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**Evaluating Employers' Needs and Intentions to Implement Evidence-Based Healthy Eating Practices in the Workplace**

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## Chapter I: Introduction

Workplace health promotion utilizes strategic intervention to achieve beneficial health outcomes for employees. Such intervention involve resources for employer implementation such as guides, posters, and educational materials contained within a toolkit for the employer. The purpose of the *Healthy Foods & Beverages Toolkit* Project is to support the Health Promotion Research Center (HPRC) in formulating recommendations to further the development of the *Healthy Foods & Beverages Toolkit* used in the *Connect to Wellness* (formerly called *HealthLinks*) health promotion program for small to mid-sized employers.

Project objectives include:

- 1) **Review and evaluate** healthy food and beverage health promotion best practices in the literature.
- 2) **Develop, conduct, and analyze** an online survey of small and mid-sized employers to collect their input on resources and approaches to promoting healthy eating and drinking among employees via HPRC's Connect to Wellness study.
- 3) **Propose** a set of recommended actions for HPRC to implement through the Connect to Wellness Healthy Food & Beverages Toolkit, based on both a comprehensive literature review and prominent themes and actionable findings generated via survey responses from employers representing the target audience.

### Population

The target population for this project is small to mid-sized employers in the United States. For the purposes of this project, we define small worksites as 0-200 employees and mid-sized workplaces as 201-500 employees. Most recent data from the Census Bureau's *Annual Survey of Entrepreneurs* found 5.6 million employer firms in the United States.<sup>1</sup> Of those employer firms, 99.7% of the businesses had fewer than 500 employees and 98.2% had fewer than 100 employees.<sup>1</sup> Notably, 89% of the 5.6 million employer firms had fewer than 20

employees.<sup>1</sup> Furthermore small and mid-sized employers disproportionately employ a large number of low-wage workers and are least likely to implement a health promotion program.<sup>2-4</sup> Considering that approximately 60% of people in the United States that are 16 or above are employed<sup>5</sup>, small to mid-sized employers are an effective route to implement evidence-based interventions (EBI) to improve population health.

### Nutrition Topic of Interest

The promotion of healthy eating behaviors with the *Healthy Foods & Beverages Toolkit* in small to mid-sized businesses to reduce chronic disease risk and illness is the main nutrition topic of interest. Specifically, this project is a culmination of a needs assessment and review of the literature to further the development of the current *Healthy Foods & Beverages Toolkit* used in an evidence-based health promotion intervention.

Worksite EBIs present the opportunity for employees to live healthfully in an environment where they spend a significant portion of their daily life. Specifically, EBIs reduce chronic disease risk by decreasing or eliminating health risk behaviors.<sup>6</sup> The use of the *Healthy Foods & Beverages Toolkit* as part of the *Connect to Wellness* program aims to improve healthy eating habits in the workplace through individual and environmental approaches. Considering the amount of time working individuals spend in their workplace and general workplace culture, healthy eating EBI implementation is paramount to support the health of employees. In turn, healthy employees can better perform in the workplace, reduce company health expenditures, and increase retention.<sup>7</sup> Most importantly, healthy eating EBIs can reduce chronic disease burden for which cancer and heart disease are currently the leading causes of death in the United States.<sup>8</sup>

There is significant evidence that EBIs can reduce or eliminate preventable risk behaviors such as poor eating habits to decrease risk of chronic disease.<sup>6</sup> However, there is continued debate on the efficacy of a non-diet approach compared to a diet approach for EBI sustained success to reduce negative health outcomes. A non-diet approach focuses on internal eating cues and body acceptance independent of weight loss or gain observations while a diet approach focuses on calorie reduction, weight loss, and restriction of unhealthy foods.

Therefore, an examination of the two approaches is necessary to evaluate the *Healthy Foods & Beverages Toolkit* in the context of current research on best practices for nutrition education and promotion. EBI implementation in the workplace is an emerging field of research and review of the diet and non-diet approach will better sculpt the evaluation of environmental and individual behavior change approaches in worksite EBI literature to produce best practice recommendations.

By identifying and addressing barriers to implement the *Healthy Foods & Beverages Toolkit* in small to mid-sized companies in addition to evaluating diet and non-diet EBI approaches, this project seeks to increase and sustain healthy eating behaviors in small to mid-sized workplaces via *Healthy Foods & Beverages Toolkit* implementation. Such improvements may include design alteration of the *Healthy Foods & Beverages Toolkit*, content adjustment of the *Healthy Foods & Beverages Toolkit*, and improved communication strategies. This project may also enhance the communication and support of the *Healthy Foods & Beverages Toolkit* to reach a greater number of employees within small to mid-sized businesses by highlighting employers' unmet needs for toolkit implementation.

## Chapter II: *Connect to Wellness* Evidence-Based Intervention Overview

### Background

Health promotion initiatives within worksites present the opportunity to address preventable risk behaviors in a setting where employees spend a significant amount of their daily life. However, small to mid-sized employers often lack the infrastructure and capacity to implement evidence-based health promotion initiatives.<sup>3,4</sup> Because of this, *Connect to Wellness*, an evidence-based health promotion initiative, was developed by HPRC and has been proven to be an effective strategy to disseminate EBIs to small and mid-sized worksites at low to no cost.<sup>9,10</sup>

HPRC is a CDC Prevention Research Center at the University of Washington directed by Dr. Peggy Hannon and consists of a team of core investigators, staff, affiliate investigators, research and administrative staff, and students. Prevention research centers, such as HPRC, address chronic disease risk in communities with an underserved population with disease and

disability.<sup>11</sup> *Connect to Wellness* has been funded by federal grants and state partnerships with partners such as local health departments. The first version of *Connect to Wellness*, called *HealthLinks*, was co-developed with the American Cancer Society.<sup>12</sup>

In 2009, the first pilot test of *Connect to Wellness* was conducted by HPRC with 23 worksites in Mason County, Washington.<sup>12</sup> This pilot was funded by the Washington State Department of Health.<sup>12</sup> Results from the study showed significant increases in EBIs for physical activity programs, health behavior policies, and health information communications.<sup>12</sup> Similar results were found in 2012 when *Connect to Wellness* was tested by the HPRC with 48 South King County-based employers in Washington state through the Communities Putting Prevention to Work (CPPW) grant funded by the U.S. Center for Disease Control and Prevention (CDC).<sup>12</sup> From 2014 to 2017, a randomized controlled trial of *Connect to Wellness* was funded for worksites in King County, Washington by the National Cancer Institute.<sup>12</sup> Results showed that employers in two *Connect to Wellness* intervention arms (program alone, program with wellness-committee) implemented more than twice as many EBIs compared to employers in the control group.<sup>9,12</sup> Most recently, from 2014 to 2019, HPRC trained local health department staff and staff at the Tri-Cities Cancer Center in Kennewick, Washington to deliver *Connect to Wellness* to local worksites.<sup>12</sup> Results indicate significant increased implementation of EBIs in the worksites and were made possible by funding from the Washington Department of Health.<sup>12</sup>

Although *Connect to Wellness* is adaptable for the diversity of small to mid-size worksites, previous research and implementation has focused on Washington State. Specifically, the worksites' main contacts in the studies were similar to overall race and ethnicity for King County. As of 2019, King county is comprised of 7% African Americans, 9.9% Latinos, 19.7% Asian, 0.8% Native Hawaiian or Pacific Islanders, 1% American Indian and Alaska Native, and 58.1% White.<sup>13</sup> Additionally, a majority of the worksites in the *Connect to Wellness* intervention studies are from the education or healthcare and social assistance industries in the non-profit sector.<sup>9,12</sup>

## Structure, Mission, and Goals

*Connect to Wellness* is a worksite evidence-based health promotion intervention for small to mid-size employers. Worksites undergo the following procedures once enrolled in *Connect to Wellness*. The first is the Assessment phase in which research staff from HPRC measure the worksites' current use of health promotion initiatives. This is completed using a worksite *Implementation Survey* that measures current EBI adoption and implementation in worksite implementation best practices for cancer screening, healthy eating, physical activity, and tobacco cessation.<sup>5,7</sup>

The Recommendations phase follows in which the interventionist assigned to the worksite creates a tailored *Recommendations Report* based on the Assessment phase. The *Recommendations Report* encompasses the worksite's current implementation of evidence-based best practices in addition to recommendations for improvements at the worksite.<sup>5,10,12,13</sup> The *Recommendations Report* is delivered to the employer in a face-to-face meeting along with *Implementation Toolkits* for each of the recommended best EBI's.<sup>10</sup> The *Implementation Toolkits* include EBI's for healthy eating, physical activity, tobacco cessation, and cancer screening. Each *implementation Toolkit* includes checklists to achieve toolkit implementation and supporting materials. Examples of the included supporting materials include relevant sample policies, a checklist for creating a new policy and a timeline, and additional materials.<sup>10</sup> The toolkits that promote state resources contain distributable posters and brochures explaining the resource, including eligibility and access. The Recommendations phase ends when the interventionist and employer from the designated worksite create an implementation plan that focuses on 3-5 EBI's chosen by the employer.<sup>10</sup> The implementation plan is a schedule of future meetings with the interventionist along with detailed assistance on how to promote 3-5 appropriate EBIs in the worksite.

The Implementation phase includes employer implementation of the EBI's and interventionist support. The interventionist may offer brief education sessions to aid the employer in worksite implementation of the EBI's. Interventionists will also contact employers at least once a month to offer assistance for EBI implementation; employers can also contact the interventionist at any time inbetween.<sup>10</sup> After the Implementation phase, the Maintenance phase concludes the *Connect to Wellness* procedural implementation. In this phase the



employer can contact the interventionist for assistance but the interventionist will not proactively contact employers at the worksite in the Maintenance phase.<sup>10</sup>

The *Connect to Wellness* evidence-based health promotion intervention has shown to significantly increase worksite implementation of EBIs in randomized controlled trials and pilot studies in small to mid-sized worksites.<sup>9,14</sup> The mission of *Connect to Wellness* is to provide access to an evidence-based workplace wellness program for small to mid-sized employers to support healthy behavior to reduce chronic disease burden.<sup>10</sup> Small to mid-sized employers, especially in low-wage industries, lack the resources and finances to facilitate a worksite EBI. Specifically, small to mid-sized worksites in low-wage industries are more likely to have employees of low socioeconomic status that are at an increased risk of chronic disease yet the least likely to implement worksite EBIs.<sup>2,3,4,9</sup> Therefore, *Connect to Wellness* aims to bridge this gap by providing affordable, accessible, and applicable worksite EBIs to small and mid-sized employers. In alignment with *Connect to Wellness*' mission and goals, this project focuses on the *Healthy Foods & Beverages Toolkit* used in the *Connect to Wellness* evidence-based health promotion intervention to improve the toolkit's content based on employer needs and review of the current literature on healthy foods and beverage EBIs.

### Healthy Foods & Beverages Toolkit

*Connect to Wellness* contains EBI toolkits for cancer screening, healthy eating, physical activity and tobacco cessation best practices. The *Healthy Foods & Beverages Toolkit* is suggested to an employer in the Recommendations phase based on the Assessment phase in the procedural process of the *Connect to Wellness* implementation.<sup>10</sup> The *Healthy Foods & Beverages Toolkit* is grounded in evidence from the Center for Disease Control and the *Guide to Community Preventative Services (The Community Guide)*.<sup>6</sup>

*Connect to Wellness* was first pilot tested in 2009 and completed a randomized controlled trial in King County, Washington in 2017.<sup>9,14</sup> In the 2017 randomized controlled trial for *Connect to Wellness*, 68 worksites participated and completed the trial. *Connect to Wellness* significantly increased EBI implementation in small worksites from low-wage industries. This includes the *Healthy Foods and Beverages* EBI that showed significant increased

implementation in the *Connect to Wellness* intervention arms compared to the control arm.<sup>9</sup> Employee perception survey results validated the use of the *Healthy Eating* EBI when they reported increased support for healthy eating.<sup>9</sup>

The *Healthy Foods & Beverages Toolkit* contains communication strategies, educational materials, and policy guides. Some examples include informational posters on the effects of excessive sodium and sugar sweetened beverage consumption. Other supporting documents include a guide on access to healthy foods at the worksite through vending machines and policy templates for healthy food and beverages to share with employees. A poster on available healthy options in vending machines is shown in Figure 1.

**Figure 1.** *Healthy Foods & Beverages Toolkit* Poster to advertise healthy food options in the worksite vending machines.



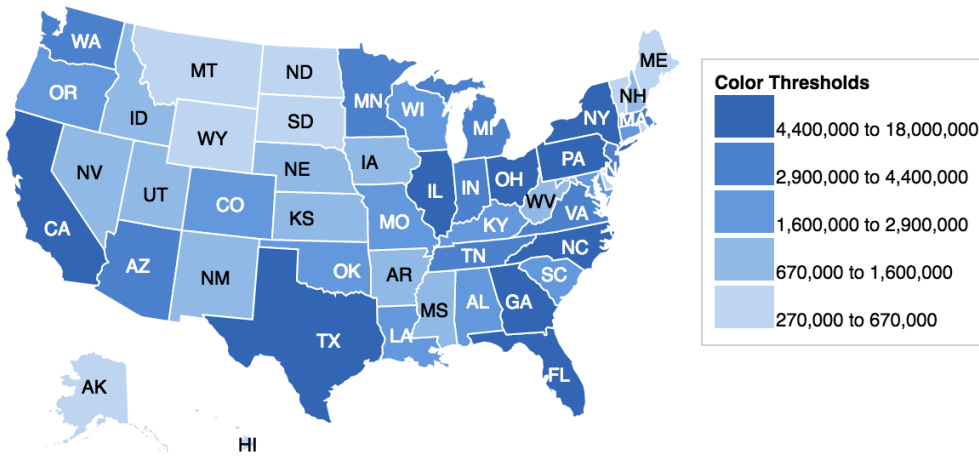
### Chapter III: Description of the Population/community

For the purposes and goals of this project, the target population is small and mid-sized companies. By December 2019, about 150,807,100 people were employed in the United States (Figure 2). As of 2017, 60.6 million employees work for a small business, a significant 47.1% of

all United States employees (Figure 3).<sup>15</sup> Additionally, smaller workplaces employ more than half of the United States private sector employees with the top four sectors of employment being Health Care and Social Assistance, Accommodation and Food Services, Retail Trade, and Construction.<sup>15</sup>

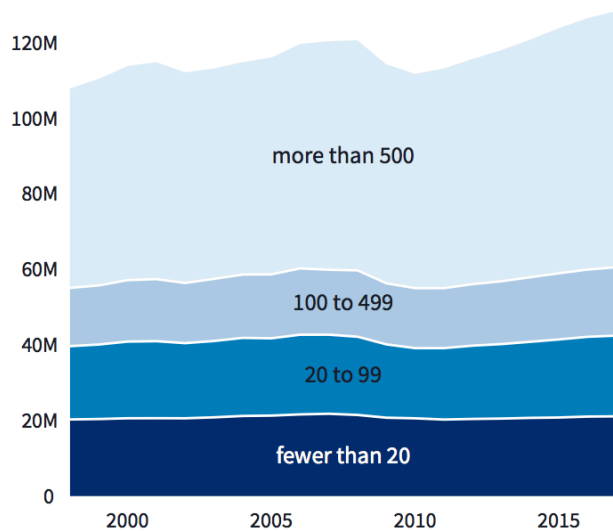
**Figure 2.** Total United States employment as reported by the U.S. Bureau of Labor Statistics-Quarterly Census of Employment and Wages (Q4, 2019).<sup>16</sup>

**Employment, Total, all industries Total Covered Dec 2019 (p)**



Source: U.S. Bureau of Labor Statistics ([www.bls.gov](http://www.bls.gov)) 

**Figure 3.** United States employment by business size as reported by the U.S. Small Business Administration from Statistics of US Businesses, US Census Bureau (2017).<sup>15</sup>



Of importance, small to mid-sized companies disproportionately employ low-wage workers and are least likely to implement worksite EBIs compared to large employers.<sup>2,3,4</sup> Compared to high-wage earners, low-wage earners are more likely to have less education, and more likely to be of minority race and ethnicity, have decreased physical activity, increased obesity and smoking, and underuse clinical preventative services.<sup>4</sup> Low-wage employees are also at a greater risk for chronic disease.<sup>17</sup> Low-wage employees report higher incidences of coronary artery disease, diabetes, hypertension as well as lower health status and more poor-health days compared to higher-wage employees.<sup>4</sup> Due to the large number of employed workers in small to mid-sized businesses, worksite EBIs can be utilized in this setting to reach low-wage employees and create a significant impact.

**Table 1.** United States wage and salary workers paid hourly rates with earnings at or below current federal minimum wage (2018) adapted from the U.S. Bureau of Labor Statistics.<sup>18</sup>

	Number of workers (in thousands)				Percentage of workers paid hourly rates		
	Total paid Hourly rates	At or below minimum wage			At or below minimum wage		
		Total	At minimum wage	Below minimum wage	Total	At minimum wage	Below Minimum wage
Total, 16 years and older	81,915	1,711	434	1,276	2.1	0.5	1.6

Occupation	Percent distribution			
	At or below minimum wage			
	Total paid hourly rates	Total	At minimum wage	Below minimum wage
Management, professional, and related occupations	23.2	5.3	6.0	5.0
Service Occupations	23.8	71.8	47.3	80.2
Sales and office occupations	24.6	13.2	34.6	5.9
Natural resources, construction, and maintenance occupations	11.4	2.3	1.7	2.5
Production, transportation, and material moving occupations	16.9	7.4	10.2	6.5

Consistent with the evidence that social and economic determinants strongly influence healthy diets and health outcomes, low-wage employees have poorer diet quality compared to higher-wage employees.<sup>19,20,21</sup> Low-wage workers report that food and diet are connected to general health but also state that they are unable to access foods of high dietary quality due to financial constraints, time, and lack of resources.<sup>22</sup> Low-wage workers further report that due

to these constraints they often change the quality and types of foods consumed more so than the amount or frequency of the foods consumed.<sup>22</sup> Improving access to healthy eating through worksite EBIs may address the barriers that low-wage workers face.

In order to reach low-wage employees in small to mid-sized businesses, the advantages and challenges to worksite EBI implementation need to be considered. Smaller worksites have the advantage of fewer hierarchical layers which can allow worksite EBI components to be implemented with more ease.<sup>23</sup> Their work environment is also more intimate which can create an inclusive culture to promote worksite EBI participation.<sup>24</sup> Furthermore their administrative and senior leadership may be more apparent and accessible which allows them to be stronger worksite EBI champions.<sup>25</sup> However, the advantages do not appear to override the challenges to worksite EBI implementation at small to mid-sized businesses, as evidenced in the lack of current worksite EBI implementation. Indeed, only 5% of worksites with 50-99 employees, 6% of worksites with 100-249 employees and 11% of worksites with 250-749 employees offer comprehensive (having all five key elements outlined in Healthy People 2010) worksite EBIs.<sup>26</sup>

Small to mid-sized worksites also face challenges with turn-over, capacity, and readiness. Specifically, small profit margins and turn-over in small to mid-sized businesses may result in a lack of willingness to invest in worksite EBIs.<sup>27,28</sup> Furthermore, employers perceive that they should not interfere with employee health behaviors and that employees are not interested in worksite EBIs.<sup>28,29,30</sup> Many employers also do not believe in the efficacy of worksite EBIs in small to mid-sized business environments.<sup>31</sup> Additionally, small to mid-sized businesses lack the budget and staff to successfully implement a worksite EBI.<sup>2</sup> As a result, reaching low-socioeconomic employees through worksite EBIs needs further evaluation for better implementation in small to mid-sized businesses.

## Chapter IV: Nutrition Education in the Workplace

This project has a two-pronged approach to evaluating nutrition education in the workplace to promote healthy behaviors. The first is analyzing worksite implementation of healthy eating initiatives, and the second is investigating the diet compared to the non-diet

approach in healthy eating interventions. This two-pronged approach aims to meet the needs of the employees via their employers, and to improve the *Healthy Foods & Beverages Toolkit*.

### Staffing and Resources in Small to Mid-Size Worksites

Small to mid-size worksites often lack fundamental infrastructure to implement health promotion initiatives. Such barriers to implementation include a lack of time, accessibility, and resources.<sup>28,30,32</sup> These barriers frequently manifest in small to mid-size businesses' inability to designate a wellness coordinator. As a result, small to mid-size businesses that implement a health initiative often utilize an employee who holds a position in senior leadership or human resources to run the workplace health promotion program.<sup>9</sup> Unsurprisingly, many small to mid-size employers cite the lack of staff expertise and time as a key barrier to sustained implementation of EBI's.<sup>28,30</sup> In contrast, employers who have dedicated staff and time for health promotion initiatives are more likely to have sustained EBI implementation in the workplace through dedicated personnel.<sup>26,33</sup>

The Community Preventive Services Task Force (CPSTF) established by the U.S. Department of Health and Human Services (DHHS), created the *Guide to Community Preventative Services* (hereafter "*Community Guide*") that identifies evidence-based EBIs, and uses weight-loss as the main measurement of best practice success. The focus on weight-loss as a measure for worksite health promotion intervention is a result of previously researched improved short-term health outcomes. According to Schulte et al., excess body weight loss can reduce risk of occupational conditions such as injury and asthma, musculoskeletal disorders, immune response, neurotoxicity stress, cardiovascular disease, and cancer.<sup>34</sup> A systematic review of 47 studies on nutrition worksite interventions and physical activity worksite interventions found an improvement in employee weight status at the 6-12 month follow-up.<sup>35</sup> This finding was independent of implementation of physical activity intervention alone, nutrition intervention alone, or a combination of both.<sup>35</sup>

Small to mid-sized employers face barriers to EBI implementation and maintenance due to a lack of resources and infrastructure. Furthermore, small to mid-sized businesses are

considerable employers in the United States. Therefore, EBI implementation for healthy eating in small to mid-size worksites can result in significant beneficial health outcomes for hard-to-reach populations (a sub-group of the population who require further outreach to become involved in intervention).

## Evidence-based Implementation of Healthy Eating Interventions

The second nutrition issue of focus in the two-pronged approach in this project is sustained health outcomes from healthy eating interventions. The *Healthy Foods & Beverages Toolkit* was grounded in evidence from the *Guide to Community Preventative Services* created by the CPSTF. This guide relies on a diet approach to beneficial health outcomes and uses weight-related measures such as weight in pounds or kilograms, BMI, and percentage body fat to quantify effectiveness of worksite healthy eating interventions.<sup>35</sup> The weight-related outcomes were measured until one year of follow-up.<sup>35</sup> Although there is an ample amount of evidence in the literature that demonstrates weight loss health promotion interventions produce short-term benefits, there is little data that supports sustained weight loss for the majority of participants.<sup>36,37</sup> Most obese and overweight participants who complete weight-loss interventions and successfully lose weight often regain weight. In fact, a majority of the individuals regain virtually most of the weight that was lost during treatment.<sup>38-45</sup> Obesity researchers at the Institute of Medicine claim that weight-loss studies show an average of 10% decrease in body weight, yet the participants then regain two-thirds of the weight lost in a year and nearly all of the weight back in 5 years.<sup>46</sup>

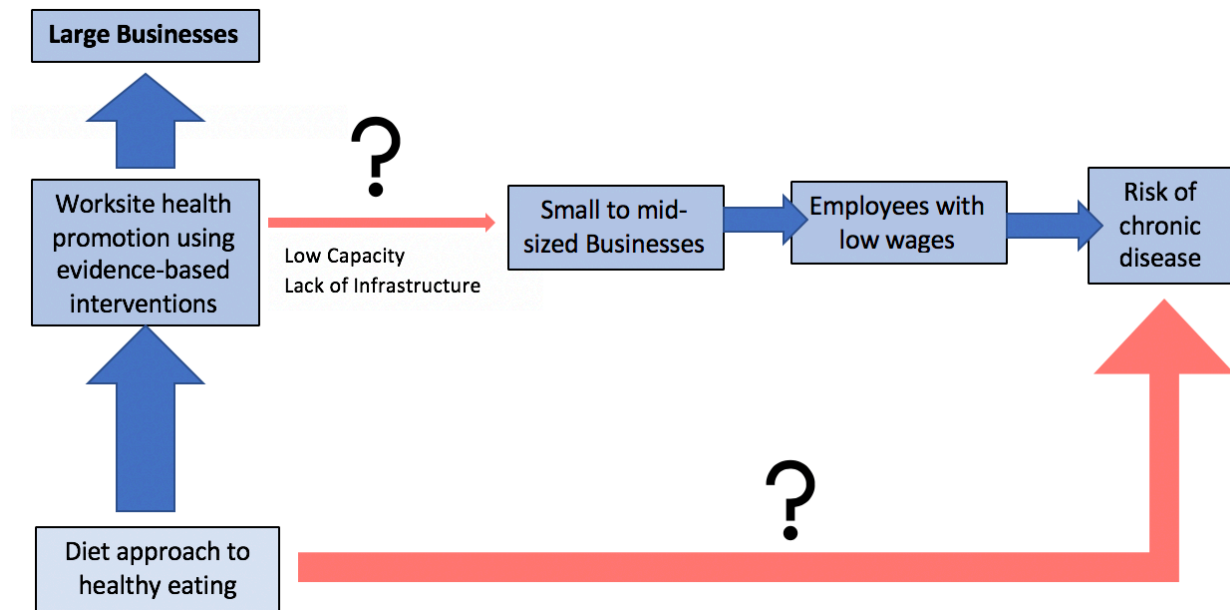
In addition to evidence that weight-loss interventions do not show sustained results, weight loss outcome measurements can also misclassify a significant number of people. Tomiyama et al., analyzed nationally representative 2005-2012 National Health and Nutrition Examination Survey data to quantify cardiometabolic health misclassifications in the principle BMI categories.<sup>47</sup> Blood pressure, triglyceride, cholesterol, glucose, insulin resistance and C-reactive protein data, population frequencies and percentages of metabolically healthy compared to metabolically unhealthy participants were stratified by BMI.<sup>47</sup> Findings from a sample of 40,420 participants showed that about half of overweight participants, 29% of obese



participants, and 16% of obesity type 2/3 individuals were metabolically healthy.<sup>47</sup> Furthermore, 30% of normal weight individuals, as classified by BMI, were cardiometabolically unhealthy.<sup>47</sup> These findings indicate that an estimated 74,936,678 adults in the United States are misclassified as cardiometabolically unhealthy or cardiometabolically healthy using BMI as a diagnostic tool for cardiometabolic health.<sup>47</sup> This in combination with a lack of sustained weight-loss outcomes in the literature indicate that there are factors beyond BMI, weight in pounds or kilograms, and percentage body fat to be used as diagnostic indicators to determine best implementation of healthy eating interventions in small to mid-sized worksites.

The barriers small to mid-size employers face to EBI implementation and contradicting research on the diet approach in nutrition education both contribute significantly to understanding worksite healthy eating intervention best practices. Additionally, assessing employer receptibility to a diet compared to a non-diet approach in nutrition education is paramount to identifying best implementation practices. Therefore, understanding the needs of employers for best implementation of healthy eating EBIs in small to mid-size workplaces and a review of healthy eating EBI literature will most appropriately sculpt recommendations for healthy eating worksite intervention.

**Figure 4.** Integrated system of factors to examine to improve best practice implementation of the *Healthy Foods & Beverages Toolkit*.



## Chapter V: Existing Resources and Programs

Several evidence-based interventions can be replicated in workplace health and wellness initiatives. The *Community Guide* created by the CPSTF, is a culminating resource based on systematic reviews of effectiveness and economic evidence of current intervention approaches. The *Healthy Foods & Beverages Toolkit's* content is predominantly curated from the *Community Guide's* recommendations. The *Community Guide* focuses on weight-loss as the main measure of best practice outcomes for healthy eating workplace intervention recommendations. An emerging workplace health and wellness intervention that uses a non-diet approach rather than the diet approach could be a beneficial alternative to further support employees and employers. Such interventions are seen in Ellen Satter's eating competence model, an evidence-based intervention, that prioritizes eating attitudes, food acceptance, internal regulation, and contextual skills rather than weight loss.<sup>48,49</sup>

## The Community Guide

*The Community Guide* provides recommendations for interventions to improve health and prevent disease in community settings. The guide includes recommendations specifically for worksite health and organizes nutrition, obesity, and physical activity into a category for systematic review titled “Obesity: Worksite Programs”.<sup>6</sup> Upon review of the evidence-based interventions, the CPSTF recommends worksite programs that improve physical activity participation or better diet quality and are dependent on their effectiveness for reducing weight among employees.<sup>6</sup> A non-federal, independent group of public health and prevention experts make up the CPSTF and are appointed by the Director of the CDC. Interventions, as defined by *The Community Guide*, may include one or more of the following: educational materials, activities that focus on thoughts and social support, and changes to the worksite environment to improve healthy eating behaviors.<sup>6</sup> The most recent systematic review identified that most studies focused on a combination of physical activity and healthy eating interventions.<sup>35</sup> Fewer studies analyzed in the review focused on environmental modifications in the workplace environment.<sup>35</sup> The primary outcome of measurement to determine effectiveness was body size and composition with follow-ups ranging from six months to one year.<sup>35</sup>

*The Community Guide* also includes resources for employers such as how to disseminate health information and “What Works” one-pagers that describe evidence-based practices reviewed by the CPSTF to use in the workplace.<sup>6</sup> *The Community Guide* also organizes the CPSTF findings by strength of evidence. The “Obesity: Worksite Programs” is recommended by the CPSTF in *The Community Guide* according to strong evidence. Strong evidence is the highest attributable evidence category. Other categories include sufficient evidence and insufficient evidence. Findings on intervention approaches will not be recommended in the insufficient category but will be recommended in the strong and sufficient evidence category.<sup>6</sup> Evidence is reviewed on a continuous basis by the CPSTF in all categories of interventions to improve health and prevent disease in a diverse array of communities. The most recent review on diet and nutrition intervention in the workplace was conducted in 2009 and continues to be used as the recommendation.<sup>35</sup>

## Satter's *How to Eat* Method

Ellen Satter's evidence-based eating competence model focuses on measurement of eating attitudes, food acceptance, internal regulation and contextual skills. Eating attitudes refers to having a positive outlook on eating and towards food.<sup>48,49</sup> Food acceptance is the ability to eat a variety of available food.<sup>48,49</sup> Internal regulation is the use of internal regulatory cues to consume enough food to sustain energy and support weight maintenance.<sup>48,49</sup> Contextual skills are one's ability to manage food and resources to regularly offer consistent meals and snacks.<sup>48,49</sup> Implementation of the eating competence model is associated with beneficial physical and mental health outcomes.<sup>48,49</sup> Satter's eating competence model is assessed using the validated ecSatter Inventory for descriptive and outcome measurements.<sup>50</sup> Eating competence has shown to improve diet quality, lower BMI, lower fasting blood glucose concentration, and lower serum LDL to HDL cholesterol ratio.<sup>51,52</sup> The eating competence model was molded into a worksite health promotion initiative titled the *How to Eat* method to be used as a nutrition education and healthy eating intervention.

A recent single-arm, pilot intervention study conducted with Satter's *How to Eat* method used a cognitive behavioral approach grounded in the Satter eating competence model (ecSatter) that used tools and experiential activities focused on eating exercises, education, discussion, and progressive assignments.<sup>53</sup> Measurements to determine effectiveness of Satter's *How to Eat* method included eating competence using the validated ecSI 2.0™, eating disorder symptoms using the EAT-26, and body weight.<sup>53</sup> This 10-week intervention during a 6-year period showed improvements in participants' measures of eating competence and symptoms of eating disorders among previous dieters although there was no change in body weight.<sup>53</sup> Long-term follow-up is needed to determine sustained improvements yet this pilot indicates promising beneficial health outcomes for employees.

Another recent study with Satter's *How to Eat* method used two delivery modes, individual and group, in an employee wellness program at a large midwestern university to implement the model. Identical to the pilot study, the *How to Eat* intervention used a cognitive-

behavioral approach grounded in the ecSatter model in a 10-week intervention.<sup>54</sup> Measures to determine efficacy of the *How to Eat* method included eating competence using the validated ecSI 2.0™, eating disorder symptoms using the EAT-26, and body weight.<sup>54</sup> Although no significant changes in body weight were recorded, participants showed improved eating competence and disordered eating symptom measures.<sup>54</sup> The improvements were of greater significance in individual sessions compared to group classes in the workplace setting.<sup>54</sup> Although long-term follow-up is needed to determine sustained outcomes, the study demonstrates a potential alternative to weight-loss interventions in workplaces using the *How to Eat* method or the principles of the method.

## Chapter VI: Strategies from the literature to increase best practice implementation of the *Healthy Foods & Beverages Toolkit*

The following questions informed the literature review on strategies to increase best practice implementation of the Healthy Foods & Beverages Toolkit.

- What elements encourage and maintain healthy eating EBI implementation in the workplace?
- What are the greatest contributors to a lack of healthy eating EBI implementation in the workplace?
- Is a non-diet EBI more or less effective for sustained behavior change compared to a diet focused EBI?
- What is the impact of workplace health promotions that emphasize a diet approach compared to a non-diet approach?

The review is divided into (1) barriers to healthy eating EBI implementation in the workplace, (2) facilitators to healthy eating EBI implementation in the workplace, (3) Impact and Perceptions of Diet-Focused Workplace Healthy Eating EBIs on Employees, (4) Dieting and Weight Stigma (5) Non-diet Interventions. The sections, (1) and (2), are part one of the two-pronged project assessing best implementation of healthy eating EBIs in the workplace. Sections (3), (4), (5) are the second part of the two-pronged project evaluating a diet-focused approach to a non-diet approach in workplace health promotion initiatives. Several studies

included in the review for part one explores more broadly EBIs that depend on individual and environmental behavior change. While published studies that focus solely on healthy eating EBI implementation in the workplace are few, the literature on EBI implementation is replicable to healthy eating initiatives within the workplace. Part 2 of the literature provides extensive evidence on the non-diet approach for EBI implementation. Several articles for Part 2 also discuss the impact of diet-focused EBI workplace implementation on employees.

### Barriers to Healthy Eating EBI Implementation in the Workplace

Goetzl and Ozminkowski (2008) in their review on workplace health promotion (WHP) claim that significant barriers to workplace health promotion sustained implementation is a result of employers opposed to interfering or advising employee's health behaviors and employer beliefs that WHP is distracting to employers, is a luxury, and lacks grassroots support.<sup>25</sup> Employers who do believe in the efficacy of WHP face barriers such as seeking funding from senior managers to implement a WHP that does not display hard evidence of program impacts or the program impacts are achieved after many years of investment and are not of interest to the senior managers. Furthermore, employers who desire to start WFP claim there are too few best practices to implement. Additionally, small businesses contend that they lack the resources necessary to implement WHP such as infrastructure, scalability and staffing that large employers maintain. Upon implementation of a weight-loss focused WHP, employers find that participants lose weight in the short-term but regain much of the weight after the program is completed. The barriers to WHP are multi-faceted and are greatly impacted by the employer's perceptions and active participation in implementation to create a workplace climate that supports healthy behaviors. Additionally, weight focused WHP often see weight regain following program completion and are in need of evaluation of program design and EBI.

Despite a number of employers' hesitancy to interfere with employee health behaviors, Mcleary et al. (2017) analyzed two independent surveys of employers (N= 1500) and the general population (N = 4611) and found that 59.4% of employees feel that employers should play a role in improving employee health.<sup>31</sup> Roughly half of the survey respondents were from

small businesses. Furthermore 80.6% of employers reported providing worksite EBIs to their employees but only 45% of employees reported having access to these programs. Furthermore, less than half of employees claimed that they were employed in an environment that supports healthy behaviors which poses a barrier to worksite EBI participation. Discrepancy between employer and employee perceptions pose a barrier and may contribute to the low 13.3% percentage of employers that provide the five elements required for a comprehensive WHP program from the National Worksite Health promotion Survey: (a) health education, (b) employee services links, (c) supportive workplace environment for health improvement (d) integration of the WHP values into the company culture, and (e) employee follow-up and post measurements.

## Facilitators to Healthy Eating EBI Implementation in the Workplace

### Organizational Theory for Worksite EBI Implementation Use

Weiner et al. (2008) describes an integrated theory of implementation for worksite health promotion programs for all sized employers to promote effective implementation.<sup>55</sup> The organization theory is derived from theory and research from manufacturing, education, and health care setting implementation of complex intervention strategies. The national Working Well randomized controlled trial conducted from 1989-2004 with 111 worksites in the United States at four study centers to reduce cancer incidence provides a common frame of reference for the use of organization theory. The national Working Well Trial aimed to reduce cancer risk with a comprehensive health promotion intervention that emphasized increased dietary fiber consumption, decreased consumption of dietary fat, and decreased use of tobacco products through individual and environmental approaches. From the outcomes of this study, the organization theory proposes that effective implementation is based on the worksites' readiness for change, quality of the worksite implementation of policies and practices, and the implementation climate congruent with employee values. Weiner et al. posit that shared beliefs and collective action in which employers and employees thoroughly contribute to the implementation effort will increase change efficacy. Additionally, a greater number of implementation policies and practices increase desired behavior change outcomes within the

worksite and depend on high quality implementation such as trainings. Furthermore, the worksite environment will become a strong implementation climate through clarity and consistency of policy and practices to exhibit a collective sense of the worksites priorities and how the worksite will implement those priorities. Implementation effectiveness is dependent on the strength of the implementation climate and interventions congruent with employee values. Multiorganizational study design is needed to evaluate the organizational theory in worksite EBI implementation studies.

### Elements of Effective Practices in Worksite EBI Implementation

Goetzel and Ozminkowski (2008) in their review on workplace health promotion (WHP) identify promising elements in EHP practices that apply more broadly to larger employers yet some elements can be utilized or altered for small employers.<sup>25</sup> One promising element are needs assessments that allow for the tailoring of WHP interventions that fit with an individual's learning style and readiness to change behavior. High participation rates in addition to easy access to the program and follow-up are key elements to employee enrollment and participation in WHP. Tailored behavior-change messages to the individual rather than generic feedback improves employee's risk behavior change. Similarly, individualized and tailored behavioral interventions to support self-care and self-management such as goal-setting, reflective counseling, and motivational interviewing completed in a consistent manner are more effective than general education for health maintenance and engagement. Offering a menu of engagement modalities to employees can also further enrollment and maintenance as not all worksite health promotion activities appeal to every individual. Social support and a culture of health in the workplace can better WHP implementation. Specifically, employers who believe and embody the healthy culture are more likely to reinforce desired health behaviors in employees and maintain engagement in the WHP. In order to correctly evaluate the health and financial outcomes of a WHP program, the program needs to be in place for at least three years with annual and baseline measurements.

Heinen and Darling (2009) examine the employer's perspective on healthy eating EBI in the workplace and examples from U.S. companies that highlight the employer's role in healthy



eating EBI.<sup>56</sup> Heinen and Darling found that environmental change in the workplace to facilitate healthy eating behaviors was the most cost-effective and applicable for a small to mid-sized employer. Specifically, employers can make healthy foods readily available rather than energy-dense foods in the workplace in cafeterias, vending machines, and meeting rooms. Descriptive language on menus, bowl sizes, and food types play a role in employee consumption of healthy foods and beverages. This along in partnership with vendors and food distributors who aim to provide healthy options to employees at the worksite can greatly improve employee's risk of chronic disease.

Kent et al.(2016) found that creating a culture of health and using strategic communications are best practices for worksite EBI implementation independent of workplace size.<sup>57</sup> A worksite EBI is more effective when the company replicates the values of the worksite EBI into their company culture rather than focusing on individual responsibility for health management. Characteristics of the business that can be easily seen such as facilities, proclaimed values of the company, and underlying collective assumptions encompass the worksite culture and are the avenues for creating a culture of health. This includes leaders who exemplify healthy behaviors, implementation of policies and practices, and sustained program duration. Additionally, managers are needed to alter organizational norms to support healthy behaviors and actively engage employees in shaping the worksite EBI to meet the needs of the employees. Furthermore, peer support can further worksite EBI implementation. In addition to creating a culture of health, strategic communications are one of the most important factors in employee participation for worksite EBIs. Specifically, strategic communications need to be grounded in an evidence-based behavior change theory and serves to educate, motivate, market, and build trust with employees. Not only do strategic communications need to be transparent and clearly explain the program's purpose, they also need to be tailored and targeted. This includes individualized messages, use of many technology channels, optimum timing, frequency, and placement of the messaging. Lastly, communication strategies need to be bi-directional to involve the employee's individuality and perspective in forming their experience in the worksite EBI to better improve health.

## Summary of Part 1 Literature Review

Barriers to healthy eating worksite EBI implementation are reflected in employer's desire for an immediate investment return from the intervention, employer's hesitancy to interfere with employee health behaviors, employee perceptions of lack of access to interventions, and lack of long-term results.<sup>25,31</sup> Organizational theory for worksite EBI implementation can be used to mediate many of these barriers. For instance, discrepancy between employee and employer perceptions and lack of commitment to worksite EBI by the employer because the theory relies on the company's readiness to change, quality of policies and practices, and congruency of the intervention with employee and employer values.<sup>55</sup> This framework provides a promising strategy for effective implementation. Elements of effective practices within worksite EBIs are grounded in environmental change personalized to the individual rather than placing responsibility on the individual to engage in desired health behaviors. Such practices are grounded in environmental change and include employers that embody healthy company culture values, making healthy foods readily available in common workplace spaces, sustained program duration, and tailored messages to employees regarding health promotion activities.<sup>25,56,57</sup> For the *Healthy Foods & Beverages Toolkit*, a focus on long-term environmental change rather than an expectation for individual behavior change will prove more effective for sustained worksite EBI implementation.

## Impact and Perceptions of Diet-Focused Workplace Healthy Eating EBIs on Employees

### Short and Long-term Weight Loss Outcomes from a Diet-Focused Worksite EBI

Scoggins et al. (2011) evaluated the weight loss outcomes using BMI from a worksite EBI titled Healthy Incentives<sup>SM</sup> compared to a control (United States MEPS sample) after one year and five years.<sup>58</sup> Healthy Incentives<sup>SM</sup> included weight management, exercise, nutrition, stress management and tobacco cessation initiatives. In the first year of Healthy Incentives<sup>SM</sup>, the majority of participants lost weight on average. However, the participants average BMI slowly increases in the subsequent four years. The program was most successful for women, participants older than 60 years, African Americans, and members who did not graduate from

college. The authors fail to comment on or the need to follow-up on the gradual weight regain the participants in the Healthy Incentives<sup>SM</sup> display. This was one of the few studies that examine weight-focused worksite EBI long-term outcomes, yet we see clearly the individuals regain weight over-time from the initial weight loss in the first year of intervention.

Nigg et al. (2010) assessed physical activity and nutritional environmental health promotion initiatives in a randomized clinical trial of 30 hotel sites with a weight loss and obesity prevention worksite EBI.<sup>59</sup> The study used cross-sectional data to test the efficacy of environmental physical activity and nutrition indicators on BMI. The environmental assessment was conducted using the Checklist of Health Promotion Environments at Worksites (CHEW), a previously validated tool. No strong correlations were found between BMI and calculated environmental variables across hotel sites. Thus, no nutritional or physical activity environmental worksite health promotion interventions were related to BMI.

#### Employee Perceived Barriers to Diet-Focused Healthy Eating Worksite EBI

Strankevitz et al. (2017) surveyed 124 participants, classified as obese, on perceived barriers that participated in a workplace obesity intervention.<sup>60</sup> Perceived barriers of significance were a lack of self-control and convenience, lack of access to healthy foods, negative attitudes towards healthy foods, and a lack of knowledge and support. Strankevitz et al., theorize that creating a healthy food environment in the workplace can address some of the barriers such as accessibility and convenience to eat healthfully. Such interventions can include increasing availability to healthy food and beverage options such as in the vending machines and during meetings. However, Strankevitz et al. claim that current interventions rooted in behavior change theories are not addressing the majority of barriers employees face to healthy eating.

#### Impact of Weight-Focused Worksite EBI on Employees

Tauber et al. (2018) identifies weight-focused worksite EBIs inadvertently induce weight stigma and weight-based discrimination especially when the responsibility is placed on the

employee for health outcomes.<sup>61</sup> Weight stigma is the negative attitudes towards a person because of their weight and can result in discrimination which further leads to poor outcomes on psychological and physical health. From a survey sample of 131 respondents, Tauber et al. found that employees perceived weight as more controllable when a worksite EBI is present than when the worksite EBI is absent. A follow-up survey with 96 respondents created a theoretical health program replicable to the majority of *Healthy Foods and Beverages* worksite EBIs currently in use to measure weight stigma, controllability attributions, and BMI. Results show that respondents displayed weight stigma and elicited weight-bias when the worksite EBI manipulation focused on individual responsibility for health behaviors rather than organizational responsibility. Additionally, the absence of a worksite EBI, those with high BMI were less weight biased than people with low BMI. The presence of a worksite EBI influenced weight bias in respondents with high BMI up to the same level of people with low BMI. Further study to test weight bias internalization was conducted with 238 respondents who engaged in an interactive role-playing of an HR manager exposed to a worksite EBI and asked to hire candidates. Findings show employees with higher BMI displayed greater weight bias internalization. Thus, worksite EBIs that focus on individual responsibility for health showed increased weight stigma and weight discrimination in employees. However, this can be countered with emphasizing organizational responsibility rather than individual responsibility in worksite EBIs.

## Weight Stigma and Dieting

### Impact of Weight Stigma

Himmelstein et al. (2014) examined experimentally manipulated weight stigma on the hypothalamic-pituitary-adrenal axis in female participants who perceived themselves as average or heavy weight status.<sup>62</sup> Although BMI was also measured, participants' perceptions of their own body weight was significantly associated with increased cortisol reactivity from weight stigma. Specifically, participants who identified themselves as heavy showed sustained, elevated cortisol from weight stigma post-manipulation compared to participants who

identified as average weight. These findings indicate that weight stigma can induce a cycle of physiological consequences, wherein stigma promotes cortisol secretion thus inducing weight gain to then beget more stigma. Additionally, stress and cortisol are linked to negative health outcomes, increased food consumption, and increased abdominal adiposity. Therefore, weight stigma that can be found in many avenues of society including diet focused workplace health promotion programs, could result in even poorer health outcomes compared to baseline measurements.

Tomiyama et al. (2018) reviews the current literature on weight stigma and identifies weight stigma as a significant risk factor for weight gain and poorer health.<sup>63</sup> In multiple studies in which participants were manipulated to experience weight stigma, their eating increases, cortisol levels elevate (an obesogenic hormone), and their self-regulation decreases compared to controls. Additionally, dysregulation in metabolic health and inflammation in addition to increased abdominal obesity and HbA1c are increased in individuals who experience weight discrimination. These findings are in greater association with one's perceived weight rather than calculated BMI. Furthermore, anti-obesity efforts are contributing to weight stigma by focusing on individual responsibility thus implying shame and blame on the individual for not achieving a desired weight. Therefore, health intervention strategies such as healthy eating worksite EBIs need to distance themselves from placing the responsibility on the individual and shaming individuals for their weight status in order to prevent these negative health outcomes.

### Negative Impacts of Dieting

Vergnaud et al. (2008) found weight fluctuations as a risk factor for metabolic syndrome and its components from a sample of 13,017 subjects with 7.5 years of follow-up.<sup>64</sup> Findings were independent of confounding variables such as weight change during follow-up. Weight fluctuations were defined as cycles of weight loss and recovery and analyzed by tertile. Specifically, weight fluctuations showed an increased risk for blood pressure, HDL-c, and weight circumference. Severe weight cyclers (third weight fluctuation tertile) and subjects without weight cycling were at the highest risk for metabolic syndrome. Subjects without weight fluctuations showed highest weight gain during follow-up which could explain higher metabolic

syndrome risk. Weight cyclers in the first tertile of weight fluctuations were at the lowest risk for metabolic syndrome and were characterized as weight stable and weight monitoring. The findings support weight maintenance rather than dieting in adults to reduce risk of metabolic syndrome. The findings also support weight gain prevention in early adulthood to reduce risk of metabolic syndrome.

Schaumberg and Anderson (2016) identified dietary restraint as the most consistent variable to predict eating pathology in a sample of 245 young adults.<sup>65</sup> Dietary restraint is defined as intentional efforts to restrict caloric intake. The findings indicate that restrained individuals are at risk for maladaptive eating patterns such as compensatory behaviors most likely as a result of the pressure to restrict calories resulting in stress and impulsive behaviors. Dietary restraint was also correlated with body dissatisfaction in the sample. While dietary restraint and weight loss was associated independently with a higher risk of disordered eating. Therefore, weight loss and dieting (restrained eating) are risk factors for eating pathology and thus may not be favorable for long-term intervention focus.

Similarly, Andres and Saldana (2014) found significant associations between body dissatisfaction and dietary restraint on binge eating behavior.<sup>66</sup> Of a sample of 600 young adults, Andres and Saldana found that those who dieted were 2.01 times more likely to binge eat and those who overvalued their weight were 2.31 times more likely to binge eat. Participants that reported binge eating (9.9%) were more likely to be of overweight status and identified as frequent dieters. Furthermore, structural equation modeling highlighted the connection between body dissatisfaction, dietary restraint, and binge eating showing that body dissatisfaction prompted dietary restraint that then triggered binge eating. Dieting and binge eating are behaviors of importance because they show increased risk for excess weight and eating disorders that can further impact negative health outcomes. Therefore, body dissatisfaction and dietary restraint are important risk factors that need to be considered when formulating healthy eating worksite EBIs.

Montani et al. (2015), identify dieting and weight cycling as a risk factor for cardiometabolic disease in individuals with normal body weight in addition to obese and overweight individuals.<sup>67</sup> Dieting and weight cycling is prevalent among the United States

population including non-overweight individuals that include people with overweight perception, performers and entertainers, and athletes in weight-sensitive sports. The findings of the prevalence of dieting and weight cycling is significant considering the long-term adverse health consequences of dieting and weight cycling such as increased risk for eating disorders, anxiety, depression, hypertension, cancer, obesity, type 2 diabetes, and general mortality. Weight cycling is thought to contribute to overall morbidity and mortality due to fluctuations in blood pressure, heart rate, glomerular filtration rate, glucose and lipids that lead to increased cardiac load, glomerular damage, and vascular injury. This in turn can result in cardiovascular and renal diseases. In fact, these fluctuations in cardiovascular risk variables are seen more readily in non-overweight individuals compared to overweight and obese individuals. These findings support the emerging evidence on negative health outcomes associated with dieting and weight cycling for the general population and alternative methods to healthy lifestyles should be explored.

Evert and Franz (2017) evaluate the current literature on biological mechanisms and weight loss maintenance.<sup>68</sup> They find that weight loss maintenance is difficult and weight regain is seen post-intervention due to dysregulation of hormones, reductions in energy expenditure, and neural issues that affect appetite. In addition to a genetic predisposition and environmental effect that contribute to obesity, weight loss can result in hormonal adaptive responses that motivate the body to gain weight and are sustained one-year post-weight loss. Such hormones include ghrelin that stimulates hunger and GIP that promotes energy storage. Adaptive thermogenesis, also called resting metabolic rate, can occur for which the body conserves energy as an adaptive response to starvation and reverts to normal upon weight regain. Furthermore, when an individual experiences weight loss, there is a decrease in rewards from food intake which is manifested in symptoms of insatiable cravings, fatigue, and poor mood. The brain senses the deficit and induces increased food consumption through neural dopamine signaling. The evidence of hormonal adaptations to weight loss, adaptive thermogenesis, and neural factors provide necessary insight into the lack of efficacy in diet-focused interventions.

## Non-diet interventions

Bacon et al. (2002) in a randomized clinical trial analyzed two treatment arms, a non-diet wellness program and a weight focused diet program, with obese, Caucasian, female, chronic dieters.<sup>69</sup> By post-treatment, 41% of the subjects from the diet group dropped out of the intervention compared to 8% that dropped out of the non-diet intervention. Although the diet group lost an average of 5.9 kg post-aftercare, both groups showed significant improvements in total cholesterol, LDL, triglycerides and systolic blood pressure. The non-diet group exhibited a significant increase in total energy expenditure compared to the diet-group. The non-diet and diet group both showed significant improvements in self-esteem but was not sustained in the diet group post-aftercare. Body image avoidance behaviors improved in both groups but to a greater extent in the non-diet group. The outcomes of the non-diet approach, despite weight-loss, reflect the outcomes of the diet approach and show greater sustained eating behavior improvements and participation. Therefore, the non-diet approach is a viable alternative to the diet approach and should be exercised in settings such as workplace healthy eating EBIs.

The HAES<sup>®</sup>, Health at Every Size approach to a healthy lifestyle promotes self-acceptance and well-being rather than weight-loss. This is achieved through intuitive eating and behavioral change intervention constructs. The HAES<sup>®</sup> intervention was tested by Carbonneau et al. (2016), in a sample of 216 women compared to a control group of 110 women.<sup>70</sup> The HAES<sup>®</sup> intervention consisted of thirteen 3-hour weekly meetings and a 6 hour intensive day Measures at post-intervention and one year follow-up found the women who participated in the HAES<sup>®</sup> intervention showed a significant improvement in diet quality and intuitive eating compared to the control group. The improvement in diet quality, although short-term, is considerable since the participants did not receive nutritional advice on healthier food choices yet there was a decrease in high-fat and high-sugar foods post-intervention. Despite the intensity of the intervention, findings from HAES<sup>®</sup> indicate that a non-diet approach to a healthy eating worksite EBIs can motivate beneficial health outcomes.

Clifford et al. (2015) completed a systematic review of non-diet approaches on health outcomes such as weight, body image, and mental health.<sup>71</sup> The findings of greatest



significance were seen in improved psychological assessments such as depression, self-esteem, disordered eating, and body image for the non-diet group. Inconsistent findings regarding biochemical measures and weight loss were seen in the non-diet interventions compared to diet interventions. Despite the inconsistency, the review clearly indicates the non-diet approach can result in improved variables beyond weight loss. Therefore, the non-diet approach can be a more fruitful approach to worksite EBI as it results in more, sustained beneficial health outcomes.

Schaefer et al. (2014) completed a similar review on non-diet interventions with consistent findings to Clifford and colleagues.<sup>72</sup> Measures of dietary restraint, restrictive dieting, physical activity, body satisfaction, and a drive for thinness improved significantly in participants in the studies thus suggesting improved eating behavior, lifestyle and body image. Participants also showed improved psychological measures of depression, ineffectiveness, anxiety, self-esteem, negative affect and quality of life. Of note, most psychological improvements, increased self-esteem, and decreased body dissatisfaction were sustained long-term. Participation and completion in the non-diet interventions were significantly high compared to average completion rates for interventions. These findings of improvement for participants support the non-diet intervention as a promising alternative to the diet approach for healthy eating worksite EBIs.

### Summary of Part 2 Literature Review

The current use of the Community Guide for healthy eating worksite EBI focuses on a diet approach to health. Diet-focused worksite EBIs show an initial weight loss reduction in a significant number of employees yet post-intervention there is gradual weight regain.<sup>58</sup> Nigg et al., found no association with healthy eating worksite EBIs and BMI.<sup>59</sup> Furthermore, employees face barriers and stigma in the workplace with a healthy eating worksite EBI. Such barriers include a lack of support, convenience, and lack of access to healthy foods.<sup>60</sup> Additionally a manipulation of a weight-focused EBIs was shown to induce weight bias in employees and promote weight stigma when the intervention emphasized individual responsibility.<sup>61</sup>

Dieting can result in metabolic syndrome, eating pathology, eating disorders, cardiometabolic disease, psychological disorders, hypertension, cancer, weight regain and general mortality.<sup>64-67</sup> Furthermore, upon weight loss, weight regain is common as a result of reductions in energy expenditure, hormone adaptive responses, and neural issues that motivate appetite.<sup>68</sup> Weight stigma as a secondary component can further influence negative health outcomes related to weight. Those who experience weight stigma, such as from healthy eating workplace EBIs, show increased cortisol levels and decreased self-regulation which can further abdominal adiposity and weight gain that cycles to more weight stigma from societal factors.<sup>62,63</sup> Due to these negative health outcomes from dieting and weight stigma, a non-diet approach to healthy eating EBIs may prove favorable for long-term health outcomes. Such interventions in the non-diet intervention have shown improvements in total energy expenditure, in total cholesterol, LDL, triglycerides, systolic blood pressure, diet quality, psychological assessments, and body satisfaction compared to controls or diet-focused interventions.<sup>69-72</sup> A non-diet approach has yet to identify with negative health outcome associations and should therefore be considered as a viable and healthful approach to worksite EBI.

## Chapter VII: Insight from Workplace Health and Wellness Employer Surveys

### Methods

This project consists of one primary survey data source. The survey was conducted from July 13<sup>th</sup> through July 31<sup>st</sup> during summer 2020.

#### ***Workplace Health and Wellness Survey***

The Workplace Health and Wellness Survey was developed by the HPRC project team and me, the MPH capstone student. The project team conducted the Workplace Health and Wellness Survey over a time period of three weeks from July 13<sup>th</sup> through July 31<sup>st</sup>. The anonymous survey was sent online using an email template from my graduate student address to management or human resources staff in small to mid-sized businesses. Monday through Friday, 25 emails were sent at 9:15 am to management or human resources staff in small to

mid-sized businesses. Email addresses were found through a convenience sampling in which small to mid-sized business owners in the Seattle, WA and Half Moon Bay, CA location were initially contacted. When those contacts were exhausted, the chamber of commerce website was used to locate small to mid-sized businesses in cities with a considerable amount of small businesses; San Diego, Napa, Denver, Nashville, Portland, Seattle, and Truckee. Emails were sent to management or HR staff emails available on their business website. Recruitment materials such as the email and script include the inclusion criteria and the survey also included screening questions. All recruitment activities for the survey were conducted remotely due to the COVID-19 pandemic.

The survey development was founded in Greenhalgh's diffusion of innovations framework and Roger's diffusion of innovation's theory<sup>73,74</sup> and included questions targeted to identifying the needs of small to mid-sized employers to implement the *Healthy Foods & Beverages Toolkit*. The survey included questions on employer receptibility to diet and non-diet approaches to worksite EBI that were grounded in Ellen Satter's evidence-based surveying practices.<sup>75</sup> The Workplace Health and Wellness Survey (Appendix A) was created for online distribution using the University of Washington's Catalyst platform. The anonymous survey consisted of 17 questions and was estimated to take approximately 10-15 minutes to complete. The first question screened participants for inclusion criteria (0-500 employees). If a participant answered "More than 500" employees at the worksite then the survey would route to the concluding page of the survey. If the participant passed the screening question, the next seven questions focused on background information. The following five questions were asked to determine employer perception of the toolkit, workplace health and wellness intervention implementation, and perception of non-diet to the diet approach. The last four questions aimed to identify toolkit-specific feedback and health promotion best implementation practices.

The survey distribution period was conducted remotely due to the COVID-19 pandemic. From July 13<sup>th</sup> through July 31<sup>st</sup>, recruitment emails were sent, and surveys were distributed online using a link. No incentives were provided to participants.

**Data Analysis.** Quantitative survey data was analyzed using simple descriptive statistics. Qualitative survey data was analyzed using a thematic approach in which each qualitative survey question was systematically reviewed to derive and classify themes. Survey responses were further analyzed by employer background information to determine themes within worksite composition. The open-ended data from the *Workplace Health and Wellness Survey* were analyzed using a grounded theory approach. The grounded theory approach is used to generate themes to describe, define, and specify relationships from the survey responses.<sup>76</sup> Each survey question was analyzed for common qualities and concepts were organized into categories upon identification. Each category is considered a code and each employer response could have more than one code. The full coded data are available in Appendix B.

## Results

Thirty-two employers completed the Workplace Health and Wellness Survey. However, one of the participants reported more than 500 employees, outside the inclusion criteria, at their workplace and was thus redirected to the end of the survey to thank them for their participation. Therefore, a total of 31 employers' responses were analyzed for recommendations with close to half with 0-20 employees (45%) (Table 1). The greatest number of respondents were from the Professional and Business Services industry (32%). Other and the Manufacturing industry had the second most respondents (16% and 13% respectively). Of the 31 participants, 28 reported the title of their position. All participants were either managers, owners, directors, or in a human resources position. Participants in the "Other (please specify):" category reported wine industry, insurance, hard cider industry, nonprofit, and property management as their industry.

**Table 1.** Demographics: Number and percentage of survey participants who answered the Workplace Health and Wellness Survey

Question	0-20 Employees	20-100 Employees	100-300 Employees	300-500 Employees	Total	Respondents in each industry
What is your organization's industry?	# of Respondents	# of Respondents	# of Respondents	# of Respondents	# of Respondents	% of Respondents
Construction	1	0	0	0	1	3%
Educational Services	1	0	2	0	3	10%
Government	0	0	0	0	0	0%

Financial Activities	1	0	1	0	2	6%
Information	0	0	0	0	0	0%
Leisure and Hospitality	0	2	0	1	3	10%
Health Care and Social Assistance	1	0	0	0	1	3%
Manufacturing	1	0	2	1	4	13%
Natural Resources and Mining	0	0	0	0	0	0%
Professional and Business Services	7	2	0	1	10	32%
Transportation and Warehousing	0	0	0	0	0	0%
Utilities	0	0	0	0	0	0%
Wholesale or Retail Trade	0	2	0	0	2	6%
Other (please specify)	2	2	1	0	5	16%
Total # Employees	14	8	6	3	31	
% of Respondents	45%	26%	19%	10%		

Among surveyed employers, the majority offered health insurance to their employees (81%) (Table 2). Over half of the employers did have experience offering an employee health or wellness program (52%). Notably, only one employer (7%) with 0-20 employees reported experience with an employee health or wellness program whereas the majority of employers with 0-20 employees did not have experience with an employee health or wellness program (71%). The majority of employers did not have a budget dedicated to health promotion or wellness (67%). Employers mainly utilized “food or beverages in common areas” (61%) or “food and beverages at meetings” (39%) as their on-site food and beverage services. In the “Other (please specify):” category, one employer reported that they provide free water and two employers reported providing coffee. One employer reported providing meals and two employers reported providing snacks randomly. The majority of employers reported being somewhat or very interested in promotion healthy foods and beverages at their organization (61% and 32% respectively).

Employers reported many challenges to promoting healthy foods and beverages to employees at their organization. The greatest being a lack of interest from employees (42%). Four employers in the “Other (please specify):” category reported that healthy eating is not a priority in their organization. One employer reported no challenges. One employer reported they did not have a formal healthy eating program. “Managing expectations”, “Employees already agree with healthy options”, and “How to promote healthy eating in a work from home environment” were also reported as challenges.

Forty-two percent of employers agreed with the statement “The nutritional health of employees depends on employees eating only healthy food (i.e. avoiding unhealthy food)”. Employers were most interested in free or low-cost programs for employees that address topics such as weight management, dieting, and avoiding unhealthy foods; free or low-cost programs for employees that address topics such as food enjoyment and meal planning; poster for their organization to promote nutrition guidelines such as lowering sugar consumption, drinking more water, and reducing calories; online or mobile-based apps for employees related to nutrition education and healthy foods and beverages. However, the majority of employers were interested in all the resources listed except for posters or other communication materials about reducing weight stigma (50% not at all interested).

Employers reported a variety of methods to communicate with employees about health and wellness. Employers were most likely to use email messages (61%), meetings (45%), Lunch & Learn presentations (35%), and bulletin boards (29%). Six employers in the “Other (please specify option):” reported use of face-to-face discussions with employees. The majority of employers (62%) reported that low-cost or free programs for employees related to weight management would best help their organization promote nutrition education and healthy eating among employees.

Employers with 20 or more employees indicated more interest in resources that used a non-diet approach to wellness such as posters for the organization to promote varied meal plans, a worksite policy focused on providing a wider variety of foods and beverages at their organization, and posters or other communication materials about reducing weight stigma. Employers with 20 or less employees were least likely to report interest in resources and employer could use to promote nutrition education to their employees.

**Table 2. Workplace Health and Wellness Survey- Multiple Choice**

	0-20 Employees	20-100 Employees	100-300 Employees	300-500 Employees	Total Respondents
Question	# (% respondents by size)	# (% respondents by size)	# (% respondents by size)	# (% respondents by size)	# (% total respondents)
Does your organization offer health insurance to employees?	n = 14	n = 8	n = 6	n = 3	n = 31
Yes	9 (64%)	7 (88%)	6 (100%)	3 (100%)	25 (81%)
No	5 (36%)	1 (13%)	0 (0%)	0 (0%)	6 (19%)
Unsure	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Does your organization have any experience offering an employee health or wellness program?	n = 14	n = 8	n = 6	n = 3	n = 31
Yes	1 (7%)	4 (50%)	4 (67%)	1 (33%)	10 (32%)
No	10 (71%)	2 (25%)	2 (33%)	2 (67%)	16 (52%)
Unsure	3 (21%)	2(25%)	0 (0%)	0 (0%)	5 (16%)
Does your organization have a budget dedicated to health promotion or wellness?	n = 13	n = 8	n = 6	n = 3	n = 30
Yes	1 (8%)	2 (25%)	3 (50%)	1 (33%)	7 (23%)
No	11 (85%)	4 (50%)	3 (50%)	2 (67%)	20 (67%)
Unsure	1 (8%)	2 (25%)	0 (0%)	0 (0%)	3 (10%)
Which of the following on-site food and beverage services does your organization provide?	n = 14	n = 8	n = 6	n = 3	n = 31
Cafeteria	0 (0%)	2 (25%)	0 (0%)	0 (0%)	2 (6%)
Food vending machine	1 (7%)	1 (13%)	1 (17%)	1 (33%)	4 (13%)
Beverage vending machine	0 (0%)	1 (13%)	2 (33%)	2 (67%)	5 (16%)
Food or beverages at meetings	5 (36%)	2 (25%)	4 (67%)	1 (33%)	12 (39%)
Food or beverages in common areas (e.g. a coffee bar)	7 (50%)	6 (75%)	5 (83%)	1 (33%)	19 (61%)
My organization does not provide on-site food or beverage services for employees	2 (14%)	1 (13%)	0 (0%)	0 (0%)	3 (10%)
Other (please specify)	2 (14%)	2 (25%)	0 (0%)	1 (33%)	5 (16%)
Which of the following best describes your level of interest in promoting health foods and beverages at your organization?	n = 14	n = 8	n = 6	n = 3	n = 31
I'm very interested in promoting healthy foods and beverages to employees at my organization.	6 (43%)	3 (38%)	1 (17%)	0 (0%)	10 (32%)
I'm somewhat interested in promoting healthy foods and beverages to employees at my organization.	7 (50%)	4 (50%)	5 (83%)	3 (100%)	19 (61%)
I'm not interested in promoting healthy foods and beverages to employees at my organization.	1 (7%)	1 (13%)	0 (0%)	0 (0%)	2 (6%)
What challenges do you think you would face in promoting healthy foods and beverages to employees at your organization? Select all that apply.	n = 14	n = 8	n = 6	n = 3	n = 31

Lack of interest from employees	5 (36%)	2 (25%)	5 (83%)	1 (33%)	13 (42%)
Not enough support from senior leadership	1 (7%)	1 (13%)	2 (33%)	1 (33%)	5 (16%)
Lack of funding	1 (7%)	2 (25%)	3 (50%)	3 (100%)	9 (29%)
Competing priorities	4 (29%)	4 (50%)	2 (33%)	0 (0%)	10 (32%)
Not enough staff time to manage promoting healthy foods and beverages	1 (7%)	2 (25%)	3 (50%)	3 (100%)	9 (29%)
Lack of knowledge on how to promote healthy foods and beverages to employees	3 (21%)	0 (0%)	1 (17%)	1 (33%)	5 (16%)
Our organization would not benefit from promoting healthy foods and beverages to employees	0 (0%)	1 (13%)	0 (0%)	0 (0%)	1 (3%)
Other (please specify):	7 (50%)	2 (25%)	2 (33%)	0 (0%)	11 (35%)
To what extent do you agree or disagree with the following statement: The nutritional health of employees depends on employees eating only healthy food (i.e. avoiding unhealthy food).	n = 14	n = 8	n = 6	n = 3	n = 31
Strongly agree	3 (21%)	1 (1%)	0 (0%)	0 (0%)	4 (13%)
Agree	7 (50%)	3 (38%)	3 (50%)	0 (0%)	13 (42%)
Neither agree nor disagree	1 (7%)	3 (38%)	2 (33%)	2 (67%)	8 (26%)
Disagree	2 (14%)	1 (13%)	1 (17%)	1 (33%)	5 (16%)
Strongly disagree	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1 (3%)
Free or low-cost programs for employees that address topics such as weight management, dieting, and avoiding unhealthy foods	n = 13	n = 8	n = 6	n = 3	n = 30
Not at all Interested	3 (23%)	1 (13%)	0 (0%)	0 (0%)	4 (13%)
Slightly Interested	2 (15%)	1 (13%)	0 (0%)	0 (0%)	3 (10%)
Moderately Interested	5 (38%)	3 (38%)	4 (67%)	3 (100%)	13 (43%)
Very Interested	2 (15%)	2 (25%)	2 (33%)	2 (67%)	8 (27%)
Extremely Interested	1 (8%)	1 (13%)	0 (0%)	0 (0%)	2 (7%)
Free or low-cost programs for employees that address topics such as food enjoyment and meal planning	n = 13	n = 8	n = 6	n = 3	n = 30
Not at all Interested	4 (31%)	1 (13%)	0 (0%)	1 (33%)	6 (20%)
Slightly Interested	2 (15%)	2 (25%)	3 (50%)	0 (0%)	7 (23%)
Moderately Interested	5 (38%)	2 (25%)	2 (33%)	1 (33%)	10 (33%)
Very Interested	1 (8%)	2 (25%)	1 (17%)	1 (33%)	5 (17%)
Extremely Interested	1 (8%)	1 (13%)	0 (0%)	0 (0%)	2 (7%)
Posters for your organization to promote nutrition guidelines, such as lowering sugar consumption, drinking more water, and reducing calories	n = 13	n = 8	n = 6	n = 3	n = 30
Not at all Interested	6 (46%)	2 (25%)	0 (0%)	0 (0%)	8 (27%)
Slightly Interested	2 (15%)	1 (13%)	2 (33%)	0 (0%)	5 (17%)
Moderately Interested	0 (0%)	0 (0%)	3 (50%)	2 (67%)	5 (17%)
Very Interested	3 (23%)	5 (63%)	1 (17%)	1 (33%)	10 (33%)
Extremely Interested	2 (15%)	0 (0%)	0 (0%)	0 (0%)	2 (7%)
Posters for your organization to promote varied meal plans	n = 13	n = 8	n = 6	n = 3	n = 30
Not at all Interested	8 (62%)	3 (38%)	0 (0%)	0 (0%)	11 (37%)
Slightly Interested	0 (0%)	0 (0%)	3 (50%)	1 (33%)	4 (13%)
Moderately Interested	1 (8%)	2 (25%)	3 (50%)	1 (33%)	7 (23%)



Very Interested	3 (23%)	3 (38%)	0 (0%)	1 (33%)	7 (23%)
Extremely Interested	1 (8%)	0 (0%)	0 (0%)	0 (0%)	1 (3%)
A worksite policy focused on reducing or eliminating unhealthy foods and beverages at your organization	n = 13	n = 8	n = 6	n = 3	n = 30
Not at all Interested	7 (54%)	4 (50%)	1 (17%)	2 (67%)	14 (47%)
Slightly Interested	1 (8%)	1 (13%)	3 (50%)	0 (0%)	5 (17%)
Moderately Interested	3 (23%)	0 (0%)	1 (17%)	1 (33%)	5 (17%)
Very Interested	1 (8%)	3 (38%)	1 (17%)	0 (0%)	5 (17%)
Extremely Interested	1 (8%)	0 (0%)	0 (0%)	0 (0%)	1 (3%)
A worksite policy focused on providing a wider variety of foods and beverages at your organization	n = 13	n = 8	n = 6	n = 3	n = 30
Not at all Interested	8 (62%)	3 (38%)	0 (0%)	0 (0%)	11 (37%)
Slightly Interested	1 (8%)	3 (38%)	4 (67%)	2 (67%)	10 (33%)
Moderately Interested	2 (15%)	1 (13%)	2 (33%)	1 (33%)	6 (20%)
Very Interested	1 (8%)	1 (13%)	0 (0%)	0 (0%)	2 (7%)
Extremely Interested	1 (8%)	0 (0%)	0 (0%)	0 (0%)	1 (3%)
A worksite policy prohibiting weight stigma at your organization	n = 13	n = 8	n = 6	n = 3	n = 30
Not at all Interested	5 (38%)	3 (38%)	3 (50%)	1 (33%)	12 (40%)
Slightly Interested	2 (15%)	2 (25%)	2 (33%)	2 (67%)	8 (27%)
Moderately Interested	2 (15%)	1 (13%)	1 (17%)	0 (0%)	4 (13%)
Very Interested	3 (23%)	1 (13%)	0 (0%)	0 (0%)	4 (13%)
Extremely Interested	1 (8%)	1 (13%)	0 (0%)	0 (0%)	2 (7%)
Posters or other communication materials about reducing weight stigma	n = 13	n = 8	n = 6	n = 3	n = 30
Not at all Interested	7 (54%)	4 (50%)	3 (50%)	1 (33%)	15 (50%)
Slightly Interested	4 (31%)	1 (13%)	1 (17%)	1 (33%)	7 (23%)
Moderately Interested	0 (0%)	1 (13%)	2 (33%)	1 (33%)	4 (13%)
Very Interested	1 (8%)	2 (25%)	0 (0%)	0 (0%)	4 (13%)
Extremely Interested	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Online or mobile-based apps for employees related to nutrition education and healthy foods and beverages	n = 13	n = 8	n = 6	n = 3	n = 30
Not at all Interested	5 (38%)	2 (25%)	0 (0%)	0 (0%)	7 (23%)
Slightly Interested	1 (8%)	2 (25%)	2 (33%)	1 (33%)	6 (20%)
Moderately Interested	2 (15%)	2 (25%)	2 (33%)	1 (33%)	7 (23%)
Very Interested	3 (23%)	1 (13%)	2 (33%)	1 (33%)	7 (23%)
Extremely Interested	2 (15%)	1 (13%)	0 (0%)	0 (0%)	3 (10%)
When communicating with employees about health and wellness, which of the following methods are you most likely to use? Select all that apply.	n = 14	n = 8	n = 6	n = 3	n = 31
Bulletin Boards	2 (14%)	2 (25%)	4 (67%)	1 (33%)	9 (29%)
Posters	1 (7%)	2 (25%)	3 (50%)	1 (33%)	7 (23%)
Postcards	0 (0%)	1 (13%)	0 (0%)	0 (0%)	1 (3%)
Newsletters	0 (0%)	2 (25%)	0 (0%)	1 (33%)	3 (10%)
Payroll Stuffers	0 (0%)	2 (25%)	1 (17%)	0 (0%)	3 (10%)
Mail to employees' homes	0 (0%)	1 (13%)	0 (0%)	0 (0%)	1 (3%)
Website	0 (0%)	1 (13%)	1 (17%)	1 (33%)	3 (10%)
Email messages	8 (57%)	4 (50%)	4 (67%)	3 (100%)	19 (61%)
Text messages	2 (14%)	2 (25%)	0 (0%)	0 (0%)	4 (13%)
Meetings	8 (57%)	4 (50%)	1 (17%)	1 (33%)	14 (45%)

Lunch & Learn presentations	4 (29%)	3 (38%)	3 (50%)	1 (33%)	11 (35%)
Other (please specify):	5 (36%)	1 (13%)	0 (0%)	0 (0%)	6 (19%)
Which of the following resources would help your organization promote nutrition education and healthy eating among employees at your organization? Select all that apply.	n = 12	n = 8	n = 6	n = 3	n = 29
A sample healthy foods and beverages policy you can edit to fit your organization	5 (42%)	2 (25%)	0 (0%)	0 (0%)	7 (24%)
A guide on how to promote and market healthy foods and beverages at your organization	5 (42%)	2 (25%)	4 (67%)	1 (33%)	12 (41%)
A guide on including healthy foods and beverages at your organization's meetings and events	7 (58%)	2 (25%)	2 (33%)	2 (67%)	13 (45%)
A list of healthy foods and beverages that can be added to worksite vending machines	2 (17%)	2 (25%)	1 (17%)	2 (67%)	7 (24%)
Flyers and posters to display at your organization promoting nutrition topics and tips	3 (25%)	5 (63%)	3 (50%)	2 (67%)	13 (45%)
Email templates and language to send to employees to promote nutrition topics and tips	5 (42%)	4 (50%)	2 (33%)	2 (67%)	13 (45%)
Low-cost or free programs for employees related to weight management	7 (58%)	5 (63%)	3 (50%)	3 (100%)	18 (62%)

### Short-Answer

Thirty-one employers responded to the Workplace Health and Wellness Survey (Appendix B). The survey respondents included 14 employers with 0-20 employees, 8 employers with 20-100 employees, 6 employers with 100-300 employees, and 3 employees with 300-500 employees. Four open-ended questions were provided. Twenty-eight employers answered the "Position Title" question. Twenty-seven employers responded to the question, "How would you define healthy eating for your employees". Twelve employers responded to the question, "Can you think of any additional resources not listed above that would help your worksite promote nutrition education and healthy eating among employees at your organization?". Seventeen employers responded to the question "Do you have any additional thoughts about promoting nutrition education and healthy eating at your organization?". Additionally, four questions provided an "Other (please specify):" option.

### Current Employee Health or Wellness Programs in Place.

Many employers who reported having experience with a health or wellness program in their organization described comprehensive health insurance offerings or a single wellness offering such as a gym membership discount (Appendix B). No employers described a complete health or wellness promotion program in their organization. A complete health or wellness promotion program would include a planned and organized combination of health education, social support, and resources available to employees to encourage healthy behaviors and health condition incidence.

#### **On-Site Food and Beverage Services.**

Some employers who contributed to the “Other (please specify):” category identified that they only served water or coffee or coffee and tea. The other employers that submitted an “Other (please specify):” response noted that the COVID-19 environment does not allow their usual offerings of food samples and meals. One of the employers identified this was because their employees were working from home and the other implied restrictions were put in place due to COVID-19 that would not allow giving food samples to their employees.

#### **Diet and Non-Diet.**

The majority of employers, when defining healthy eating for their employees, specified what employees should eat and should not eat. Foods cited that employees should eat included vegetables, fruit, whole grains, low-fat foods, and lean meats. Food cited that employees should not eat are sugar, processed food and too much salt. Employers also alluded to foods as treats or occasional exceptions to their employees’ diet such as pizza and candy. About half as many employees discussed themes of the non-diet approach compared to the diet approach.

The employees that discussed themes of the non-diet approach reported a healthy diet for their employees was a balanced diet with variety. One employer noted that they strive to provide a variety of food option onsite for their employees in support of a balanced and varied healthy diet. One employer reported community food events at their organization as a facet of healthy eating for their employees. Some employers included that healthy eating for their employees was providing time and space for their employees to cook their meal, eat their meal, and enjoy their meal.

#### **Employee Responsibility.**

About half of employers reported employees should dictate and manage their healthy eating habits. Some employers did not define healthy eating for their employees and rather claimed that employees should decide how to define healthy eating for themselves. Some employers reported that when employees make their own food, this behavior constitutes healthy eating. Other employers claimed that their workplace or employees already had the knowledge and behaviors necessary for healthy eating practices. Some employers reported that defining healthy eating for their employees is invasive and would not be well received by employees.

#### **Challenges to Healthy Foods and Beverages Promotion.**

Employers who utilized the “Other (please specify):” category in identifying challenges to healthy foods and beverages promotion claimed that healthy foods and beverages promotion was not applicable to their workplace, their workplace did not need to promote healthy foods and beverages, there was no infrastructure to promote healthy foods and beverages, and there was dissonance among workers in the organization regarding healthy foods and beverages.

#### **Communication About Healthy Foods and Beverages.**

Employers who utilized the “Other (please specify):” option claimed that face-to-face discussion with employees was a common mode of communication about healthy foods and beverages. Some employers identified this tactic as a result of the small and intimate size of their organization that allowed for such conversations to occur.

#### **Additional Resources.**

Employers provided varied responses when asked about additional resources employers desired to support healthy foods and beverages health promotion implementation. Of note, a few employers wanted referrals to suppliers to provide inexpensive and healthy food options to the organization. Some employers suggested informational teaching resources on healthy foods and beverages.

#### **Additional Thoughts About Promoting Healthy Foods and Beverages.**

One employer reported that exercise and behavior health should be considered when promoting healthy foods and beverages. Other employees expressed a desire upon finishing

the survey to implement or engage with healthy foods and beverages promotion in their organization.

## Discussion

Reflective of the literature, small to mid-size employers do not report having the components that constitute a comprehensive healthy foods and beverages promotion program at their organization due to a barrier such as lack of time, staff capacity, funding, and support from senior leadership. These barriers constitute a fundamental infrastructure needed to successfully implement a healthy foods and beverages promotion program at their organization. Also consistent with the literature, many employers feel that defining healthy eating for their employees is infringing on their employees' personal life and behaviors. This was a common theme in the survey in which almost half of employers claimed that healthy eating was to be defined by the employee and engagement with healthy eating behaviors was the responsibility of the employee. Furthermore, many employers reported a lack of interest or receptibility from employees regarding a healthy foods and beverages workplace health promotion implementation.

Despite employers reporting themes of employee responsibility to decide what to eat and drink, over half of employers defined how employers should participate in healthy eating behaviors by identifying what they should eat and what they should not eat. The diet mainly consisted of fruits, vegetables, whole grains, lean meats and avoidance of high-fat, sugar and too much salt in the diet. Although the majority of employers discussed a diet approach to healthy eating, 26% of employers did mention key themes of the non-diet approach when defining healthy eating for their employees such as eating or providing a variety of food, taking time and space to enjoy food, and eating with others. This observation indicates receptibility to implement a non-diet approach to healthy foods and beverages workplace health promotion.

Employers were most interested in free or low-cost programs and posters using the diet approach to healthy eating. However, employers were also interested in free or low-cost programs for employees using a non-diet approach. Although employers were slightly more interested in the diet approach for posters and a free or low-cost program, employers were

more interested in a non-diet worksite policy. This implies there is receptibility to a non-diet approach to employee health promotion. Furthermore, excluding the poster or other communication materials about reducing weight stigma, the majority of employers expressed interest in all resources listed in the survey. Most employers would use bulletin boards, email messages, and meetings to promote healthy foods and beverages to their employees.

Employers reported a variety of resources when asked to provide additional resources they wanted to use to implement healthy foods and beverages in their workplace. This aligns with the majority of employers' interest in the listed resources in the survey because the majority of employers did not have a program in place nor the resources for implementation. Another common theme was the lack of a health environment within the organization. The majority of employers discussed the dissonance between employees and employers regarding healthy eating behaviors. Healthy eating-focused WHP appeared to be defined as an addition to employers workplace rather than a implementation that represented the organization's values and health beliefs. Employers differed in their definition and actions to support employees in healthy eating that can result in dissonance and a lack of clarity posing a barrier to effective best practice implementation of healthy foods and beverages promotion.

The main strength of these findings is the number of 0-20 employers who responded to the survey. A limitation, however, is the low number of total employer responses. This was due to the current Covid-19 climate in which recruitment was only available over email and many employers were focused on altering their workplace to adhere to the COVID-19 restrictions. Due to the small sample size and convenience sample, there is a potential lack of generalizability of the responses to small-to-midsized employers across the United States.

Overall the results from the Workplace Health and Wellness survey suggest small to mid-size employers lack the necessary infrastructure to implement best practice WHP. The results also suggest that the majority of employers define healthy eating using a diet approach but there is receptibility to a non-diet approach to healthy eating. Furthermore, there is a lack of consistency and environmental implementation of healthy eating values by the employers due to fear of infringing on employees' personal behaviors and dissonance with healthy eating beliefs and desired resources. Establishing a clear health environment through low-cost and

time-saving resources using outlets of communication such as bulletin boards, email messages, and meetings may help foster best practice implementation of WHP.

## Chapter VIII: Recommended Strategies to Best Practice Implementation of EBI and Non-diet Receptibility

Strategies to reduce employer barriers to best practice EBI implementation have the potential to increase EBI implementation in small to mid-size worksites to improve equitable access to healthy eating. The following strategies were developed by reconciling best practices for EBI implementation and healthy eating from the literature and employer feedback from the Workplace Health and Wellness Survey. Of note, this data is minimal in representation of food-based industries. Therefore, the data is limited to provide significant guidance for food-based industries and future research is needed specific to the sector.

### **1. Educate employers on common misconceptions with workplace wellness.**

Consistent with the literature, employers believe that employees would not be receptive to a healthy eating EBI or that advising employees on healthy eating behaviors is infringing on their autonomy.<sup>25,31</sup> Employer responses from the Workplace Health and Wellness Survey indicate that a lack of interest from employees is the most cited challenge in promoting healthy foods and beverages at their organization (42%). In open-ended questions employers also noted their distaste in providing healthy eating support for their employees in the workplace due to worries of pleasing employees and supporting employee autonomy. However, the majority of employees feel that employers should play a role in improving employees health.<sup>31</sup> Furthermore, disseminating evidence-based interventions in small, low-wage worksites has increased employees' perception of greater support for their health by their employers.<sup>9</sup> Employers also identified comprehensive health insurance and benefits as their company having experience with health and wellness programs (29%). However, a comprehensive health and wellness program includes five elements: (a) health education, (b) employee services links, (c) supportive workplace environment for health improvement (d) integration of the EBI values into the company culture, and (e) employee follow-up and post

measurements.<sup>31</sup> Therefore, educating employers on facets of the healthy eating EBI will result in shared beliefs and collective action in which employers and employees thoroughly contribute to the implementation effort will increase change efficacy.<sup>55</sup>

## **2. Construct a culture of health.**

Employers in the Workplace Health and Wellness Survey did not indicate shared beliefs and common values in the organization and among employees and employers. Employers would define healthy eating for their employees and 61% provided food or beverages in common areas but many employers did not want to infringe healthy eating behaviors on their employees. Thirty-two percent of employers also expressed experience with offering an employee health or wellness program, but these offerings were not cohesive or comprehensive. Considering 93% of employers indicated interest in promoting healthy foods and beverages at their organization, constructing a culture of health using consistency, transparency, and commitment may improve efficacy of healthy eating EBI implementation. The worksite environment can become a strong EBI implementation climate if there is consistency and clarity of policy and practices that exhibit a collective sense of the company's priorities and how the company will implement the supports.<sup>25,55,57</sup> A worksite can best implement a healthy eating EBI when the employer embodies values of the healthy eating EBI in their company culture rather than expecting the employee to be responsible for their health management.<sup>25,55,57</sup> To create a culture of health, leaders in the company must exemplify health behaviors, implement policies and practices, and ensure sustained program duration.<sup>57</sup> Strategic communications regarding the healthy eating EBI implementation need to be transparent, explain the program's purpose, and need to be tailored and targeted to each employee.<sup>57</sup>

## **3. Implement Low-cost and low-time commitment resources.**

Consistent with the literature, small to mid-sized employers lack the capacity, funding and infrastructure to implement a comprehensive healthy eating EBI.<sup>25,31</sup> Sixty-seven percent of employers from the Workplace Health and Wellness Survey reported no budget dedicated to



health promotion or wellness. Employers reported a lack of funding (29%), and not enough staff time to manage promoting healthy foods and beverages (29%) as significant barriers to promoting healthy foods and beverages to their employees at their organization. Creating clear and consistent resources that are low-cost and need a low-time commitment can best address these barriers.<sup>55</sup> Providing the employer with tailored behavior-change messages for employees in the healthy eating EBI can support employee self-care and self-management.<sup>25</sup> Such additions to the healthy eating EBI can include a goal-setting document for the employer to provide the employee, email templates, and posters.<sup>25,57</sup> The use of many channels free to the employer such as email and posters coupled with optimum timing, frequency, and placement of the messaging can best address cost and capacity challenges.<sup>57</sup> Small to mid-sized employers need instruction, templates, and posters to best implement these practices using time-saving techniques.

#### **4. Explore the non-diet approach to healthy eating EBI implementation.**

The majority of employers from the Workplace Health and Wellness Survey indicated interest in resources from the diet and non-diet approach. Furthermore, employers were concerned with defining healthy eating for their employees and implementing a healthy eating EBI due to perceptions of infringing on employee's autonomy. These findings support the consideration of using a non-diet approach to healthy eating EBI worksite implementation. The non-diet approach does not tell participants what to eat and what not to eat but rather stresses eating enough, eating a variety, trying new foods, and body size acceptance. Employers can provide a variety of foods consistently in the workplace rather than only "healthy" food. Resources created for employers can use inclusive language emphasizing diverse diets and foods. Using a diet focused healthy eating EBI can result in weight stigma which is harmful to employee health.<sup>61</sup> Furthermore, the Healthy Eating EBI was created based on weight-loss outcomes, however most weight loss that occurs with dieting is not sustained beyond five years and can result in metabolic disturbances.<sup>64-68</sup> Non-diet interventions have shown to result in many beneficial health outcomes and have yet to indicate negative health outcomes.<sup>69-72</sup> Post-evaluation of a non-diet implementation to employee health and wellness will be necessary to

examine best practice outcomes. Such evaluation can include biometrics such as cholesterol, triglycerides, LDL, and total energy expenditure in addition to psychological measures such as anxiety, self-esteem, negative affect, and quality of life. Exploring the facets of the non-diet approach and replicating them to a healthy eating EBI with proper evaluation may show increased participation, sustained health outcomes, and support the development of a culture of health at the workplace.

## Chapter IX: Summary

The goal of this project was to support HPRC in their efforts to improve best practice implementation of their *Healthy Foods and Beverages* EBI by reviewing the literature, analyzing employer responses to a Workplace Health and Wellness Survey, and proposing actions to take for further healthy eating EBI implementation. Healthy Eating EBI supports employees in healthy behaviors that in turn can improve health outcomes. The use of the non-diet approach is emerging in the literature as a worksite EBI implementation through the Ellyn Satter Institute. Findings from the literature reveal support for the non-diet approach to healthy eating EBI implementation using best practice techniques to motivate sustained outcomes. Recommended actions for HPRC include: 1) Educate employers on common misconceptions with workplace wellness; 2) Construct a culture of health; 3) Implement low-cost and low-time commitment resources; and 4) Explore the non-diet approach to healthy eating EBI implementation.

## Appendix A

The University of Washington is conducting a survey to evaluate a workplace health promotion program designed for small and mid-sized employers. You are invited to participate in this survey if you work in a management or human resources position at a small or mid-size employer (0-500 employees).

Your participation in this survey is voluntary. If you decide to participate in this survey, you may end the survey at any time. The survey will take approximately 10-15 minutes to complete and your responses will be anonymous. We will not collect any identifying information such as your name, email address, or IP address. There are no incentives for participating in this survey.

The results of this survey will be used by the research team to make improvements to a workplace health promotion program. If you have any questions about the research study or survey, please contact Alexandra Garrity at [garrita7@uw.edu](mailto:garrita7@uw.edu).

Clicking “Next” indicates that:

- you have read the above information
- you voluntarily agree to participate
- you are at least 18 years of age

### Screening Question

1. How many employees does your organization employ?
  - a. 0-20
  - b. 20-100
  - c. 100-300
  - d. 300-500
  - e. More than 500

### Background Questions

2. What is the title of your position at your organization?
3. What is your organization's industry?
  - Construction
  - Educational Services
  - Government
  - Financial Activities
  - Information
  - Leisure and Hospitality
  - Health Care and Social Assistance

- Manufacturing
  - Natural Resources and Mining
  - Professional and Business Services
  - Transportation and Warehousing
  - Utilities
  - Wholesale or Retail Trade
  - Other (please specify):
4. Does your organization offer health insurance to employees?
    - a. Yes
    - b. No
    - c. Unsure
  5. Does your organization have any experience offering an employee health or wellness program?
    - a. Yes
    - b. No
    - c. Unsure
  6. [If yes] Please briefly describe your organization's experience with health or wellness programs:
  7. Does your organization have a budget dedicated to health promotion or wellness?
    - a. Yes
    - b. No
    - c. Unsure
  8. Which of the following on-site food and beverage services does your worksite provide? Select all that apply.
    - a. Cafeteria
    - b. Food vending machine
    - c. Beverage vending machine
    - d. Food or beverages at meetings
    - e. Food or beverages in common areas (e.g. a coffee bar)
    - f. Other (please specify):
    - g. My worksite does not provide on-site food or beverage services for employees

#### Perception Questions

9. How would you define healthy eating for your employees?
10. Which of the following best describes your interest in promoting healthy foods and beverages at your organization?
  - a. I'm very interested in promoting healthy foods and beverages to employees at my organization.
  - b. I'm somewhat interested in promoting healthy foods and beverages to employees at my organization.
  - c. I'm not interested in promoting healthy foods and beverages to employees at my organization.

11. What challenges do you think you would face in promoting healthy foods and beverages to employees at your organization? Select all that apply.
- a. Lack of interest from employees
  - b. Not enough support from senior leadership
  - c. Lack of funding
  - d. Competing priorities
  - e. Not enough staff time to manage promoting healthy foods and beverages
  - f. Lack of knowledge on how to promote healthy foods and beverages to employees
  - g. Our organization would not benefit from promoting healthy foods and beverages to employees
  - h. Other (please specify):
12. To what extent do you agree or disagree with the following statement: The nutritional health of employees depends on employees eating only healthy food (i.e. avoiding “unhealthy” food).
- a. Strongly agree
  - b. Agree
  - c. Neither agree nor disagree
  - d. Disagree
  - e. Strongly disagree

### Toolkit-Specific Questions

The following table lists examples of resources that an employer could use to promote nutrition education to their employees. For each example, please select your level of interest in using this type of resource at your own organization.

	Not at all interested	Slightly interested	Moderately interested	Very interested	Extremely interested
Free or low-cost programs for employees that address topics such as weight management, dieting, and avoiding unhealthy foods					
Free or low-cost programs for employees that address topics such as food enjoyment and meal planning					

Posters for your organization to promote nutrition guidelines, such as lowering sugar consumption, drinking more water, and reducing calories					
Posters for your organization to promote varied meal plans					
A worksite policy focused on reducing or eliminating unhealthy foods and beverages at your organization					
A worksite policy focused on providing a wider variety of foods and beverages at your organization					
A worksite policy prohibiting weight stigma at your organization					
Posters or other communication materials about reducing weight stigma					

Online or mobile-based apps for employees related to nutrition education and healthy foods and beverages					
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13. When communicating with employees about health and wellness, which of the following methods are you most likely to use? Select all that apply.

- Bulletin boards
- Posters
- Postcards
- Newsletters
- Payroll stuffers
- Mail to employees' homes
- Website
- Email messages
- Text messages
- Meetings
- Lunch & Learn presentations
- Other (please specify):

14. Which of the following resources would help your worksite promote nutrition education and healthy eating among employees at your organization? Select all that apply.

- A sample healthy foods and beverages policy you can edit to fit your organization
- A guide on how to promote and market healthy foods and beverages at your organization
- A guide on including healthy foods and beverages at your organization's meetings and events
- A list of healthy foods and beverages that can be added to worksite vending machines
- Flyers and posters to display at your worksite promoting nutrition topics and tips
- Email templates and language to send to employees to promote nutrition topics and tips
- Low-cost or free programs for employees related to weight management

15. Can you think of any additional resources not listed above that would help your worksite promote nutrition education and healthy eating among employees at your organization?

16. Do you have any additional thoughts about promoting nutrition education and healthy eating at your organization?

## Appendix B

### Healthy Foods and Beverages Survey Free Response Questions Key Categories and Themes

31 number total survey respondents

113 number free response answers coded and analyzed\*

\*Nonsensical/uninformative answers were excluded from coding (example: Question-Do you have anything more to add? Answer-No)

#### Questions:

- What is the title of your position at your organization?  
(28 respondents, 90% of total respondents)
- Industry: [Other \(please specify\)](#):  
(5 respondents, 16% of total respondents)
- Please briefly describe your organization's experience with health or wellness programs:  
(9 respondents, 90% of total respondents)
- Which of the following on-site food and beverage services does your worksite provide? Select all that apply. [Other \(please specify\)](#)  
(5 respondents, 16% of total respondents)
- How would you define healthy eating for your employees?  
(27 respondents, 87% of total respondents)
- What challenges do you think you would face in promoting healthy foods and beverages to employees at your organization? Select all that apply. [Other \(please specify\)](#)  
(12 respondents, 39% of total respondents)
- When communicating with employees about health and wellness, which of the following methods are you most likely to use? Select all that apply. [Other \(please specify\)](#)  
(6 respondents, 19% of total respondents)
- Can you think of any additional resources not listed above that would help your organization promote nutrition education and healthy eating among employees?  
(7 respondents, 23% of total respondents)



- Do you have any additional thoughts about promoting nutrition education and healthy eating at your organization?  
(14 respondents, 45% of total respondents)

**Code:** **Position**- workplace title; job description

(occurred 28 times)

Key themes and representative quote(s):

- I. Many respondents were owners of the business, in senior positions, and in human resources
  - a. Employers with the title of Owner, Director, President, or Human Resources was the most common.
    - i. "Owner"- respondent 19964734, respondent 19946484, respondent 19942783, respondent 19940974, respondent 19945535
    - ii. "CFO of Chief Financial Officer"- respondent 19964525, respondent 19960737
    - iii. "Executive Assistant"- respondent 19962518
    - iv. "Partner"- respondent 19961637, respondent 19948078, respondent 19942251
    - v. "VP or Vice President or Senior Vice President"- respondent 19961045, respondent 19955088, respondent 19952628, respondent 19942242
    - vi. "President"- respondent 19961025, respondent 19945122, respondent 19944258, respondent 19944125
    - vii. "HR or Human Resources"- respondent 19961045, respondent 19947637, respondent 19945535, respondent 19942284, respondent 19942242
    - viii. "Executive Director or Director or Senior Director"- respondent 19948185, respondent 19942479, respondent 19946090, respondent 19942255, respondent 19942220

- ix. "Manager"- respondent 19942882
- x. "Chiropractor"- respondent 19941797

**Code: Industry**- field of work; industry descriptor

(occurred 5 times)

Key themes and representative quote(s)

- I. One participant identified their business being involved in multiple industries
  - i. "We manufacture hard cider, have a tasting room, sell both retail and wholesale"- respondent 19942882
- II. A couple other participants identified industries not identified on the available list
  - i. "Property Management"- respondent 19955088
  - ii. "Nonprofit"- respondent 19946090
  - iii. "Insurance"- respondent 19942479
  - iv. "Wine Industry"- respondent 19942242

**Code: Employee Wellness Benefits** – specific employee benefits; wellness programs; wellness resources;

(occurred 9 times)

Key themes and representative quote(s)

- I. Comprehensive employee benefits were identified by employers as part of their experience with health or wellness programs
  - a. Medical, dental and vision were commonly identified as wellness offerings as well as the Employee Assistance program.
    - i. "We offer medical, dental, vision and EAP"- respondent 19964525
    - ii. "We provide a full menu of medical, dental, life, disability insurance and a range of coverage from which our employees can assemble the plan that best suits their needs."- respondent 19952628

- iii. “In addition to offering comprehensive health insurance...”- respondent 19942231
    - iv. “Part of our medical insurance coverage also includes an EAP (Employee Assistance Program)”- respondent 19946534
    - v. “Aetna Employee Assistance Program, Aetna-Telemedicine, Personal Health Advocacy”- respondent 19948185
    - vi. “We offer free chiropractic care for our employees”- 19941797
- II. Employers offered wellness programs to employees
  - a. One employer identified the wellness program as a partnership with their health insurance company
    - i. “...we have had a series of wellness programs on our premises conducted in conjunction with our health insurance providers and our HR & Benefits staff.” – respondent 19946534
  - b. One employer identified offering a wellness program and educating mid-size employers on wellness programs.
    - i. “We do health and wellness productivity programs internally for our company and on a more complex level consult for mid-size employers on a full range of engaged wellness and productivity programs.” – respondent 19942479
  - c. One employer identified a wellness reimbursement program.
    - i. “We offer a wellness reimbursement program every month. up to \$50 for qualified expenses (gym, eating program, exercise equipment etc...)”- respondent 19942284
  - d. One employer reported a fitness center discount.
    - i. “Fitness center discounts”- respondent 19960737
- III. Employers offered wellness resources that did not constitute a wellness program.
  - a. One employer reported providing health and wellness fairs.
    - i. “...health & wellness fairs”- respondent 19960737

- b. One employer reported meetings conducted by their insurance partner to provide insight on available health benefits.
  - i. “At insurance renewal time each year, our insurance agents, along with reps from the various health insurance providers, conduct meetings to not only explain benefits anew, but also provide any additional, helpful advice and instruction with the changing face of medical benefits.”- respondent 19946534
- c. One employer reported providing periodic classes.
  - i. “...we have periodically offered in-person and online resources on wellness, mindfulness, financial literacy, weight loss, stress reduction, yoga and other health and wellness topics.”- respondent 19942231

**Code:** [Free Food Offerings](#) – beverages; meals or samples

(occurred 4 times)

Key themes and representative quote(s)

- I. Employers reported offering beverages on-site to employees.
  - a. Some employers offered one beverage on-site for their employees and did not select any other option.
    - i. “Coffee”- respondent 19955088
    - ii. “Aqua tru filtered water is offered”- respondent 19941797
  - b. One employer offered coffee and tea on-site for employees.
    - i. “We provide coffee and tea..”- respondent 19946534
- II. Employers reported providing meals or samples to employees but are not currently offering this option due to the COVID-19 pandemic restrictions.
  - a. “...since we are a distributor of specialty food items, we at times have samples for our employees. At this present time, however, with the Covid restrictions, we have dispensed with the offerings of food” – respondent 19946534

- b. “meals provided (pre-COVID, when in office not WFH)”- respondent 19962518

**Code:** Diet – What to eat; What not to eat; bad foods

(occurred 16 times)

Key themes and representative quote(s)

- I. Employers defined healthy eating for their employees with a diet and avoidance of certain foods in meals and snacks.
  - a. Many employers identified a diet with vegetables, fruit, whole foods, nuts, and lean meats as healthy eating in addition to avoiding processed food, sugar, flour.
    - i. “Eating a plant-based diet that is low in sugar and flour and minimizes any processed food”- respondent 19940974
    - ii. “Sustained, organic natural foods. No junk food”- respondent 19942220
    - iii. “Emphasizes fruits, vegetables, whole grains, and fat-free or low-fat milk and milk products. Includes lean meats, poultry, fish, beans, eggs, and nuts. Is low in saturated fats, trans fats, cholesterol, salt (sodium), and added sugars.”- respondent 19942479
    - iv. “Low carbs, low sugar, non-processed foods”- respondent-19964525
    - v. “Balanced diet, limit processed foods, focus on fresh fruits/veggies and some healthy meat or protein”-respondent 19962518
- II. Employers defined healthy eating for their employees by implying certain foods as treats or occasional meals not to be had often.
  - a. Many employers defined a healthy diet and then implied that certain foods were treats to be had occasionally.
    - i. “Fresh fruits and vegetables with selective proteins. Occasionally we throw in pizza.....”-respondent 19942251

**Code:** Non-diet – Variety; Space for employees to make food; Enjoying food together  
(occurred 8 times)

Key themes and representative quote(s)

- I. Employers defined healthy eating for their employees as having a balanced variety of many foods
  - i. “A balanced combination of fruits, vegetables, protein, and carbohydrates.”- respondent 19942783
  - ii. “Mixed foods”- respondent 19944258
  - iii. “When we provide lunches for office meetings, we always try to have a variety of options.”-respondent 19952628
- II. Employers define healthy eating for employees as providing a space where employees can cook, make themselves food, and eat their food.
  - i. “Our company provides a noise safe, clean luncheon/break area, including refrigeration, appliances for heating and cooking foods and has tables and chairs for seating.”-respondent 19945535
  - ii. “Eating away from their desks, making meals at home and bringing them to work, taking a break and walking to get lunch.”-respondent 19946090
- III. Employers define healthy eating for employees as providing time and space where employees can enjoy food with others.
  - i. “Employees enjoy the ability to bring their lunches and morning snacks from home and have a place to relax and visit with co-workers over a meal. The Company also holds Company BBQ's once/month and provides healthy choices of foods/drinks for the group to enjoy. We often tie this in with a company meeting bringing company news or safety discussions to everyone.”- respondent 19945535
- IV. Employers reported interest in the non-diet approach
  - i. “Webinars about the difference between “Diets” and “Healthy Eating.”-respondent 19946484

**Code:** [Employee Responsibility with what they eat](#) – Employees bring their own meals; Employers shouldn't define healthy eating for employees; Employees should choose what they want to consume

(occurred 15 times)

Key themes and representative quote(s)

- I. Employers did not define healthy eating for their employees.
  - i. "We don't"- respondent 19942231
  - ii. "Personal choice based on their health requirements."-respondent 19946484
  - iii. "I don't really get into that, but healthy diet, goes along with exercise and work/life balance. It's really up to each employee to take care of themselves."- respondent 19952628
- II. Employers reported that healthy eating is when employees make their own food.
  - i. "They fix it themselves"-respondent 19945122
  - ii. "They bring their own meals"-respondent 19955088
- III. Employers believe their current employees and workplace aligns with nutrition education and healthy eating.
  - i. "My employees are highly educated HR consultants and they all have an understanding of what healthy eating entails."-respondent 19944125
  - ii. "Outside of leading by example, sharing my food, can't think of any benefit to a more formal approach."-respondent 19942882
  - iii. "I don't really need to promote healthy eating because everyone is aware of what that entails and they generally don't have bad habits"- respondent 19944125
  - iv. "We are in the restaurant business so food is our business. We try to feed our employees healthy nutritious foods and beverages."- respondent 19942251

- IV. Employers believe promoting nutrition education and healthy eating at their organization is not what the employees want and is invasive.
  - a. Employers report that nutrition education and healthy eating are not well received by employees in the workplace
    - i. “We Are food and beverage industry. These are all great but I’m not sure how it would be received.”- respondent 19940974
    - ii. “It's really a mind-share challenge. People are very busy and we throw a lot at them as part of their job. I think these types of messages get a little lost on the shuffle of work and at our organization, health and eating would generally be seen as a personal rather than work domain.”- respondent 19942231
    - iii. “With long term, experienced employees it would be difficult to raise this subject without appearing to judge or invade privacy. We have chosen to simply provide the healthy options.”-respondent 19961637

**Code:** [Challenges to promoting healthy foods and beverages](#)– Employers are not interested in promoting healthy food and beverages, Employers do not have a formal healthy eating program in place, differing beliefs about healthy eating in the workplace  
(occurred 8 times)

Key themes and representative quote(s)

- I. Employers reported that they do not need to place healthy foods and beverages workplace promotion as part of their responsibilities nor is it applicable.
  - i. “We are here to work. Food is not part of employment.”-respondent 19964734
  - ii. “Our employees agree with healthy options.”-respondent 19961637
- II. Employers reported they do not have a program in place to support healthy eating
  - i. “We don’t have a formal onsite food program”-respondent 19942231



- III. Employers face differing opinions in the workplace as what constitutes healthy eating
  - i. “What some people feel is healthy, others do not. I find it very difficult to manage everybody's expectations.”- respondent 19942255

**Code:** [Communication from Employers to Employees about health and wellness](#) – additional methods of communicating with employees that were not posted as an option in the survey. (occurred 6 times)

Key themes and representative quote(s)

- I. Employers reported talking to employees is the way in which they communicate with employees about health and wellness
  - a. Employers discuss using face-to-face discussion as a method they are most likely to use when communicating with employees about health and wellness.
    - i. “Talking to them”- respondent 19941797
    - ii. “Discuss face to face”- respondent 19962518
  - b. Employers identified that they talk to one another using informal discussions about employee health and wellness due to the small size of the business.
    - i. “We are small enough to just talk to each other”- respondent 19944125
    - ii. “Casual conversation. We are a very small, family biz.”-respondent 19942882
    - iii. “We are a very close-knit organization--a family, if you will, who take much interest in promoting good health for each other. The only thing that we could add is to continue to remind and promote good nutrition.”- respondent 19946534

**Code:** [Additional Resources to help promote nutrition education and healthy eating among employees](#)– Resources; Suppliers; Informational sessions; No Resources

(occurred 8 times)

Key themes and representative quote(s)

- I. Employers reported a variety of additional resources that would help the organization promote nutrition education and healthy eating among employees
  - a. One employer reported a comprehensive list of resources.
    - i. “Workforce challenges and competitions, Incentive based programs to engage in health eating lifestyles, health eating coaches, counseling on health eating, success stories on healthy eating”- respondent 19942479
  - b. Two employers reported a need for where to source healthy eating options for the workplace.
    - i. “We would enjoy lunches being delivered that were healthy and inexpensive.”- respondent 19944125
    - ii. “list of vendors to supply healthy options”- respondent 19948185
  - c. Employers reported a desire for informational teaching sessions
    - i. Webinars about the difference between “Diets” and “Healthy Eating.”-respondent 19946484
    - ii. “In person training on the effects of healthy eating (and other habits) to sustain an employee during the long, sometimes stressful workday.”-respondent 19961637
    - iii. “Perhaps provide healthy cooking classes to make it more interactive and fun. Educate people on apps that help with healthy eating.”- respondent 19942242
- II. One employer reported that it should not be the employers’ responsibility or part of the job to address healthy eating and nutrition education in the workplace.

- i. “I have not even considered talking with employees about THEIR eating choices. As an employer, I feel it is not my business to address this. I understand the value of food choices but I hire people to work and get the job done. What employees eat or drink is not my concern. If I were an employee perhaps seeing posters would be a good reminder but I certainly would think it invasive if they probed me on what to consume which would likely be limiting to my wants and desires.”- respondent 19964734

**Code:** [Expanding the discussion surrounding healthy eating promotion in workplaces](#)– What should be part of the discussion; Employers wanting to explore or implement healthy eating promotion opportunities  
(occurred 4 times)

Key themes and representative quote(s)

- I. One employer identified what was lacking in the survey content on healthy eating promotion in workplaces.
  - i. “I think exercise and behavior health should be a part of the discussion when evaluating healthy eating practices”- respondent 19942479
- II. Other employers wanted to engage with healthy eating promotion in their workplace and offered other avenues for implementation.
  - i. “I have not given much thought to promoting nutrition at our facility beyond what I've described and find this an interesting challenge to expand our future focus on nutrition for all our employees. Our group, thankfully, places a high regard to sound nutrition in general and this could surely be an area we can expand on together.”- respondent 19945535

- ii. "It's a hard thing to do, but probably worth it" - respondent  
19952628

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