

# HEALTHIER VENDING AND SNACK BAR POLICY PROJECT CUMULATIVE EVALUATION

*November 2018*

## PROJECT BACKGROUND

The primary objective of the Healthier Vending and Snack Bar Project is “to provide businesses with guidelines for incorporating healthier food and drink options in vending machines and snack bars at their workplaces<sup>1</sup>.” The project guide for worksites serves two purposes:

- 1) Inform employees about what they are eating and which choices are healthier.
- 2) Increase choice, not restrict choice. The policy is designed to make healthy choices more accessible, more appealing, and more affordable. It is not designed to restrict choices.

The project relies in part on the Munch Code, which classifies foods by color; green indicates foods and drinks that are the healthiest options and can be enjoyed often; yellow indicates foods and drinks that have added sugar, fat, and calories and should be eaten occasionally; and red indicates foods and drinks that are the highest in sugar, fat, and calories and the least healthy, which should be eaten sparingly<sup>1</sup>.

## EVALUATION

The project has currently completed its fifth year of implementation, and the objective of this report is to summarize and evaluate the extent of the program’s success. The approach to this report is to synthesize the top-level results from the years 3, 4, and 5. Years 1 and 2 are not evaluated as they focused on program development and implementation with pilot sites. The results from years 3 to 5 can be examined in more detail in the evaluation reports for each of those individual years. Across the three years of the program, 39 worksites participated.

There are three areas that were evaluated in each of the three active years of the grant cycle:

- Final Progress Reports: Worksites completed a final progress report requesting outcomes, successes, whether the worksite implemented a Healthier Vending and Snack Bar Policy, future plans, and any additional feedback.
- Strategies to Increase Sales of Healthier Products: Eight questions were asked to each of the worksites, each asking about specific changes and improvements the site may have implemented.

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<sup>1</sup> South Dakota Healthier Vending and Snack Bar Policy Implementation Guide; retrieved from [http://goodandhealthysd.org/content/uploads/2014/09/ModelPolicy\\_HealthyVendingSnackBar\\_Implementation\\_Guide.pdf](http://goodandhealthysd.org/content/uploads/2014/09/ModelPolicy_HealthyVendingSnackBar_Implementation_Guide.pdf)

- Vending Machine and Snack Bar Analysis: Each worksite completed a vending machine and snack bar analysis to determine how the items offered are distributed across the Munch Code color categories.

The following sections of this report summarize the outcomes from each of these areas across all three years.

## FINAL PROGRESS REPORTS

The final progress reports focused on four areas: outcomes (specifically challenges or barriers experienced), implementation of a healthy vending and snack bar policy, future plans, and feedback.

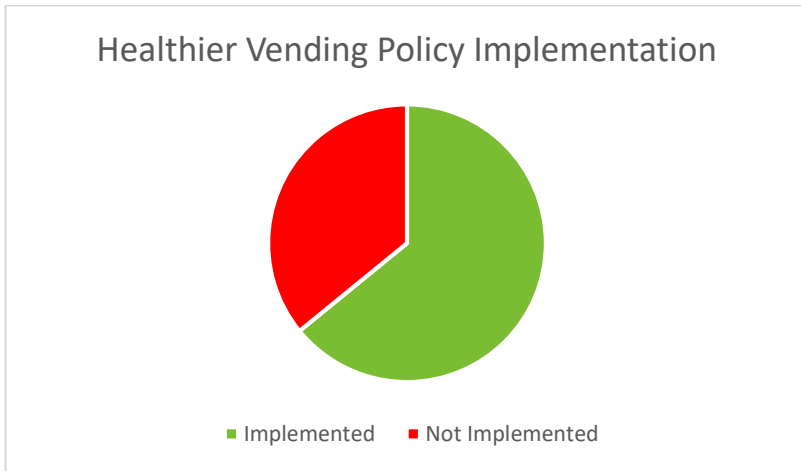
### Outcomes/Challenges or Barriers

The most common challenge mentioned in all three years of the study was easily working with vendors to gain their assistance in providing healthier vending items. The vendors were occasionally difficult to communicate with in general, but also were hesitant to provide more “green” items due to the perception that they would not be popular items, or found it difficult to obtain green items to place in the vending machine. There were also difficulties with vendors adapting to new labeling systems or making changes in a timely manner. While some worksites were able to overcome these barriers with persistent communication and demonstration of the value of green items in the workplace, other solutions included switching vendors, or focusing on self-stocking vending and snack bar areas.

Other challenges were not as consistent across the three years of the study. These challenges included lack of staff time or availability to focus on the project, difficulty finding truly “green” items in general, reluctance of staff to switch to a healthier vending inventory, difficulty focusing on a physical area for changes at larger worksites, and difficulty learning to work with new equipment purchased to help provide additional healthier choices.

### Implementation of Healthy Vending and Snack Bar Policy

Across the three years of the study, 25 of the 39 worksites (64.1%) had implemented a Healthier Vending and Snack Bar policy (see Figure 1). The majority of worksites that were unable to do so during the timeframe of the project had plans to do so in the future. The few sites that did not have plans to implement a policy mentioned reasons that included removing all vending machines in general, not wanting to impose a policy on the staff that would require healthier choices or not seeing a need for this policy, or being too large to implement one broad policy.



**Figure 1.** Implementation of Healthier Vending Policy During Project Period

### Future Plans

Most worksites throughout the course of the program indicated that they planned to continue implementing the changes that had already been made. In all years, this included identifying food choices according to munch code colors and increasing the percentage of green items available in the vending machines and at snack bars. Many worksites also mentioned implementing additional activities and policies that they had not introduced during the course of the project, such as staff surveys, providing additional information about the Munch Code and food choices to employees, and creating plans that would allow business owners to implement more of their own vending. Some worksites decided to implement programs and activities that were not directly related to the Munch Code, especially in year 4; these plans included providing quarterly material on healthy lifestyles to employees, introducing the Wellness Works Education Series, providing exercise options or cooking/nutrition classes, and introducing options for remote workers to follow healthy lifestyles.

### Feedback

The majority of feedback provided in each year was very positive, indicating the programs had been quite successful from both the employers' and employees' perspectives. In general, the worksite representatives indicated that employees enjoyed having a variety of foods to choose from and many employees (and others with access to vending machines and snack bars) appreciated having more healthy options. In many cases, the perception was that employees and other worksite visitors did appear to be making more conscientious food choices, and some employees were changing their purchasing habits and making purchases from vending machines when they may not have previously, due to the inclusion of these healthier items. It was rare that a worksite reported any reluctance by employees and other vending machine and snack bar users to adapt to the new system.

There was some feedback related to potential changes in the program. In years 3 and 5, at least one worksite commented that it would be helpful to have a sustainability grant or other program to help continue or extend the progress that was made during the time period of the project (for example, that would allow for extending the program to entrée foods, and allow for additional education, taste tests,

vending upgrades, etc.). Another comment was that it may be useful to create an app or have other means of summarizing nutritional value automatically while shopping, since it was sometimes difficult to determine an item’s nutritional value using the calculations that were provided.

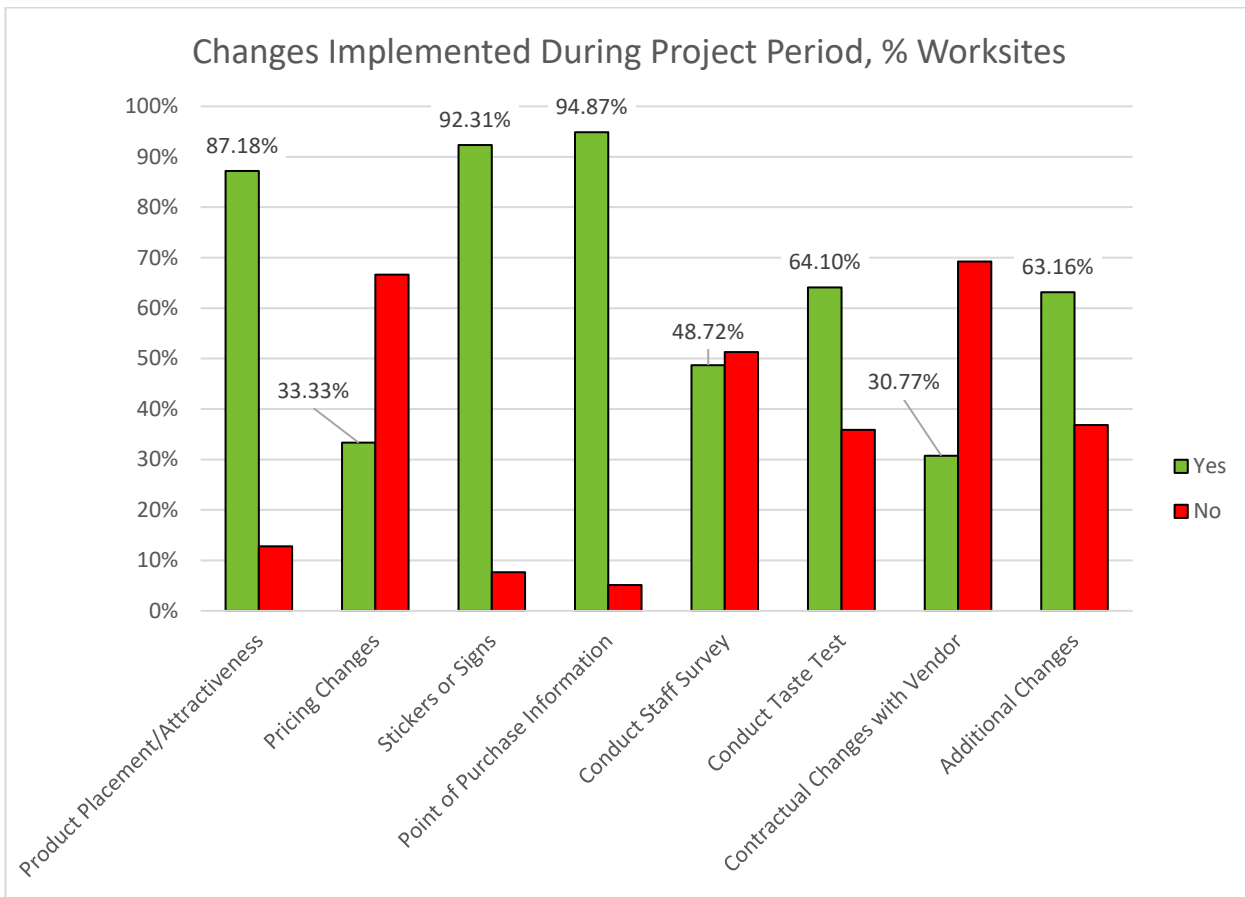
### Strategies to Increase Sales of Healthier Products

Eight questions were asked to determine whether the worksite had made specific changes. Table 1 and Figure 2 summarize the responses to these questions from the 39 worksites. Note that all 39 sites did not respond to every question.

The types of changes that were implemented most commonly by the worksites were relatively consistent from year to year. The most commonly made changes were related to visual displays; point of purchase information, stickers or signs, and product placement/attractiveness were changed by the great majority of worksites (over 85% in each case). Changes that were made by a moderate number of worksites were related to interaction with staff—that is, staff surveys and taste tests. The changes that were made by the least number of worksites (just over 30% in both cases) were related to sales issues; those were pricing changes and contractual changes with the vendor.

**Table 1.** Summary of Changes Implemented During Project Period

Did your worksite make the following changes/improvements to increase sales of healthier products?	Yes	No	%Yes
Product Placement/Attractiveness	34	5	87.18%
Pricing Changes	13	26	33.33%
Stickers or Signs	36	3	92.31%
Point of Purchase Information	37	2	94.87%
Conduct Staff Survey	19	20	48.72%
Conduct Taste Test	25	14	64.10%
Contractual Changes with Vendor	8	18	30.77%
Additional Changes	24	14	63.16%



**Figure 2.** Changes Implemented by Worksite

Additional improvements or changes that were not specifically asked about were made by many of the worksites. While additional improvements varied by worksite, several types of improvements were mentioned commonly by worksites, including (1) purchasing equipment (their own vending machines, refrigeration equipment, display equipment etc.), (2) creating incentive programs to encourage employees to purchase healthier items (for example, employee contests or reward programs for purchasing healthy items), and (3) allocating funding specifically to the purchase of healthier items (e.g., implementing a free fruit program for employees, supplementing the sometimes higher costs of green items, and diverting funds from unhealthy food purchases to healthier ones).

### Vending Machine and Snack Bar Analysis

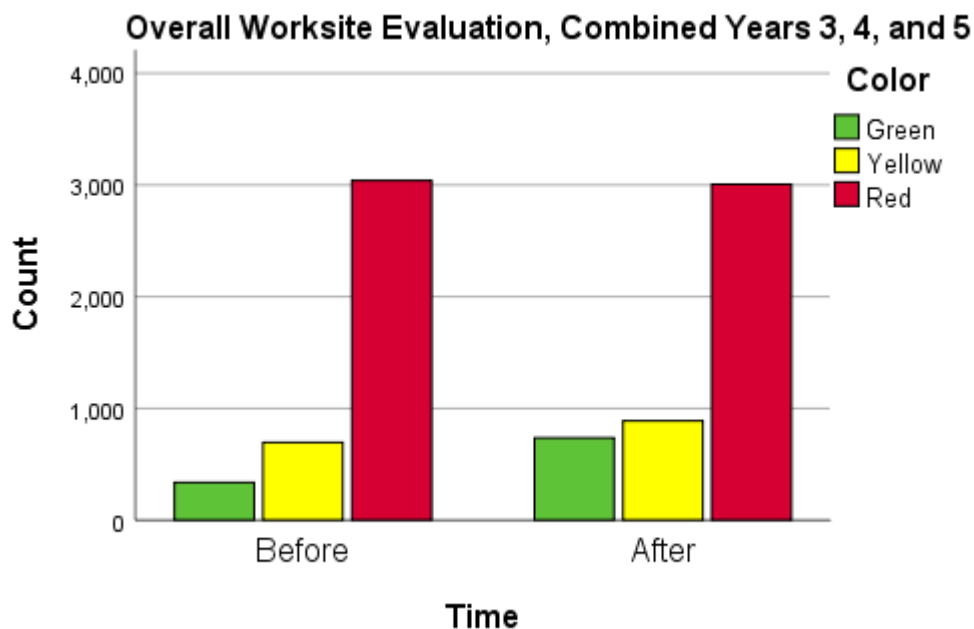
Finally, an analysis was completed at each individual worksite, and over each year, to determine whether there had been a significant increase in percentage of healthier items being offered in vending machines and at snack bars. Individual analyses can be found in the separate annual reports. A combined report that was provided at the end of the year 5 report is also provided here, as a summary of the changes made over the entire course of the grant.

Table 2 shows the distribution of items of each Munch Code color category for all year 3, 4, and 5 worksites combined, before and after implementation. Note that only 12 of the 15 year 3 worksites completed this analysis, for a total of 36 worksites rather than 39. Figure 3 is a bar graph of these numbers. Overall, the percentage of green items has increased from 8.3% to 15.9%; the percentage of red items has decreased from 74.6% to 64.9%. **The gamma statistic of 0.231 (which must be between -1 and 1) indicates an overall positive change; the p-value of < 0.001 indicates this is a highly statistically significant change.**

**Table 2.** Distribution of items by Munch Code color, before and after implementation

Time		Color			Total
		Green	Yellow	Red	
<b>Before</b>	Count	337	696	3040	4073
	% within Before	8.3%	17.1%	74.6%	100.0%
<b>After</b>	Count	737	889	3006	4632
	% within After	15.9%	19.2%	64.9%	100.0%

$\gamma = 0.231, p < 0.001$



**Figure 3.** Bar chart of distribution of items by Munch Code color, before and after implementation

Finally, Table 3 provides a summary across the 36 worksites, rather than the 4,000 + items in each time period. As an example of how to interpret this table, across the 36 worksites, the average worksite had 9.9% green items before the project, and 24.9% green items after the project.

**Table 3.** Average % Green, Yellow, and Red Items Across 36 Worksites

Time	Munch Code Color		
	Green	Yellow	Red
Before	9.9%	22.9%	67.2%
After	24.9%	27.6%	47.5%

## Discussion

Overall, the Healthier Vending and Snack Bar efforts have been highly successful. The majority of worksites implemented a healthier vending policy during the year in which they were implementing the project. Final progress reports indicated that barriers (such as working with vendors) were generally overcome with time and patience, and occasionally adopting new strategies. Feedback indicated that employees were happy to adapt to the new vending systems, and in many cases were quite happy that healthier food choices had been made available. Most worksites had plans at the end of the one-year cycle to continue to implement the changes they had made, along with additional changes to help encourage employees to lead healthier lifestyles.

Areas where worksites made the greatest number of changes were related to display and visual availability of nutritional information for employees. This makes sense, since these changes were relatively easy to make, and do not require great expense. These changes can also be highly impactful. Changes related to interaction with employees were less common, but still popular (e.g., taste tests and employee surveys). These require greater effort than providing visual displays but based on feedback were quite helpful when they were implemented—these encouraged employees to be involved, and resulted in greater availability of healthier choices that would be appealing to employees. Changes that were the least common were related specifically to sales (e.g., contractual changes with vendors and price changes). These can be difficult to employ, as vendors may not be willing to make changes to the contract, and prices may be difficult to control without long-term supplementation (which can become expensive). However, worksites adapted and discussed solutions to these difficulties—some worksites supplemented with directly supplied items or stopped working with vendors all together; other worksites introduced incentive programs for employees that required less expense than long-term price supplementation, such as employee contests or rewards for purchasing healthier items.

With respect to changes made in the distribution of items available, the average worksite went from offering 9% green items to offering 24.9% green items. The average worksite increased their offering of healthier items by close to 15%, which is a very large practical impact. Although the greatest number of items offered at the typical worksite are still red items, this change is very much in line with the overall objective of the project—specifically, the second guideline listed in the project background of this report: “Increase choice, not restrict choice. The policy is designed to make healthy choices more accessible, more appealing, and more affordable. It is not designed to restrict choices.” Employees at the worksites now have access to a greater variety of items, including items that are healthier. They also have access to more information regarding healthy choices, while being given the option to make those choices.

Given the success of the project, and the information gathered through the implementation, there are several recommendations for future work:

- Provide the opportunity for worksites to apply for sustainability grants, which can help worksites continue to make improvements and potentially supplement the costs of healthier choices.
- Introduce technology (for example, an app or webpage) to help worksites more easily determine the necessary information to place items in a Munch Code category.
- As multiple worksites found it difficult to work with vendors, provide TA specifically oriented toward helping worksites to (1) encourage vendors to help work with them to provide healthy items, or (2) move away from the necessity of outside vendors and toward providing their own vending and snack-bar products. Worksites that did move to supplying their own vending items found it could be profitable in addition to providing a benefit to employees.