HSD

#### **Findings**

The project provided valuable information for the Wellness Program. The data collected from the vending machine assessment and HSD surveys was presented at the Board of Supervisors Health Committee meeting on October 17, 2019. It should be noted that even though the program is not tasked with enforcing the policy, it is expected to provide updates on the status of the overall compliance.

The first component of the project assessed the inventory of snacks and beverages sold in vending machines. The results of the first inventory assessment that was completed on October 2018 created a baseline that showed that only 12.30% of snacks and 36.70% of beverages were in compliance with the policy. The second inventory assessment, which was completed during the summer of 2019, revealed that only 12.52% of snacks and 35.67% of drinks were compliant with the policy.

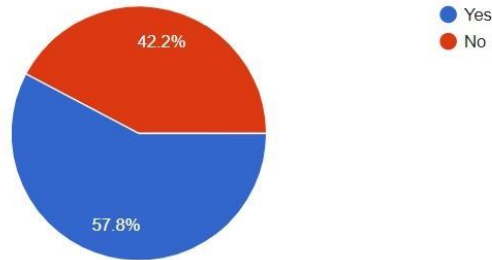
The second component of the project intended to create employee engagement and increase healthy food policy awareness via the HSD tabling event. A 5 question survey was available at this event. It was important for employees to know that completing a survey was optional, but their participation would provide valuable feedback for the Wellness Program. A detailed list of the survey questions can be seen in the Healthy Snack Day Survey in Appendix B. A total of 258 surveys were collected. As demonstrated in Figure A, 42% of respondents were not aware of the county's HFP. Though this is a high number, it is estimated that the number may have been higher had the question been asked using different wording. A post evaluation of the survey questions indicated that many respondents had learned about the policy during the event, and were therefore answering "yes" to this question. In retrospective, the question should

have asked, “Before today’s event, were you aware of the Monterey County Healthy Food Policy?”.

Appendix C, Healthy Snack Day Survey Results

Figure A

I am aware of the Monterey County Healthy Food Policy

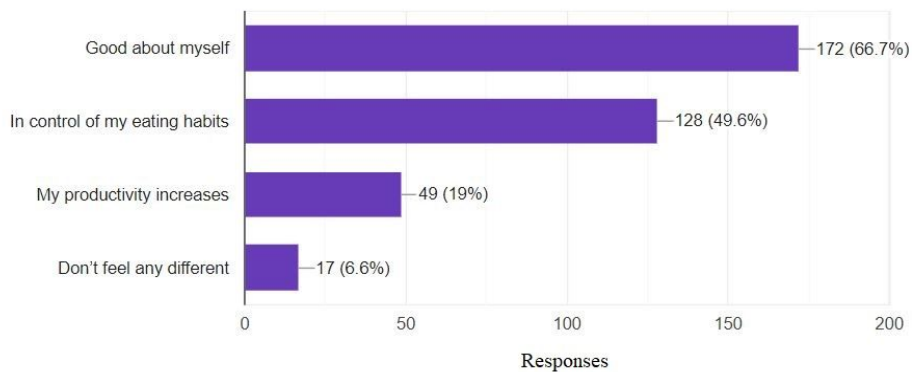


Additionally, 38% of respondents stated that vending machines at their work-site do not offer a variety of healthy snack and drink options. As shown in Figure C, a significant number of respondents expressed that when they eat a healthy snack at work, they feel good about themselves, in control of their eating habits and their productivity increases. Detailed survey responses can be seen in the Healthy Snack Day Survey Results in Appending C.

Appendix C, Healthy Snack Day Survey Results

Figure C

When I eat a healthy snack at work, I feel



### **Conclusion & Recommendations**

A few barriers were identified throughout the course of the project. The absence of communication among departments was evident when sites were visited during the reassessment period. It was discovered that while some departments may have been aware about the policy, they were not aware of who they should go to for guidance. At the time the vending machine assessment was conducted, the inventory demonstrated insignificant improvement from the baseline. Additionally, nearly half of HSD survey respondents were not aware of the policy. Second, collaboration was not established. The department with the authority to begin the implementation process had not worked with departments to facilitate the transition to healthy vending.

It is recommended that the Wellness Program continue to offer support and guidance to the department responsible for implementing the HFP, as well as individual departments as they begin to implement the policy. Ideally, employee's preferred snacks choices should be considered upon choosing vendors and products. An assessment of the vending machine inventory should be conducted per the recommended policy schedule to ensure that compliance is progressing. Most importantly, communication and collaboration must be established to achieve the purpose of the Healthy Food Policy.

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## Appendix A

### Scope of Work

Activities	Deliverables	Timeline/Deadlines	Supporting Staff
Assist with collection of the 1st vending machine inventory	Summary of inventory	Fall 2018	Leslie Ambriz, Melissa Pouch
Ongoing learning about the progress of the healthy food policy	Summary of research	Spring 2019	Melissa Pouch
2nd collection of vending machine inventory	Photos	Summer 2019	Melissa Pouch, Brenda Ortiz
Assessment of vending machine inventory	Summary of inventory	Summer 2019	Brenda Ortiz
Finalized capstone project idea and tentative plan Name: Healthy Snack Day (HSD)	Meeting	Summer intersession / August 1, 2019	Melissa Pouch, Debra Dunn, Niaomi Hrepich, Brenda Ortiz
Reach out to staff at potential event sites to coordinate dates and times	Emails	September 17, 2019	Debra Dunn, County Staff, Brenda Ortiz
Calculate snacks needed for event and cost	PRF and Memo	September 3, 2019	Debra Dunn, Health finance staff, Brenda Ortiz
Design HSD invitation & distribute to county staff	Canva invitation, emails	September 23, 2019	Debra Dunn, Brenda Ortiz
Measure staff's knowledge of policy and opinion of healthy snacks	Survey	October 1 & October 3, 2019	Debra Dunn, Janet Vaughn
Snack prep	Cut and package snacks for each site	September 26, 2019	Tara Gomen, Kaylin Dumke, Brenda Ortiz
Organize materials for each site	Bins designated for each event site fully stocked and labeled	September 26, 2019	Brenda Ortiz
Host HSD event	Tabling event	October 1 & October 3, 2019	Debra Dunn, Tara Gomes, Kaylin Dumke, Brenda Ortiz
Assess HSD surveys	Summary of responses	October 10, 2019	Brenda Ortiz
Distribute prizes to survey respondents	Raffle, prizes, interoffice mail	October 31, 2019	Brenda Ortiz, Debra Dunn

**Appendix B****Healthy Snack Day Survey**

I am aware of the Monterey County Healthy Food Policy (check 1)

- Yes
- No

The vending machines at my work-site offer a variety of healthy snack and drink options (check 1)

- Strongly Agree
- Agree
- Disagree
- Strongly Disagree

When I eat a healthy snack at work, I feel (check all that apply)

- Good about myself
- In control of my eating habits
- My productivity increases
- Don't feel any different

I prefer snacks that are (check all that apply)

- Gluten free
- Vegan
- Dairy Free
- Low in sugar, fat, or calories
- Other \_\_\_\_\_

Choosing a healthy snack is important (check 1)

- Strongly Agree
- Agree
- Disagree
- Strongly Disagree

Appendix C

Healthy Snack Day Survey Results

Figure A

I am aware of the Monterey County Healthy Food Policy

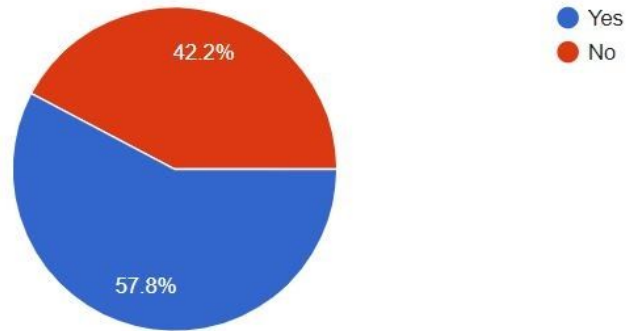


Figure B

The vending machines at my work-site offer a variety of healthy snack and drink options

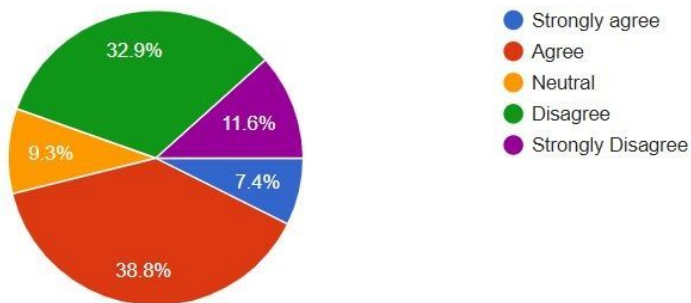




Figure C

When I eat a healthy snack at work, I feel

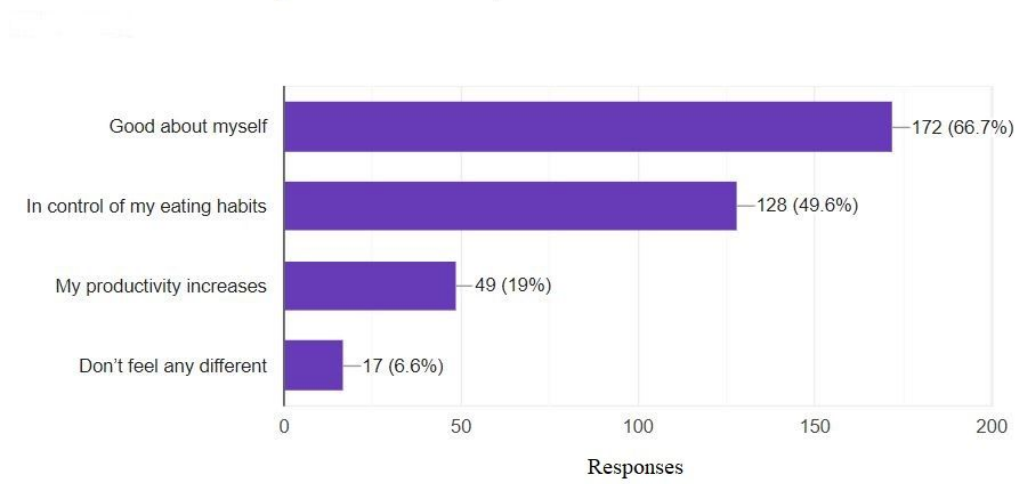


Figure D

I prefer snacks that are

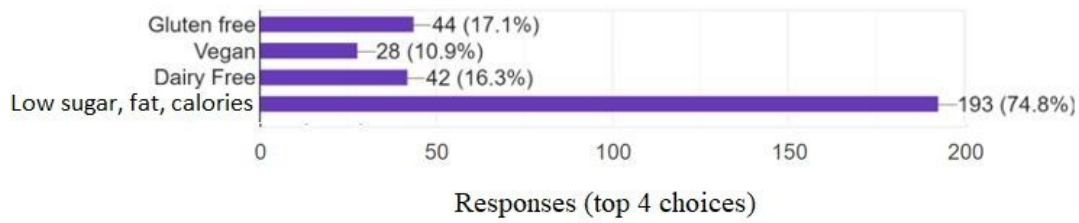


Figure E

Choosing a healthy snack is important

