

# PSE PLAYBOOK

Implementing Policy, System, &  
Environmental Change in Our Communities





This playbook was written for the UCSF Champion Provider Fellowship. The Champion Provider Fellowship was launched in 2014 to empower, train, and support healthcare providers to use their expertise and respected voices to improve the health of communities through local policy, systems, and environmental changes.

To learn more, visit [championprovider.ucsf.edu](http://championprovider.ucsf.edu).

# Table of Contents

**2**  
Introduction

**8**  
Putting Ideas Into Action

**18**  
Healthy Food and Beverage Standards

**24**  
Food Security

**30**  
School Wellness

**40**  
Safe Routes to School

**46**  
Structured Physical Activity

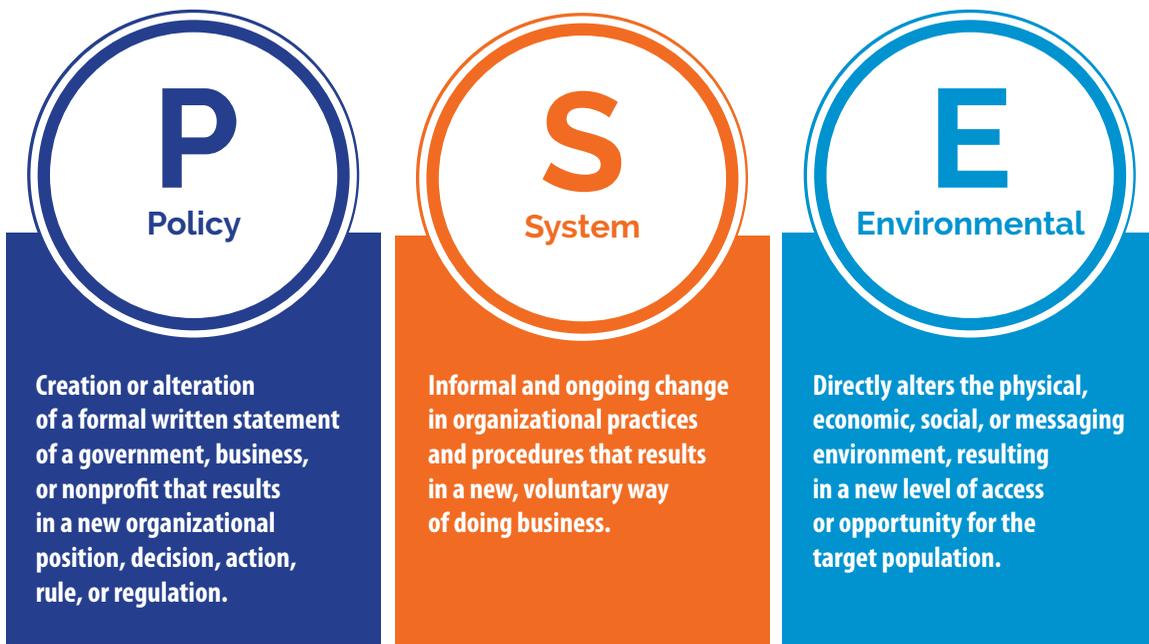
**52**  
References

A child wearing a red jacket and blue sneakers with red accents is stepping on a puddle on a gravel path. The child's hands are visible, holding the sides of the jacket. The background is a blurred outdoor setting with green grass and brown soil.

# What Is PSE change?

## **PSE change is vital to creating** **HEALTHY COMMUNITIES** across California.

Imagine a healthy community. Families have access to nutritious food, children can safely walk and bike to school, seniors are active, and residents have the opportunities and resources they need to lead an active and nourishing life. Policy, system, and environmental (PSE) change refers to interventions that affect the upstream causes of health—broad societal conditions such as access to nutritious food and opportunities for physical activity.<sup>1</sup> PSE change is vital to creating healthy communities across California.



# What Are the *DIFFERENCES* Between P, S, and E Change?

Policy, system, and environmental change can vary in sustainability, scale, and scope. Policy change is generally more complex and can be more time-consuming to accomplish than a system or environmental change. Often system and environmental changes build toward a policy change, but they can also be implemented on their own to promote health. The table below lists some benefits and considerations to keep in mind when working on each type of change.



	BENEFITS	CONSIDERATIONS
Policy	<ul style="list-style-type: none"> <li>• Formal decision or course of action</li> <li>• Binding</li> <li>• Sets out a general approach to be applied broadly</li> </ul>	<ul style="list-style-type: none"> <li>• Often requires a substantial amount of time and effort</li> <li>• Implementation could be challenging, depending on scope or affected area</li> </ul>
System	<ul style="list-style-type: none"> <li>• Focused on changing organizational procedures and practices</li> <li>• Impacts all elements of an organization, institution, or system</li> </ul>	<ul style="list-style-type: none"> <li>• Change is limited to an organization; however, changes in an organization can affect other associated institutions.</li> </ul>
Environmental	<ul style="list-style-type: none"> <li>• Physical and observable changes in the environment can lead to health benefits themselves and do not necessarily require policy or system change to implement</li> <li>• Can generally be accomplished with less time and fewer resources than system change or policy change</li> </ul>	<ul style="list-style-type: none"> <li>• Implementing environmental changes alone may not be self-sustaining</li> <li>• Requires monitoring and maintenance to keep change in place</li> </ul>

## A Practical **PSE EXAMPLE:** Healthy Choices in Workplace Vending Machines

An employee wants healthier choices to be stocked in vending machines at their workplace to increase healthy food options and improve nutrition.

As a first step, the employee might **educate coworkers on the importance of healthy snacking** to reduce consumption of unhealthy products from the vending machine. Education might initially decrease demand for unhealthy snacks, but to succeed as a solution, it would require ongoing coaching because its impact would be limited to the coworkers who had received the education. Although it is a crucial element in implementing behavioral change, education alone is not considered a PSE change. Nothing has been done to change the environment, system, or policy conditions to sustain the adoption of healthier choices.

**ENVIRONMENT:** *Remove all unhealthy snacks from the vending machines.* Removing the snacks would be a physical change and could be implemented quickly. This solution, however, is not sustainable on its own because consistent monitoring would be needed to make sure the unhealthy snacks are no longer stocked.

**SYSTEM:** *Work with existing or new vending machine operators to change to a healthier product mix.* In this solution, the vending machines’ “system operators” (i.e., the operators, managers, and distributors) would change their procedures for stocking the machines. If the changes in their processes remain in place, this system change could sustain healthier snacking. However, if the

system is disrupted in some way (e.g., managers who maintain the relationship with the machine operators leave the company), it could cease to function correctly.

**POLICY:** *Adopt a policy requiring that a minimum percentage of foods sold in vending machines on company property meet nutritional standards.*

This policy would be a written statement, which would be binding and would be applied widely to all company vending machines. This policy could endure changes in management, operators, or distributors and provide sustainability.

A policy change may seem like the most appealing option, but policy change takes time and a considerable amount of effort to achieve. Key decision makers need to buy into the idea. Implementation of the policy directive—in this case, nutritional requirements for food in vending machines—would require active monitoring systems. And a policy is not guaranteed indefinitely. New management could change the policy or fail to enforce it.

In this example, each type of PSE change listed would achieve the goal set by the employee: healthier food in vending machines and improved nutritional options at the workplace. No one change is necessarily better than another, and each type has benefits and considerations. Successful change often combines elements of each type or uses elements that blur the lines between the PSE categories.

## How Can **HEALTHCARE PROVIDERS** Support PSE Change?

Healthcare providers are valuable partners because of their health expertise, experience with underserved populations, and role as respected members of the community. They can play many roles, with varying levels of involvement, in supporting PSE change. The table below describes the roles that healthcare providers can play.<sup>2</sup>

ROLE		LEVEL OF INVOLVEMENT	
<b>Connector</b>	Identifies other providers in the community to increase support for an issue	Low	One-time role that requires a limited time commitment and is not central to the implementation or sustainability of the intervention (e.g., testifying at a public meeting)
<b>Advocate</b>	Advocates for a specific policy, decision, or change	Low	
<b>Amplifier</b>	Writes, speaks, blogs, or is interviewed about an issue	Medium	Ad hoc role that requires a moderate time commitment and is not central to the implementation or sustainability of the intervention (e.g., attending three task force meetings to help design a policy)
<b>Team Expert</b>	Joins an existing collaboration or partnership or provides subject matter expertise	Medium	
<b>Leader</b>	Identifies or produces resources, convenes stakeholders, or establishes multisectoral partnerships	High	Ongoing role that requires a significant time commitment and is central to the implementation or sustainability of the intervention (e.g., securing funding for, and helping to design and manage an ongoing physical activity program)



# Putting Ideas Into Action

1 in 6 children are

food insecure



## Seven **KEY ELEMENTS** of PSE Change

Once a strategy is selected, it can be challenging to figure out the steps needed to implement PSE change. This section will provide an overview of the **7 key elements of PSE change**. The elements were developed after a review of case studies of successful PSE change involving healthcare providers and local health departments. The elements highlight key steps that practitioners took to initiate and sustain change.

The elements are not linear steps but rather are building blocks that provide structure for a PSE intervention. Moreover, not all PSE interventions will use every element. Elements can be mixed and matched as needed. An intervention can start with one element, skip to another, and revisit an element as the intervention progresses (see figure below). Bottom line: The elements needed to put PSE change in motion depend on local context and the specifics of the situation. There is no one-size-fits-all approach. However, the key elements presented in this section provide information for what is generally needed to design and implement a PSE intervention.



**DEFINE THE PROBLEM AND YOUR GOALS**



**UNDERSTAND THE PSE LANDSCAPE**



**OUTLINE A CLEAR STRATEGY FOR CHANGE**



**MOBILIZE PARTNERS**



**EDUCATE THE PUBLIC AND KEY DECISION MAKERS**

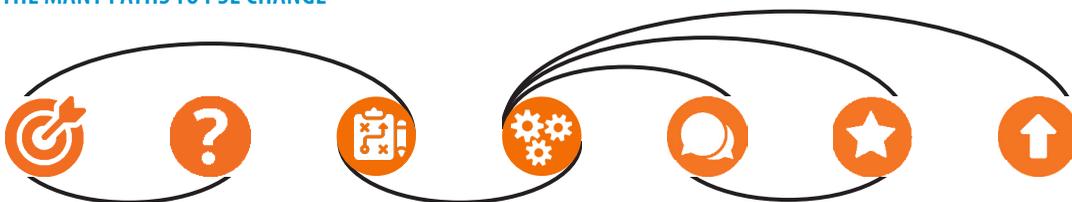


**DETERMINE WHETHER SUCCESS HAS BEEN ACHIEVED**



**TAKE STOCK AND LEVEL UP**

### THE MANY PATHS TO PSE CHANGE





## Define the Problem and Goals

It is essential to define the problem you are trying to address with PSE change. Specificity is critical, and your problem definition should include a description of the target population and any social and health equity considerations that may be contributing to the problem. The problem can be defined by what's happening (e.g., how many people are not getting the recommended amount of physical activity) and upstream contributing causes (e.g., lack of safe places to play).

Local health departments and other community-based organizations can be integral partners in defining the problem. They often have access to sources of data that can inform your understanding of the problem. For example, local health departments gather information through community health needs assessments, community health assessments, health surveys, and reports—information

that can be used to understand the scale and distribution of a community health problem. Statewide and national health surveys, such as the California Health Interview Survey and the Behavioral Risk Factor Surveillance System, provide data on baseline health conditions across California's communities.

Once the problem is defined, establish clear goals for your PSE change. Having clear goals will help you later when you are trying to determine whether goals and objectives of the intervention are being met. In most instances, PSE change is part of a broader effort to reach a larger goal (e.g., reduce obesity and chronic disease rates). Identifying short-term (1–2 years), medium-term (3–5 years), and long-term (5+ years) goals can help keep the PSE intervention on track and moving forward.

### RESOURCES

**General tips and guidance for gathering data:** *Ten Steps in Information Collection: Steps for collecting information and learning about a problem from Community Tool Box.* Available at: <http://bit.ly/2GKA2vA>.

#### Existing data sources:

- *California Health Interview Survey (CHIS):* California's largest health survey, conducted by the UCLA Center for Health Policy Research in collaboration with the California Department of Public Health and the Department of Health Care Services. Available at: <http://bit.ly/1ICztTE>.
- *Behavioral Risk Factor Surveillance System (BRFSS):* Survey of U.S. residents pertaining to their health-related risk behaviors, sponsored by the Centers for Disease Control and Prevention and other federal agencies. Available at: <http://bit.ly/2GJbgMj>.



## Understand the PSE Landscape

This key element is about understanding the existing policy and environmental conditions that can facilitate or hinder the PSE change you hope to achieve. For example, a policy goal of adopting nutrition standards in school wellness policies will likely entail a scan of all the school wellness policies that have already been implemented in the school district, to provide an overview of what currently exists and where there may be gaps. Also, if other organizations or stakeholders are working on school wellness policies, it would be helpful to understand their projects to see whether there are opportunities to partner or to share what has been learned with each other. Understanding the PSE

landscape can provide context for your intervention: Has the strategy been tried before? What was the outcome of that attempt? What should be done differently? Answers to these questions can help shape a PSE strategy that learns from the work of others and looks for new opportunities, given the political and environmental context.



## Outline a Clear Strategy for Change

Identifying a strategy for implementing PSE change is important. A clear strategy will:

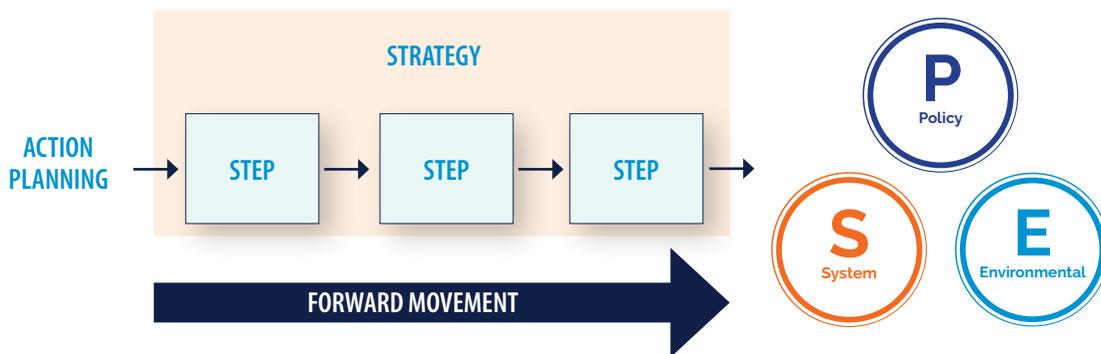
- Help to appropriately match an intervention to the problem you are addressing
- Describe how the PSE change will align with existing initiatives already in action or set out in a new direction
- Outline the type of PSE change needed to address the problem and achieve defined goals

Strategies for PSE change can build on one another, and the focus of a PSE intervention can shift over time, depending on objectives and opportunities. For example,

an approach can begin with an environmental change, which is generally seen as easier to implement. Achieving environmental change can help plant the seeds for subsequent system or policy change, building momentum toward more complex efforts.

Once your strategy is clear, action planning can help lay out the steps needed to achieve your goals (see figure on next page). Action plans can clarify the roles that partners will play in supporting the strategy, establish a timeline for activities, and determine what resources are needed to implement your intervention.

## A Clear Action Plan Supports a Strategy's Forward Movement Toward PSE Change



### RESOURCES

**Developing a strategy:** *Developing an Action Plan:* Resources on how to develop an action plan, including examples and guides, from Community Tool Box. Available at: <http://bit.ly/2HczgXU>.



## Mobilize Partners

Collaboration between partners is vital to any PSE change effort. Successful alliances share goals, detail roles for each partner, and have active and clear communication. Local health departments, in particular, are natural strategic partners in implementing your PSE change for health. Many health departments are already working on PSE change and share a similar vision for community health. Other partners could include nonprofit organizations,

resident associations, elected officials, or advocacy groups. Establishing key partnerships is often critical for success. These collaborations create a space for sharing knowledge and provide a diversity of perspectives, both of which can inform and enhance your solutions.

Community engagement is also vital to PSE change. Members of the communities impacted by the problem you have defined can also be integral collaborative partners. Working with affected communities will help ensure that your PSE strategies are both sustainable and tailored to their needs. Engaging affected community members with humility and empathy helps to establish trust and authenticity in the partnership.

Successful partnerships are defined by three parameters: shared goals, clear roles, and effective communication (see figure below).

### ELEMENTS OF A SUCCESSFUL PARTNERSHIP<sup>3</sup>



### RESOURCES

#### Establishing collaborations for health:

- *Collaboration Multiplier*: Online tool from the Prevention Institute that provides a systematic approach to laying the groundwork for collaboration to accomplish common goals. Available at: <http://bit.ly/2FYyBZi>.
- *Collective Impact*: Approach to making collaboration work across sectors with the goals to achieve significant and lasting change. Available at: <https://bit.ly/1p7JlGl>.



## Educate the Public and Key Decision Makers

Educating decision makers and the general public about the need for your chosen PSE strategy and how it can address the defined problem can engage new partners and help build support for the initiative. A champion or an advocate can represent your initiative and help to educate stakeholders, the media, and others about why it is important for community health. Healthcare providers, in particular, as trusted members of the community, can play a vital role in bringing attention to critical health issues and advocating for PSE change. Champions

do not have to be healthcare providers, elected officials, teachers, community workers, or other key members of the community can also be champions for your initiative.

Placing news stories in traditional or new media outlets, starting an awareness campaign, and creating infographics are some of the many strategies that can be used to raise awareness of a PSE intervention and share information about your plan.

### RESOURCES

#### Talking to decision makers:

- *Advocating for Change: Persuading Decision Makers to Act for Better Health*: A manual for talking with decision makers about health issues from the Public Policy Department of The California Endowment and the Center for Healthy Communities. Available at: <http://bit.ly/2lzSbfW>.
- *Communicating with Policymakers Delivery Tips 101*: A fact sheet for communicating important messages to decisionmakers, with advice on how to highlight key information and drive the conversation toward your goals. Available at: <https://bit.ly/2q3lPjZ>.



## Determine Whether Success Has Been Achieved

Defining success can help to determine whether your PSE intervention is on the right track to achieving its goals. Key partners, especially local health departments, can help to identify measures of success, help to collect data, or lead an evaluation of the PSE change. Health departments often have the funding, staffing, and infrastructure to define success and measure progress and outcomes. Healthcare providers can play critical roles as team experts or leaders in the process of determining

whether success has been achieved with your PSE intervention. Providers can give critical input on understanding the multiple ways that PSE change can support better health in a community, from changing environmental conditions and policies to building support for PSE change across partners. Additional considerations for ensuring the success of the PSE intervention beyond the seven elements are listed on the following page.



## Take Stock and Level Up

Once success with a PSE change has been achieved, taking stock of the progress made and the current windows of opportunity can help you expand and strengthen your initiative to take it to the next level. It is important to take stock of progress made in order to understand whether gaps still exist in achieving health goals. Recent success of a PSE change can help to garner support and build momentum toward other efforts or work that will sustain the change.

Taking stock of PSE change and leveling up means:

- Checking in with partners to document learning, share challenges, and address any issues pertaining to collaboration
- Understanding what has been accomplished through PSE change and what steps remain in achieving your health outcome
- Sharing success stories with others, including partners and decision makers
- Using all of this information to inform the next initiative

## Additional PSE Considerations

<b>FUNDING</b>	Funding for a PSE change might need to be supported by multiple funding sources, because change takes time. It is important to evaluate funding sources when thinking about the type of strategy needed to achieve your desired PSE change.
<b>SUSTAINABILITY</b>	Once your PSE change has happened, support structures should be in place to help sustain the change. Sustainability could mean securing funding, monitoring implementation procedures, or documenting best practices to create a working history of its progression.
<b>REPLICABILITY</b>	A successful PSE change can build momentum toward adoption by other practitioners. Thinking about how your approach could translate to another community during its planning and progression will help with replicability.
<b>TIMELINE</b>	It is important to note that the timeline for implementing PSE change can vary widely. Some PSE changes, such as policy adoption, take time and should be broken down into manageable steps. PSE interventions require investment and commitment in order to succeed. PSE change is a marathon, not a sprint. Map out specific action steps along your timeline to give you an idea of where to direct your efforts.

## Putting the *PSE PLAYBOOK* to Work for You

Healthcare providers and local health departments play distinct roles in making communities healthier, and the two can collaborate to be more effective. This playbook showcases examples of collaboration between providers and local health departments on PSE change, covering the following topics:

- Healthy food and beverage standards
- Food security
- School wellness
- Safe routes to school
- Structured physical activity

For each topic, the playbook describes the problem, offers a menu of PSE solutions, and highlights case studies. Each case study is unique, but focuses on either provider roles or implementation, incorporating the key elements of PSE change. Readers will notice that sometimes interventions fall in multiple PSE categories—providers may play more than one role or play the same role repeatedly, making for a larger time commitment than initially indicated. There is no one-size-fits-all approach to collaboration between providers and local health departments, and this playbook is intended to inspire action rather than prescribe a specific path forward.

A chef in a light green t-shirt is working in a kitchen, focused on a task. The background shows kitchen equipment and a tiled wall. A large blue semi-transparent banner is overlaid across the middle of the image, containing the title text in white. Below the banner, several clear plastic containers filled with fresh green leafy vegetables and cherry tomatoes are visible on a metal tray.

# Healthy Food & Beverage Standards

## What Is the **IMPACT?**

### **The food environment affects community health.**

Research shows the availability, affordability, and marketing of foods and beverages in stores, restaurants, schools, workplaces, healthcare settings, and other places where residents spend their time have a substantial impact on diet and diet-related disease.<sup>4,5,6</sup>

### **Low-income residents, communities of color, and rural residents are disproportionately exposed to unhealthy food environments and messages. They are also more likely to face barriers to accessing healthy food.<sup>7</sup>**

Stores located in low-income communities of color stock more processed foods and alcohol, and carry lower-quality produce and meats than stores in wealthier areas.<sup>4</sup>

Low-income Latino and African-American communities are disproportionately targeted by unhealthy food advertising—for example, African-American and Latino youths are significantly more likely than white children to see fast food advertisements.<sup>8,9</sup> In rural areas, residents have fewer stores offering nutritious, low-cost food options compared with urban areas, and those stores are outnumbered by convenience stores that offer less nutritious foods.<sup>10</sup>

### **Low-income residents, communities of color, and rural residents are disproportionately affected by poor health outcomes associated with diet and physical activity, including obesity, diabetes, heart disease, and dental decay infection.<sup>11,12,13</sup>**

## What Are **HEALTHY FOOD & BEVERAGE STANDARDS?**

For the purposes of this playbook, healthy food and beverage standards are a set of requirements that define the types of foods and beverages available and the way they are promoted in stores, restaurants, schools, workplaces, healthcare settings, and other places where individuals can get food.

Interventions that create healthy food and beverage standards could:

**Require the stocking, serving, and sale of healthy items,** such as fresh produce, whole grains, low-fat dairy and low-sodium snacks.

**Prohibit or limit the stocking, serving, and sale of unhealthy items,** such as sugary drinks, candy, high-sodium snacks, and alcohol.

**Make unhealthy foods and beverages less attractive** by changing the price, adding a tax, removing signage, or altering the location of these items within the food environment.

## EXAMPLES OF PSE CHANGES

### That Use Healthy Food & Beverage Standards

- P** **E** Adopt a municipal policy requiring food stores to place healthy items instead of unhealthy items near the checkout counter
- P** **E** Adopt a municipal policy requiring food stores to stock a minimum amount and variety of specific healthy foods
- S** **E** Implement a healthy corner store program incentivizing small food stores to stock and sell healthier foods and beverages while limiting the promotion of unhealthy items
- S** **E** Pilot a pricing initiative at a hospital or workplace that subsidizes the cost of healthy food options
- S** **E** Change procurement practices at a workplace to prioritize vendors offering low-sodium menu items

## CASE STUDY: Choose Health LA Restaurant Program



**PROVIDER & TEAM ROLES:** Leader / Team Expert / Advocate / Connector

**LEVEL OF INVOLVEMENT:** High

### INTERVENTION SUMMARY

The Choose Health LA Restaurant Program<sup>14</sup> was established by the Los Angeles County Department of Public Health in 2013 to incentivize restaurants in the Los Angeles area to offer healthier menu items.<sup>15</sup> The program's healthy food and beverage standards include:

- Smaller portion sizes
- A healthy kids' menu, including fruit, vegetables, and non-fried food
- Water upon request, free of charge

In exchange for offering healthier options, restaurants are given free promotional materials and assistance in restructuring their menus.<sup>15</sup>



### PROVIDER AND TEAM ROLES

Dr. Elisa Nicholas, MD, MSPH, chief executive officer of The Children's Clinic (TCC), led efforts to secure funding from the county of Los Angeles and First 5 LA to operate the Choose Health LA Restaurant Program in Long Beach (*leader*).<sup>16</sup> Public health professionals at TCC reached out to and educated local restaurants about the program (*advocate/connector*). They also partnered with the local health department and Long Beach restaurants to restructure their menu plans (*team expert*). One of the restaurants they partnered with was Kim Sung Kitchen, a Cambodian-Chinese restaurant.<sup>16</sup>

### RESULTS

Since the program's launch in 2013, more than 700 restaurant locations have joined the program and agreed to offer smaller portion sizes and healthier menu options.<sup>17</sup> Local restaurants, including Kim Sung Kitchen, report that their customers regularly order from the smaller portions menu.<sup>16</sup> Staff at Kim Sung Kitchen report eating and feeling better as a result of healthier menu options and smaller portion sizes.<sup>16</sup>

# IMPLEMENTATION CASE STUDY:

## Measure AB 2782 – Healthy California Fund (“Health Impact Fee”)



**PROVIDER ROLES:** Leader / Amplifier

**LEVEL OF INVOLVEMENT:** High

### INTERVENTION SUMMARY

In 2016, a policy titled AB 2782 - Healthy California Fund<sup>18</sup> was introduced in the California State Legislature. The measure aimed to establish a “health impact fee” of 2 cents per ounce on sugary drinks in California, including sodas and energy drinks, to be paid by the distributor. Revenue from this proposed fee would be put into a fund to support localities, community-based organizations, and licensed clinics in creating and maintaining childhood obesity and diabetes prevention programs.<sup>19</sup> In addition, some of the revenue would go toward increasing access to safe drinking water and creating oral health programs.<sup>18</sup>

### PROVIDER ROLES

Dr. Jim Wood, a dentist, is the representative for California’s 2nd State Assembly District. Representing a largely rural district that includes Humboldt, Del Norte, Mendocino, Trinity, and Sonoma Counties, he has made rural health a cornerstone throughout his career.<sup>20</sup> From his experience in clinical practice, he can tell immediately whether someone consumes large amounts of sugary beverages by the condition of their teeth.<sup>18</sup> Given the connection between consumption of sugary beverages and decreased oral health, he thinks it makes sense for beverage companies to chip in for treatment.<sup>18</sup>



In 2016, Dr. Wood co-authored AB 2782 because he believes a fee on sugary drinks is an effective strategy to reduce consumption and, therefore, decrease the need for restorative dental work (*leader*).<sup>18</sup> To increase support for the measure, he issued a press release and participated in a news conference to raise awareness of the proposed legislation (*amplifier*).<sup>18</sup>

## ELEMENTS OF PSE CHANGE

While the person involved used many strategies to implement the PSE intervention, the following elements of PSE change were featured most prominently:

- **Define the problem and your goals:**

The negative oral health outcomes from consumption of soda or sugary beverages prompted Dr. Wood to pursue a legislative tax on sodas and energy drinks as a way to reduce consumption.

- **Mobilize partners:**

Dr. Wood worked with two other assembly members with a similar interest to co-author the bill.

- **Understand the PSE landscape:**

Dr. Wood observed that tobacco tax has been effective in reducing the number of smokers as well as providing a revenue source for some health programs, so he decided to implement a similar legislative strategy.

- **Outline a clear strategy for change:**

AB 2782 sought to improve health among California residents by generating revenue for grants to support local community health efforts.

- **Take stock and level up:** Dr. Wood believes that a movement for legislation at the local level might encourage statewide change. The beverage industry would need to comply with a variety of local

ordinances, each with their own set of regulations. The difficulty the beverage industry would face in trying to comply with different local approaches might encourage the state legislature to revisit a broad regulatory approach.

## TIMELINE

● 2015	Dr. Wood met with partners in the California State Assembly to draft the text of AB 2782
● February 2016	AB 2782 is introduced in the California State Legislature; Dr. Wood attends a press conference announcing the bill

## RESULTS

Although AB 2782 did not move forward in the legislature, Dr. Wood believes it may be possible to reintroduce this legislation.<sup>18</sup> He also believes that passing similar measures at the local level might be a more effective strategy because it could compel the beverage industry to uniformly lower the sugar content of their products rather than comply with various local ordinances.<sup>18</sup>



# Food Security

## What Is the **IMPACT?**

### **Food insecurity affects community health.**

Food insecurity is the lack of consistent, dependable access to an adequate supply of food for a healthy life.<sup>21,22</sup> Individuals experiencing food insecurity make tradeoffs between food and other necessary expenses, such as rent.<sup>23</sup> Research shows that food insecurity affects nutrition and childhood development, and can lead to or exacerbate physical, behavioral, and psychological health problems.<sup>24,25</sup>

### **Low-income residents, communities of color, and rural residents are disproportionately affected by food insecurity.**

Nationwide, African-Americans and Latinos are almost twice as likely to experience food insecurity as people in white households.<sup>26</sup> Among U.S. counties with the highest

rates of food insecurity, half are located in rural areas.<sup>27</sup>

Rural residents have more limited access to affordable food, face higher prices for food, and are less likely to receive Supplemental Nutrition Assistance Program (SNAP, commonly known as food stamps) benefits than their urban counterparts.<sup>24</sup> Low-income rural residents, particularly those living on American Indian reservations, have high rates of hunger and poor access to healthy food.<sup>4</sup>

### **Low-income residents, communities of color, and rural residents are disproportionately affected by poor health outcomes associated with diet and physical activity, including obesity, diabetes, heart disease, and dental decay infection.**<sup>11,12,13</sup>

## What Is **FOOD SECURITY?**

For the purposes of this playbook, *food security* refers to the consistent availability and usability of affordable, nutritious food among underserved communities.

Interventions that improve food security could:

**Increase the affordability and supply of healthy foods and beverages for low-income individuals** by increasing enrollment of eligible residents and retailers in SNAP, the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), the Senior Farmers' Market Nutrition Program (SFMNP), or other food benefit programs.

**Incentivize the purchase of healthy foods and beverages** by subsidizing the price of healthy items bought using SNAP, WIC, and SFMNP benefits.

**Increase the supply of healthy foods and beverages in food banks** by encouraging donations of surplus healthy items from grocery stores, restaurants, farmers markets, and farms.

**Educate individuals** about SNAP, WIC, SFMNP, or other food benefit programs; available food sources; selecting healthy food; and preparing healthy food.

## EXAMPLES OF PSE CHANGES That Improve Food Security

- P** **S** Adopt a payment policy at a local farmers market that allows SNAP participants to purchase produce with their SNAP benefits
- P** **E** Adopt a healthy food and beverage standards policy at a food bank to ensure that it only accepts healthy donations
- S** **E** Implement a voluntary program that matches purchases made with SNAP benefits at a farmers market, allowing SNAP participants to double the amount of produce they can purchase with their benefits
- S** **E** Implement a voluntary donation program to distribute surplus food from stores, restaurants, farmers markets, and farms to food banks
- E** Develop a community garden program, enabling residents to voluntarily learn about, grow, and eat fresh produce

## CASE STUDY:

# Downtown Dinuba Certified Farmers Market



**PROVIDER & INSTITUTION ROLES:** Leader / Team Expert

**LEVEL OF INVOLVEMENT:** Moderate

### INTERVENTION SUMMARY

The Downtown Dinuba Certified Farmers Market was established in Tulare County in 2014 to improve food security and increase access to physical activity.<sup>28</sup> The farmers market was created by Network Leaders on the Move, a collaborative that includes healthcare providers, healthcare networks, the local health department, the city of Dinuba, and other community organizations and government agencies.<sup>28,29</sup>

To ensure that low-income residents have access to affordable, healthy food, the farmers market accepts cash, WIC benefits, and electronic benefit transfer (EBT) payments.<sup>28,29</sup> In California, EBT includes SNAP benefits, California Food Assistance Program benefits, and cash aid benefits.<sup>30</sup> The farmers market matches EBT purchases up to \$10, so shoppers can receive \$20 worth of produce for only \$10 in EBT benefits. The farmers market also provides people aged 60 and older with \$20 vouchers to spend at the market. It also offers Zumba® dance classes and stations where community members can check their blood pressure, apply for Medi-Cal, or sign up for EBT.<sup>29</sup>

### PROVIDER AND INSTITUTION ROLES

The Family Health Care Network and Kaweah Delta Health Care District planned and implemented the farmers market (*leader*).<sup>29</sup> Several clinics and providers have staffed booths at the farmers market, sharing information about nutrition



and opportunities to improve oral and physical health (*team expert*).<sup>31</sup> Participants included Dinuba Orthodontics and Alta Family Health Clinic.

### RESULTS

Since the market was established, it has become a community gathering place and venue for concerts, performances, and workshops. Vendors report that more residents pay for produce using EBT benefits than cash, which suggests the market is successfully increasing access to fresh, healthy food for low-income community members.<sup>29</sup>

# IMPLEMENTATION CASE STUDY:

## Kaiser Permanente's San Diego Food Rx



**PROVIDER AND INSTITUTION ROLES:** Leader / Amplifier / Connector

**LEVEL OF INVOLVEMENT:** High

### INTERVENTION SUMMARY

In 2017, Kaiser Permanente in San Diego County launched a pilot program called Food Rx.<sup>32</sup> The goal of Food Rx is to adopt the American Academy of Pediatricians' (AAP) policy recommendation that healthcare providers add questions that screen for food insecurity in patients' medical records.<sup>32,33</sup>

Food Rx's program activities include:

- Educating pediatricians and medical staff about the link between food insecurity and obesity
- Raising awareness of how pediatricians and medical staff can become a resource for their patients in addressing food insecurity
- Identifying an organization that will take referrals of patients who test positive for food insecurity
- Creating a referral form

To help get this policy adopted in their area, Kaiser Permanente, AAP's chapter for San Diego and Imperial counties, the San Diego Hunger Coalition, San Diego Food Bank, San Diego County Medical Society, and 2-1-1 San Diego formed a coalition.

### PROVIDER AND INSTITUTION ROLES

Dr. Pat Cantrell is a Champion Provider Fellow, a pediatrician at Kaiser Permanente in San Diego, and president of AAP's chapter for San Diego and Imperial counties. During her tenure as president, AAP issued the policy recommendation that health providers screen for



food insecurity. Dr. Cantrell led the charge to have this policy adopted in San Diego and Imperial counties.<sup>32</sup>

Dr. Cantrell knew she needed to engage partners in order to build momentum for the policy. She initially partnered with the San Diego Food Bank, San Diego Hunger Coalition, and San Diego County Medical Society (*connector*). Together, they determined that doctors have limited time with their patients and would need to have a "one-stop shop" organization to take their patient referrals.<sup>32</sup> The Medical Society recommended 2-1-1 San Diego, a nonprofit that serves as a nexus for community resources, helping people navigate and access many kinds of services, including food assistance.<sup>34</sup>

Dr. Cantrell then integrated food insecurity screening into the electronic health records at her facility and worked with her coalition to create a referral form called Food Rx, which resembled a prescription pad (*leader*).<sup>32</sup> She also conducted trainings on how to screen for food insecurity at pilot sites located in medical offices.

## ELEMENTS OF PSE CHANGE

While the groups and people involved used many strategies to implement the PSE intervention, the following elements of PSE change were featured most prominently:

- **Define the problem and your goals:**

Many pediatricians are not familiar with the topic of food insecurity. Dr. Cantrell's goal was to help other pediatricians learn about the importance of food security and adopt AAP's recommended policy on food security screening.

- **Mobilize partners:**

Dr. Cantrell invited community organizations with a shared interest to form a coalition. Through goal setting and regular meetings, they were able to develop Food Rx.

- **Outline a clear strategy for change:**

To increase adoption of food security screening, Dr. Cantrell and her coalition provide physicians with an easy-to-use prescription pad that includes a resource for food access.

- **Educate the public and key decisionmakers:**

Initially, Dr. Cantrell asked to visit other healthcare offices to present on food insecurity and how to implement Food Rx. Today, groups invite her to speak on food insecurity and discuss how they can implement Food Rx. Dr. Cantrell is launching a Food Rx website to disseminate information about food insecurity and Food Rx.

- **Take stock and level up:**

To reach more patients who are food insecure, Dr. Cantrell will expand the program to hospitals and family practice doctors.

## TIMELINE

- 
- **October 2016** AAP recommends health providers screen patients for food insecurity
  - **February 2017** Coalition has their first meeting
  - **May 2017** Food Rx program launches
  - **February 2018** Five healthcare offices adopt Food Rx

## RESULTS

Food Rx was piloted in a Kaiser Permanente medical office in San Diego and expanded to 11 additional Kaiser offices. In less than a year, Kaiser Permanente in San Diego, several community health groups and San Diego's Children's Hospital have implemented Food Rx. One of Dr. Cantrell's original goals was to amplify the importance of the policy. Recently, Dr. Cantrell met with the president of AAP in Texas to explore how the Texas chapter can implement similar efforts (*amplifier*). Dr. Cantrell considers this meeting an indication that the policy can be adopted nationwide through the AAP network.<sup>32</sup>



# School Wellness



## What Is the **IMPACT?**

### **The school environment affects student health.**

Research shows that school features—including the types of foods and beverages available, marketing of those foods and beverages, availability of and access to physical education, and design of outdoor activity areas—affect students' diets, exercise, academic performance, and behavior.<sup>35</sup>

### **Low-income youths, youths of color, and rural youths disproportionately rely on schools as a source of food and physical activity, yet they are more likely to attend schools with limited healthy food and beverage options, limited physical education programs, or outdated recreational equipment.**<sup>36</sup>

Latino children disproportionately experience food insecurity, constitute 32% of students receiving free lunch, and are less likely to have healthy snacks available at school compared with white students.<sup>37</sup> Schools located in low-income neighborhoods

are less likely to have physical education classes or incorporate physical activity practices in the school day compared with schools in high-income neighborhoods.<sup>38</sup> Low-income youths of color have the shortest recess periods.<sup>31</sup> Unhealthy foods are more pervasive in rural schools than in urban and suburban schools.<sup>39</sup> Despite a 2010 federal law requiring schools to adopt a local school wellness policy, rural elementary schools' recess periods, physical education, and offerings of healthy foods did not increase, due to lack of funding.<sup>40</sup>

### **Low-income youths, youths of color, and rural youths are disproportionately affected by poor health outcomes associated with diet and physical activity, including obesity, diabetes, heart disease, and dental decay infection.**<sup>7,11,12</sup>

## What Is **SCHOOL WELLNESS?**

For the purposes of this playbook, *school wellness* refers to any effort to improve a school's food or physical activity environment over and above changes required by federal law. (Federal law requires schools participating in the National School Lunch Program and other child nutrition programs to adopt a local school wellness policy.<sup>41</sup> School wellness policies include standards requiring healthy foods and beverages to be served in cafeterias and limiting the sale of unhealthy foods and beverages in vending machines.<sup>41</sup> The federal law applies to most public schools.)

Interventions that improve school wellness could:

**Apply healthy food and beverage standards to snacks available at afterschool events,** such as club meetings, sports games, or fundraisers.

**Require or encourage improvements to physical education programs and recreational facilities** to make physical activity more culturally appropriate, safe, and widespread among students.

**Establish recess and lunch break policies,** maximizing physical activity among students and ensuring recess and lunch breaks are not taken away as a form of discipline.

## EXAMPLES OF PSE CHANGES That Improve School Wellness

- P** **E** Adopt a comprehensive school wellness policy expanding nutrition requirements to snacks provided at afterschool activities
- P** **E** Adopt a healthy vending policy prohibiting sugary beverages and candy from being sold at afterschool events
- S** **E** Change the recess schedule to increase the amount of time available for students to be physically active during the school day
- S** **E** Change the school schedule to increase the amount of time available for students to eat lunch and be physically active during the school day
- S** **E** Partner with local food banks to provide healthy options for midmorning and afterschool snacks
- E** Redesign a playground to make it more appealing, safe, and accessible to students with a range of interests and abilities
- E** Redesign a school cafeteria, including the display and placement of lunch food, to promote healthy choices in alignment with recommendations from the Smarter Lunchrooms Movement<sup>42</sup>

## CASE STUDY:

# Sacramento Local School Wellness Policy



**PROVIDER ROLE:** Team Expert

**LEVEL OF INVOLVEMENT:** Medium

### INTERVENTION SUMMARY

In 2015, the Sacramento City Unified School District (SCUSD) began updating its school wellness policy<sup>43</sup> to promote student wellness and streamline existing district policies.<sup>44</sup> Based on a series of community input sessions, SCUSD drafted a new policy that:

- Prohibits offering food as an incentive or reward for behavior and performance
- Requires all food offered during the school day, including for birthdays, to meet the Smart Snacks in School guidelines
- Encourages staff to choose water and use non-branded containers if they drink sugary beverages on school grounds
- Ensures that physical activity and recess are not taken away as a form of punishment
- Requires schools to meet or exceed physical activity requirements by grade level.<sup>45</sup>

Some of these requirements—such as encouraging staff to model nutritious choices—go beyond federal requirements. SCUSD solicited community input on the draft policy and hoped to finalize and adopt the policy in 2017.<sup>44</sup>

### PROVIDER ROLE

Dr. Zoey Goore, a Champion Provider Fellow and pediatrician, has been active on issues of food security and obesity prevention in Sacramento for years.<sup>43</sup> For example, she participated in a community health forum with the



SCUSD in 2015. When the new school wellness policy was being drafted, she was asked to join the Coordinated School Health Committee. Dr. Goore provided input on nutrition and physical activity requirements for student wellness as well as up-to-date information on child nutrition standards during a series of meetings with stakeholders, including SCUSD staff, parents, teachers, health and counseling staff, food services staff, and expert community organizations (*team expert*).<sup>43</sup>

### RESULTS

Once adopted, this policy will encourage healthy food and beverage choices for students.<sup>43</sup> Furthermore, SCUSD will join the ranks of school districts that are maximizing and ensuring equitable access to daily physical activity for all students, including those being disciplined, recognizing it as a critical form of stress release and an important opportunity to promote physical and mental wellness and increased cognitive functioning.<sup>46</sup>

# IMPLEMENTATION CASE STUDY:

## School Wellness Plan at Calexico Unified School District, Imperial County



**PROVIDER & INSTITUTION ROLES:** Amplifier / Advocate / Team Expert

**LEVEL OF INVOLVEMENT:** Medium

### INTERVENTION SUMMARY

In 2013, the Imperial County Public Health Department's Healthy Eating Active Living program (HEAL) approached the Calexico Unified School District (CUSD) in Imperial County about updating the district's wellness policy. HEAL conducted an assessment to identify possible revisions, but there wasn't a school wellness committee to oversee the changes.

In May 2017, Dr. Luz Elva Tristan, a Champion Provider Fellow and pediatrician, revisited the topic of school wellness in collaboration with HEAL, focusing on nutrition and healthy eating. By June, CUSD had updated their wellness policy to meet USDA requirements, but the school district wanted to make more substantial reforms. CUSD formed a committee, comprised of representatives from local organizations and the district's 13 schools, to develop a wellness plan and improve the policy. CUSD also invited Dr. Tristan and a representative from HEAL to be part of the committee.

At the committee's first meeting, HEAL and school representatives conducted assessments of the updated wellness policy, the results of which demonstrated the need for more health-promoting provisions. The committee continues to meet to develop a strong wellness plan for the district.<sup>47,48</sup>



### PROVIDER AND INSTITUTION ROLES

Dr. Tristan has served CUSD for almost two decades, and she has spent the last five years working on a wellness program for underserved kids. Her work on healthy eating and physical activity led to her meetings with HEAL, in which they discussed local health issues and possible solutions. Dr. Tristan had heard from her patients that school meals weren't nutritious, so the partners prioritized school wellness and focused on improving school menus.

In June 2017, Dr. Tristan presented at a school board meeting (*amplifier*). Her presentation on community health problems, her local wellness program, and her collaboration with the public health department helped ignite CUSD's interest in creating a school wellness committee (*advocate*). CUSD invited Dr. Tristan to participate on the committee, and her contributions allow her to connect school wellness initiatives to epidemics she sees in the community (*team expert*).<sup>47,48</sup>

## ELEMENTS OF PSE CHANGE

While the groups and people involved used many strategies to implement the PSE intervention, the following elements of PSE change were featured most prominently:

- **Define the problem and your goals:**  
Nearly half of Imperial County adolescents are overweight or obese. Dr. Tristan has seen an increase in the comorbidities of obesity—type 2 diabetes, fatty liver, and high blood pressure—among pediatric patients. Dr. Tristan and HEAL analyzed these problems and recognized that current patterns did not align with current recommendations for healthy eating and activity. They saw school wellness as a way to address the gap.
- **Mobilize partners:**  
Dr. Tristan initially presented to the school board on making healthy food the default option in CUSD schools, and HEAL met with stakeholders, including CUSD's food director and other leaders. Currently, HEAL and Dr. Tristan work directly with partners on the CUSD committee.
- **Understand the PSE landscape:**  
HEAL and the school wellness committee conducted assessments of the school's current wellness policies.
- **Educate the public and key decision makers:**  
HEAL and Dr. Tristan have identified nutrition-related priority areas that they will present to the committee at an upcoming meeting.<sup>47,48</sup>

## TIMELINE



## RESULTS

Dr. Tristan's work with the committee is just getting under way. She and HEAL have developed priority areas they want CUSD to focus on: enforcing healthy standards at fundraising events and celebrations, implementing Smarter Lunchrooms Movement strategies, requiring students to remain on the high school campus at lunch, and increasing the number of water fountains. They've also collected other findings they think will further mobilize the committee, such as menu-related discrepancies among schools within the district.<sup>47,48</sup>

# IMPLEMENTATION CASE STUDY:

## Wolves Wellness Center at Livingston High School, Merced County



**PROVIDER ROLE:** Team Expert    **LEVEL OF INVOLVEMENT:** Medium

### INTERVENTION SUMMARY

In 2012, leadership at Livingston Community Health (LCH), a network of community health centers in the San Joaquin Valley, began to recognize the health problems facing Livingston High School (LHS) students and their families, such as mental health issues, access to healthcare and dental care, and prevention and treatment of chronic diseases. LCH already provided services at LHS, but LCH began speaking with Merced Unified High School District (MUHSD) about specific health issues and new ways to collaborate. The result was Wolves Wellness Center (WWC), the first school-based health center at a high school in Merced County.

Though LHS students are WWC's primary patients, the clinic serves the entire community. Many families of the predominantly Latino student body work challenging jobs in agriculture and hard labor, and are underinsured, uninsured, or unable to access quality health services. WWC staff is familiar with local demographics and health inequities, and they have organized their clinic around these specific needs and contexts. WWC operates in two converted classrooms at LHS and offers dental, medical, and behavioral health services. WWC began by operating 30 hours a week but soon started operating 40 hours a week to meet demand.<sup>49</sup>



### PROVIDER ROLE

Dr. George Cook, DDS, oversees and provides a variety of dental services and has become an invaluable member of the WWC team (*team expert*). After operating a successful dental practice for many years, Dr. Cook was eager to work with underserved communities and help youths recognize the importance of dental hygiene. He came out of retirement to join WWC, where he oversees and provides a variety of dental services, including adult and child exams and cleanings, fillings, and extractions. In addition to Dr. Cook, other healthcare providers, including Melinda Edmondson, FNP, and Angelica Andrade, LCSW, offer medical and behavioral health services.<sup>49</sup>

## ELEMENTS OF PSE CHANGE

While the groups and people involved used many strategies to implement the PSE intervention, the following elements of PSE change were featured most prominently:

- **Mobilize partners:**

LCH approached MUHSD about an issue both institutions cared about: student health. Through assessments and conversations, they collaborated to develop a solution.

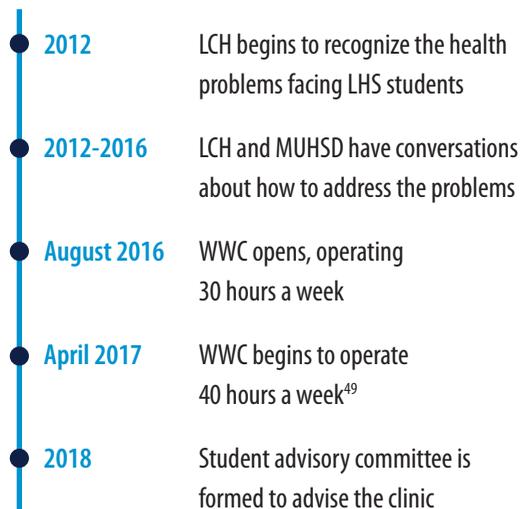
- **Outline a clear strategy for change:**

WWC seeks to improve the health of both LHS students and local residents. By providing a clinic that is easily accessible to students, WWC is helping youths become more proactive, responsible, and health literate.

- **Take stock and level up:**

As of early 2018, 38 LHS students have asked to be on the WWC student advisory committee. In this capacity, they would provide feedback on the clinic's services, raise awareness about health issues in their community, and educate people about local inequities in healthcare access and delivery.<sup>49</sup>

## TIMELINE



## RESULTS

In its first year of operation, WWC had more than 4,500 medical, dental, and behavioral health visits. Halfway into WWC's second year, the clinic had already reached 4,000 visits. WWC is also establishing a student advisory committee to allow students to participate in WWC's decisionmaking and to help them become local public health advocates.<sup>49</sup>

# IMPLEMENTATION CASE STUDY:

## Bakersfield City School District Wellness Centers



**PROVIDER ROLES:** Leader / Team Expert

**LEVEL OF INVOLVEMENT:** High

### INTERVENTION SUMMARY

In 2014, Bakersfield City School District (BCSD) opened its first two school wellness centers. Since many students in the district do not have health insurance, they rely on federally qualified health centers, which are organizations that provide comprehensive primary and preventive care to all persons regardless of their ability to pay or their health insurance status.<sup>50</sup> These clinics are inundated with patients, and it can take weeks to receive care. The goal of the school wellness centers is to increase healthcare access and availability for students so that when they have health issues, they can return to school more quickly. Initially, the district launched two centers, and they were so well utilized by students that grant funds were used to build two more centers. All of the wellness centers are stand-alone clinics that provide sick and well visits, dental care, and vision care. Recently, the district partnered with the local health department to offer contraception and screening for sexually transmitted diseases.<sup>50</sup>

### PROVIDER ROLES

Dr. Tiffany Pierce is a physician who volunteers as medical director for BCSD Wellness Centers.<sup>50</sup> As medical director, Dr. Pierce develops protocols for nurse practitioners that enable them to provide care to students (*leader*). She supervises all of the nurse practitioners and



is available to them at any time via phone or email to answer their questions (*team expert*). Dr. Pierce also trains the nurse practitioners on how to bill to medical administrators (*team expert*).<sup>50</sup>

### ELEMENTS OF PSE CHANGE

While the groups and people involved used many strategies to implement the PSE intervention, the following elements of PSE change were featured most prominently:

- **Define the problem and your goals:**

Dr. Pierce and her partner, Deborah Wood, a school nurse at BCSD, identified schools in low-income neighborhoods with the lowest rates of kindergarten physical exams, to determine which schools would benefit most from a wellness center.

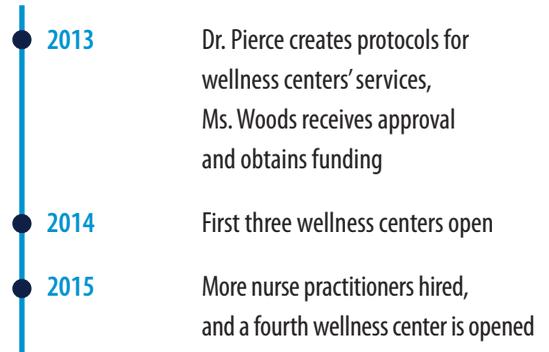
- **Mobilize partners:**

Dr. Pierce’s partnership with an employee of the school district—someone familiar with district rules, procedures, and context—was essential to her work on the school wellness centers. Dr. Pierce and Ms. Wood divided responsibility by professional scope. Ms. Wood led tasks that involved the school district, government agencies, and insurance companies, while Dr. Pierce oversaw all activities directly related to care.

- **Outline a clear strategy for change:**

Dr. Pierce allowed the wellness centers to offer services only for issues that keep students out of class, such as physicals, immunizations, asthma, and other acute illnesses. The limited number of services in the wellness centers’ first year allowed staff to work at an effective pace, as well as demonstrate an improvement in student attendance to the school board. To keep the district’s costs to a minimum, Dr. Pierce taught the nurse practitioners how to write their notes to facilitate billing.

## TIMELINE



## RESULTS

The first three wellness centers demonstrated success to the school board by lowering health-related absences. As a result, the district has dedicated funds to staffing and maintaining the centers. The district now has four centers and plans to open a fifth. In addition, Dr. Pierce has increased the capacity of the wellness centers, offering more services to students by doubling the number of protocols for nurse practitioners.<sup>50</sup>



# Safe Routes to School

## What Is the **IMPACT?**

### **The route between students' homes and schools affects their health.**

Research shows that the quality and presence of sidewalks, bike lanes, and crosswalks, and the accessibility and affordability of public transit all affect physical activity levels and safety for residents in nearby areas.<sup>51</sup>

### **Low-income youths, youths of color, and rural youths walk and bike at very high rates, yet they disproportionately live and go to school in areas that are unsafe for walking and biking.<sup>52</sup>**

Low-income neighborhoods are less likely to have sidewalks and streetlights.<sup>53</sup> Low-income students are more likely

to walk to school in hazardous conditions, making them more vulnerable to injury and fatality on their way to school.<sup>52</sup> African-American children are 50% and Latino children are 40% more likely than white children to be killed while walking. They are also more likely to be killed while bicycling.<sup>52</sup> In rural areas, pedestrian fatalities are higher for all age groups at any posted speed limit.<sup>54</sup>

### **Low-income youths, youths of color, and rural youths are disproportionately affected by poor health outcomes associated with diet and physical activity, including obesity, diabetes, heart disease, and dental decay infection.<sup>7,11,12</sup>**

## What Are **SAFE ROUTES TO SCHOOL?**

For the purposes of this playbook, *safe routes to school* refers to any effort making it safer and more convenient, accessible, and affordable for students and their families to walk, bike, or take public transit to school. This definition is based on the national Safe Routes to School program, which encourages active transportation—such as walking or biking—as a form of exercise and supports pedestrian and bicyclist safety between home and school.<sup>55</sup> Supported by federal funding, the program incorporates six elements: evaluation, engineering, education, encouragement, enforcement, and equity.<sup>56</sup>

Interventions that create safe routes to school could:

**Create or improve walking, biking, or public transit infrastructure**, including sidewalks, crosswalks, protected bike lanes, or bus stops.

**Improve safety conditions near schools** by creating street features or enforcement mechanisms that force cars to stop or slow down.

**Make walking, biking, and public transit more affordable**—for example, provide free or reduced fares for students to reduce the cost of using public transit to get to school.

**Educate students** to encourage them to walk, bike, or use public transit to get to school.

## EXAMPLES OF PSE CHANGES

### That Create Safe Routes to School

- P** **S** Adopt a transit agency policy that funds free or reduced-cost bus passes for low-income students
- P** **E** Develop a municipal bicycle and pedestrian plan that directs funding to projects that create and improve pedestrian and bicycle infrastructure in neighborhoods with high injury and fatality rates
- S** **E** Implement a volunteer crossing-guard program to provide assistance and supervision at crosswalks near schools before and after school hours and to ensure that traffic yields to students
- S** **E** Create remote drop-off locations where students can voluntarily be dropped off by bus or car and safely walk the remainder of the way to school, increasing physical activity
- S** **E** Implement a voluntary “walking school bus” program in which adults walk with groups of children between specific neighborhood locations and their school

## CASE STUDY:

# Calaveras County Safe Routes to School



**PROVIDER & INSTITUTION ROLES:** Team Expert

**LEVEL OF INVOLVEMENT:** Medium

### INTERVENTION SUMMARY

Calaveras County convened a Safe Routes to School workgroup to strategize on how to increase walking and bicycling in the county.<sup>57</sup> The workgroup decided to focus their efforts on San Andreas, a town with 3,000 residents and 4 schools in the Calaveras Unified School District. To maximize its impact, the workgroup invited stakeholders from the community, including the Mark Twain Medical Center (MTMC), to join. The workgroup met monthly to organize a community health walk, to promote safety, and to identify “healthy mile walks” from local schools to other parts of the town.<sup>57</sup>

For the first community health walk, schoolchildren were led by a county supervisor and accompanied by teachers and parents.<sup>57</sup>

The walk’s halfway point at Turner Park featured hula hoop demonstrations, Zumba® dance, and bottled water. Community Emergency Response Team members assisted with traffic control at places along the walk that were less walkable.<sup>57</sup>



### PROVIDER AND INSTITUTION ROLES

Staff members from MTMC participated in the workgroup to plan the community walk and identify routes for “healthy mile walks” (*team expert*). For the community walk event, the medical center provided hula hoops for demonstrations and water bottles to participants at Turner Park.<sup>57</sup>

### RESULTS

Since the first community walk, the event has grown to attract more than 300 people each year.<sup>57</sup> To sustain its participation, the Community Emergency Response Team has added the community walk to its budget. Public health members of the workgroup were invited to join the Calaveras Council of Governments’ Technical Advisory Committee to ensure that safety and walkability remain a priority among decision makers.<sup>57</sup>

# IMPLEMENTATION CASE STUDY:

## Cupertino Safe Routes to School



**PROVIDER ROLE:** Advocate

**LEVEL OF INVOLVEMENT:** Low

### INTERVENTION SUMMARY

In 2015, the city of Cupertino adopted a resolution to formally support the Safe Routes to School (SR2S) Working Group and initiate a formal partnership between the city of Cupertino and the Cupertino Union School District (CUSD).<sup>58,59</sup> The city's goal was to identify and address opportunities to improve safety for students walking and biking to school as well as reduce traffic congestion and air pollution.<sup>58</sup> The working group has been meeting bimonthly to identify priority projects that meet this goal, including:

- Creating bike lanes and separating bike paths from cars
- Improving traffic flow and safety along Foothill Expressway
- Improving bicycle infrastructure and connections to schools on Stevens Creek Trail, a paved multi-use trail
- Educating community members, including parents and kids, about the benefits of biking and basic bike safety, to encourage biking and decrease morning traffic<sup>58,59</sup>



### PROVIDER ROLE

Dr. Jyoti Rau is a Champion Provider Fellow and the parent of a high school student who attends a CUSD school.<sup>58</sup> While Dr. Rau grew up biking in Cupertino and Sunnyvale without traffic safety concerns, today she worries about her son's safety when he asks to bike to school. She also sees the negative impacts of physical inactivity and stress on her patients. Dr. Rau got involved with the SR2S Working Group when she and her son attended a city-sponsored training and learned about bike safety and options for improving bicycle infrastructure citywide. Since the training, Dr. Rau has been attending SR2S Working Group meetings, participating as a vocal community member to ensure that her son and his friends can enjoy the same freedom and opportunities for physical activity that she experienced as a young person (*advocate*).<sup>58</sup>

## ELEMENTS OF PSE CHANGE

While the groups and people involved used many strategies to implement the PSE intervention, the following elements of PSE change were featured most prominently:

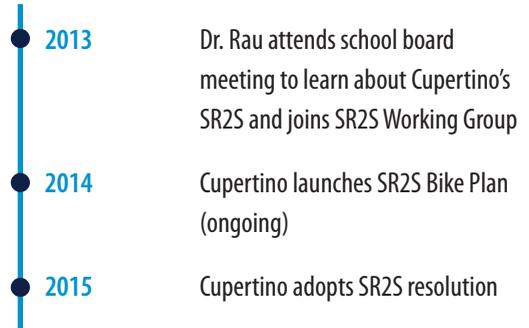
- **Mobilize partners:**

Dr. Rau attended a school board meeting to learn more about Cupertino's SR2S program and how she could get involved. After attending the school board meeting, Dr. Rau joined the SR2S Working Group to help develop Cupertino's bike plan.

- **Take stock and level up:**

Today, the working group has established a robust SR2S bike plan that includes drop-off points near schools, maps of safe routes, safety tip sheets, walk audits (assessments of the walkability or pedestrian access of a particular area), and other resources in multiple languages. Dr. Rau is excited that the program will focus on building infrastructure near Stevens Creek Trail, which will increase safety by providing more safe routes that are not near busy main streets.

## TIMELINE



## RESULTS

The SR2S program is now active at all CUSD schools.<sup>59</sup> Since the launch of the SR2S Working Group, city and school officials have tracked data on students' transportation choices and found that more students are using an active mode of transportation to get to school: nearly a quarter walk and a tenth bike.<sup>60</sup> Dr. Rau has noticed that her son is more vocal about bicycle safety and is educating his friends and members of his Boy Scout troop about it.<sup>58</sup>



# Structured Physical Activity

## What Is the **IMPACT?**

### **Access to opportunities and facilities for physical activity affects community health.**

Research shows that the availability, affordability, safety, and convenience of physical activity programs and facilities—such as playgrounds, parks, public pools, or gyms—in schools, workplaces, and neighborhoods affect the amount of exercise that nearby residents get.<sup>61,62</sup>

### **Low-income residents, communities of color, and rural residents disproportionately live in areas with limited access to physical activity programs or safe and convenient facilities.**<sup>63</sup>

Low-income areas and communities of color have fewer

parks and recreational spaces near homes than white and high-income neighborhoods.<sup>64,65</sup> Parks in low-income areas are less likely to receive adequate maintenance or have resources for physical activity programs.<sup>61,65</sup> Over a quarter of the U.S. population is completely inactive, and inactivity is most prevalent in rural areas of the country.<sup>66</sup>

### **Low-income residents, communities of color, and rural residents are disproportionately affected by poor health outcomes associated with diet and physical activity, including obesity, diabetes, heart disease, and dental decay infection.**<sup>11,12,13</sup>

## What Is **STRUCTURED PHYSICAL ACTIVITY?**

For the purpose of this playbook, *structured physical activity* refers to convenient, planned, guided, and culturally appropriate recreational opportunities in community centers, schools, workplaces, healthcare settings, or other venues.

Unstructured physical activity, by contrast, refers to unplanned activity, such as playing games at recess.

Interventions that improve access to structured physical activity could:

**Make physical activity programs more affordable** through free or low-cost guided exercise classes and team sports.

**Make physical activity programs more convenient** by incorporating exercise and movement into the daily operations and activities of a school, workplace, healthcare setting, or another venue.

**Increase the number of places where physical activity programs can be offered** by creating or improving facilities, or expanding access to public facilities such as school gymnasiums, playgrounds, fields, courts, and tracks.

## **EXAMPLES OF PSE CHANGES**

### **That Create Structured Physical Activity**

- P** **S** Adopt a school policy requiring teachers to incorporate physical movement into daily classroom activities
- P** **E** Adopt an open use, shared use, or facilities use agreement making school facilities available for structured physical activity
- P** **E** Adopt a municipal policy converting vacant land or underutilized parking lots into public open spaces
- S** **E** Change workplace practice and culture to incorporate voluntary walking meetings into employees' regular routines
- S** **E** Create a hospital-based physical activity program, offering voluntary dance and yoga classes for patients and staff on hospital grounds

## CASE STUDY:

# Pajaro Valley Unified School District *Fitness 4 Life* Program



**PROVIDER & INSTITUTION ROLES:** Team Expert

**LEVEL OF INVOLVEMENT:** Medium

### INTERVENTION SUMMARY

Fitness 4 Life<sup>67</sup> is a successful afterschool program of the Pajaro Valley Unified School District. The district is located in a rural, agricultural area. The majority of the students in the district are Latino. To address childhood obesity, the program seeks to provide more opportunities for physical activity, increase access to healthy foods, and promote healthy eating habits. Students in the program participate in activities like swimming, dance, biking, and hula hooping. They also take hands-on nutrition classes, learn to garden, and cook healthy meals. Fitness 4 Life also partners with health and dental clinics to enroll students who may benefit from the afterschool program.<sup>67</sup>

### PROVIDER & INSTITUTION ROLES

Salud Para La Gente (a local clinic) and Dientes Community Dental Care participated in a pilot workgroup called Starlight Chavez Group that included leaders from Fitness 4 Life, the Santa Cruz Department of Public Health, the school site administration, and food services at the school (*team expert*).<sup>68</sup> The group convened to explore increasing collaboration between Fitness 4 Life and the clinics to better serve the health needs of students and their families.

As a result, the clinics began referring students who would benefit from increased physical activity to the afterschool program.<sup>68</sup>

### RESULTS

The program's motto—"an apple a day keeps the absences away"—demonstrates the school district's understanding of the connection between children's health and their ability to perform well in school.<sup>67</sup> The program consistently has more than 2,500 students enrolled each year. As a result, more students in the district are learning how to stay active and eat healthily. Additionally, many Fitness 4 Life student wellness leaders have developed an interest in health and gone on to pursue degrees in agriculture, medicine, nursing, and teaching.<sup>68</sup> An unexpected success is that these same students are returning as regular teachers in the Fitness 4 Life program to continue improving the health of their community.<sup>68</sup>



# IMPLEMENTATION CASE STUDY:

## Park Prescriptions: Stay Healthy in Nature Every Day



**PROVIDER ROLES:** Leader / Advocate

**LEVEL OF INVOLVEMENT:** High

### INTERVENTION SUMMARY

Park Prescriptions: Stay Healthy in Nature Every Day (Park Rx SHINE) is a partnership between UCSF Benioff Children's Hospital Oakland and the East Bay Regional Park District (EBRPD).<sup>69</sup> Park Rx SHINE was established to alleviate high levels of stress and correlated physical inactivity and chronic disease among the hospital's 35,000+ low-income patients.<sup>69</sup>

The program increases access to nature, which it considers a social determinant of health, for clinic patients by:

- Bringing nature into the clinic, using large wall posters of East Bay parks and open space areas
- Scheduling outings to East Bay parks and providing transportation, food, and trauma-informed programming for children and adults during these visits
- Integrating questions about access to nature into electronic medical records as a routine piece of health information to collect<sup>69,70</sup>



*UCSF Benioff Children's Hospital Oakland*

### PROVIDER ROLES

Dr. Nooshin Razani has been a champion for Park Rx SHINE since its beginning. When the hospital was approached by EBRPD, Dr. Razani was already involved with grassroots and community-based efforts to advance environmental justice.<sup>69</sup> Dr. Razani and EBRPD recognized that patients who face chronic levels of stress due to poverty and housing instability stand to benefit greatly from access to green space, and they worked together to envision the program and secure funding from EBRPD and the Regional Parks Foundation (leader). Dr. Razani also convinced other clinic staff to implement the program (advocate). In her words, "my role was to be the fanatic."<sup>69</sup>

## ELEMENTS OF PSE CHANGE

While the groups and people involved used many strategies to implement the PSE intervention, the following elements of PSE change were featured most prominently:

- **Define the problem and your goals:**  
Dr. Razani saw connecting patients to parks as a way to address health inequities because often low-income communities and communities of color lack access to adequate green space.
- **Mobilize partners:**  
EBRPD asked the children’s hospital to implement a parks prescription program to improve patient health. Dr. Razani provided expertise that convinced EBRPD to expand the program to include facilitated park visits.
- **Outline a clear strategy for change:**  
By providing prescriptions for transportation, food, and nature, Park Rx SHINE helps patients see that parks can be used to improve their health.
- **Educate the public and key decision makers:**  
Epidemiological data, such as life span by zip code, were compared to green space by zip code to effectively demonstrate the importance of parks to people’s health.

- **Determine whether success is achieved:**  
Dr. Razani and EBRPD led a randomized controlled study, in partnership with the University of California, Berkeley, to determine the effectiveness of Park Rx SHINE in improving patient health.
- **Take stock and level up:**  
To make Parks Rx SHINE more sustainable, Dr. Razani and EBRPD are working to have park visits recognized as billable encounters.

## TIMELINE



## RESULTS

As of March 2017, Parks Rx SHINE has organized 44 structured outings to parks, attracted as many as 75 patients to individual outings, and inspired patients to make 900 total visits to parks.<sup>69</sup> Evaluation of the program shows that Parks Rx SHINE improves patient health.<sup>71</sup>

## References

1. *Policy, Systems, and Environmental Change Resource Guide: Strategies for Increased Access to Healthy Foods, Beverages, and Physical Activity*; 2015. <https://www.cdph.ca.gov/programs/NEOPB/Pages/Policy,SystemsandEnvironmentalChangeResourceGuide.aspx>.
2. Goldman, L.,Pfeffinger, A. *Champion Provider Fellow Roles and Level of Involvement*. University of California, San Francisco. January 2017.
3. Mitchell P, Wynla, M, Golden, R., McNellis, B., Okun, S., Webb, C., Rohrbach, V., & Von Kohorn, I. *Core Principles & Values of Effective Team-Based Health Care*. Washington, DC: Discussion Paper, Institute of Medicine;2012.
4. Bell J, Mora G, Hagan E, Rubin V, Karpyn A. *Access to Healthy Food and Why It Matters: A Review of the Research*. Oakland, CA: PolicyLink and Philadelphia, PA: The Food Trust; 2013. [http://www.policylink.org/sites/default/files/GROCERYGAP\\_FINAL\\_NOV2013.pdf](http://www.policylink.org/sites/default/files/GROCERYGAP_FINAL_NOV2013.pdf).
5. *Partnership for a Healthier America. In It for Good: 2015 Annual Progress Report – Executive Brief*; 2015. [http://ahealthieramerica.org/wp-content/uploads/2016/05/2015\\_PHA\\_Annual\\_Report\\_FINAL\\_LR.pdf](http://ahealthieramerica.org/wp-content/uploads/2016/05/2015_PHA_Annual_Report_FINAL_LR.pdf).
6. Steyn NP, Parker W, Lambert EV, Mchiza Z. *Nutrition interventions in the workplace: Evidence of best practice*. *South African J Clin Nutr*. 2009;22(3). <https://www.ajol.info/index.php/sajcn/article/download/49098/35443>.
7. Levi J, Segal LM, Rayburn J, Martin A. *State of Obesity: Better Policies for a Healthier America: 2015*; 2015. <http://stateofobesity.org/files/stateofobesity2016.pdf>.
8. *ChangeLab Solutions. Spoons Full of Sugar: How the Beverage Industry Markets Sugary Drinks to Youth*; 2014.
9. Nixon L, Mejia P, Cheyne A, Dorfman L. *Big Soda's long shadow: News coverage of local proposals to tax sugar-sweetened beverages in Richmond, El Monte and Telluride*. *Crit Public Health*. 2014. doi:10.1080/09581596.2014.987729.
10. Liese A, Weis K, Pluto D, Smith E, Lawson A. *Food store types, availability, and cost of foods in a rural environment*. *J Am Diet Assoc*. 2007;107(11):1916-1923.
11. *California Pan-Ethnic Health Network. Taking a Bite Out of Oral Health Inequities: Promoting Equitable Oral Health Policies for Communities of Color Introduction and Background*; 2016.
12. Casey AA, Elliott M, Glanz K, et al. *Impact of the food environment and physical activity environment on behaviors and weight status in rural U.S. communities*. *Prev Med (Baltim)*. 2009;47(6):600-604. doi:10.1016/j.ypmed.2008.10.001.Impact.
13. Segal LM, Martin A, Rayburn J. *The State of Obesity: Better Policies for a Healthier America 2016*. Washington, DC: Trust for America's Health and Princeton, NJ: Robert Wood Johnson Foundation; 2016. <http://stateofobesity.org/files/stateofobesity2016.pdf>.
14. Leon P. Personal Communication. 2017.
15. *Los Angeles County Department of Public Health. Choose Health LA: Restaurants*. <https://www.choosehealthla.com/eat/restaurants/>.
16. Dablo C. "What's for Lunch? Fewer Carbs, for one thing. . . Local family restaurant's new owner embraces initiative to healthier dining." *Signal Tribune*.
17. Montes C. *Restaurants Across Los Angeles County "Choose Health": Modifying Menus and Agreeing to Promote Healthy Foods*. Los Angeles County Department of Public Health. <https://www.choosehealthla.com/wp-content/uploads/2015/12/CTG-HIGHLIGHTS-CHLA-Restaurants-103114.pdf>. Accessed January 1, 2015.
18. McGreevy P. *More expensive soda? Lawmakers want to tax sugary drinks*. *Los Angeles Times*. March 2016. <http://www.latimes.com/politics/la-pol-sac-soda-tax-20160308-story.html>.
19. Ayala-Pérez S. Personal Communication. 2018.
20. Wood J. Personal Communication. 2017.
21. *World Food Programme. "What is Food Security?"* <https://www.wfp.org/node/359289>. Published 2017. Accessed July 31, 2017. *World Food Programme. "What is Food Security?"* <https://www.wfp.org/node/359289>. Published 2017. Accessed July 31, 2017.
22. *United States Department of Agriculture. Definitions of Food Security*. United States Department of Agriculture Economic Research Service. <https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/definitions-of-food-security.aspx>. Published 2016.
23. Cook J, Jeng K. *Child Food Insecurity: The Economic Impact on Our Nation*. Chicago, IL: Feeding America; 2009. <https://www.nokidhungry.org/sites/default/files/child-economy-study.pdf>.
24. *Feeding America. Importance of Nutrition on Health in America*. <http://www.feedingamerica.org/hunger-in-america/impact-of-hunger/hunger-and-nutrition/>. Published 2017. Accessed July 31, 2017.
25. Huddleston-Casas C, Charnigo R, Simmons LA. *Food insecurity and maternal depression in rural, low-income families: a longitudinal investigation*. *Public Health Nutr*. 2009;12(8):1133. doi:10.1017/S1368980008003650.
26. Coleman-Jensen A, Smith M. *What is Very Low Food Security and Who Experiences It?* [https://www.ers.usda.gov/webdocs/charts/december\\_infographic\\_jensenpng/december\\_infographic\\_jensen.png?v=42726](https://www.ers.usda.gov/webdocs/charts/december_infographic_jensenpng/december_infographic_jensen.png?v=42726). Published 2015. Accessed July 31, 2017.
27. *Feeding America. Map the Meal Gap 2016: Highlights and Findings for Overall and Child Food Insecurity*; 2014. <http://www.feedingamerica.org/hunger-in-america/our-research/map-the-meal-gap/2014/map-the-meal-gap-2014-exec-sum.pdf>.
28. *California Department of Public Health and Champions for Change. Impacting a Rural Community in Tulare County, a Certified EBT Accessible Farmers' Market Is Established in Dinuba, CA*; 2015. [http://www.cdph.ca.gov/programs/NEOPB/Documents/15TulareSS\(1\)F20141015.pdf](http://www.cdph.ca.gov/programs/NEOPB/Documents/15TulareSS(1)F20141015.pdf).
29. Rivas G. *Farmers Market Offers Healthy Choices*. *The Dinuba Sentinel*. <http://www.selfhelpenterprises.org/wp-content/uploads/2015/08/Farmers-Market-offers-healthy-choices-The-Dinuba-Sentinel-06-19-15.pdf>. Published June 15, 2015.
30. *Electronic Benefit Transfer (EBT) Project*. <http://www.ebtproject.ca.gov/>.
31. Chierici M, Powell E, Manes R. *Time to Play: Improving Health and Academics Through Recess in New York Elementary Schools*; 2013. [http://www.jumpinforhealthykids.org/userfiles/file/news/DASH-NY\\_Mandatory\\_Daily\\_Active\\_Recess\\_Guide.pdf](http://www.jumpinforhealthykids.org/userfiles/file/news/DASH-NY_Mandatory_Daily_Active_Recess_Guide.pdf).
32. Cantrell P. Personal Communication. 2017.
33. *Council on Community Pediatrics Committee on Nutrition. Promoting Food Security for All Children*. *Pediatrics*. 2015;136(5):e1431-e1438. doi:10.1542/peds.2015-3301.

34. 2-1-1 San Diego. *Our Mission*. <http://211sandiego.org/mission-values/>. Published 2017. Accessed July 30, 2017.
35. Centers for Disease Control and Prevention Division. *Putting Local School Wellness Policies into Action*. Atlanta, GA; 2014. <http://www.cdc.gov/healthyschools/npao/pdf/SchoolWellnessInAction.pdf>.
36. CDC. *A Practitioner's Guide for Advancing Health Equity: Community Strategies for Preventing Chronic Disease*. 2013.
37. National Council of La Raza. *Profiles of Latino Health: A Closer Look at Latino Child Nutrition*.; 2015. [http://www.nclr.org/Assets/uploads/Publications/Nutrition-Profles/2015plh\\_issue10\\_72715.pdf](http://www.nclr.org/Assets/uploads/Publications/Nutrition-Profles/2015plh_issue10_72715.pdf).
38. Carlson JA, Mignano AM, Norman GJ, et al. *Socioeconomic Disparities in Elementary School Practices and Children's Physical Activity during School*. *Am J Heal Promot*. 2014;28(3\_suppl):S47-S53. doi:10.4278/ajhp.130430-QUAN-206.
39. Finkelstein DM, Hill EL, Whitaker RC. *School Food Environments and Policies in US Public Schools*. *Pediatrics*. 2008;122(1):e251-e259. doi:10.1542/peds.2007-2814.
40. Belansky ES, Cutforth N, Gilbert L, et al. *Local Wellness Policy 5 Years Later: Is It Making a Difference for Students in Low-Income, Rural Colorado Elementary Schools?* *Prev Chronic Dis*. 2013;10:130002. doi:10.5888/pcd10.130002.
41. United States Department of Agriculture Food and Nutrition Service. *Local School Wellness Policy*. <https://www.fns.usda.gov/tn/local-school-wellness-policy>.
42. *The Smarter Lunchrooms Strategies*. The Smarter Lunchrooms Movement. <https://www.smarterlunchrooms.org/scorecard-tools/smarter-lunchrooms-strategies#fruit>.
43. Goore Z. Personal Communication. 2017.
44. Sacramento City Unified School District. *A School Wellness Policy for the 21st Century*. [http://www.scusd.edu/sites/main/files/file-attachments/scusd\\_infographic\\_4\\_1028.16.pdf](http://www.scusd.edu/sites/main/files/file-attachments/scusd_infographic_4_1028.16.pdf).
45. Sacramento City Unified School District. *Proposed Changes to Our School Wellness Policy*.; 2016. <http://www.scusd.edu/post/proposed-changes-our-school-wellness-policy>.
46. Blad E. *Withholding Recess as a Punishment Declines*. *Educ Week*. April 2015. <http://www.edweek.org/ew/articles/2015/04/15/withholding-recess-as-discipline-declining.html>.
47. Torres J. Personal Communication. 2018.
48. Tristan L. Personal Communication. 2018.
49. Ayala-Pérez S. Personal Communication. 2018.
50. Pierce T. Personal Communication. 2017.
51. ChangeLab Solutions. *What Are Complete Streets? A Fact Sheet for Advocates and Community Members*. [http://www.changelabsolutions.org/sites/default/files/CompleteSts\\_FactSht\\_20141106.pdf](http://www.changelabsolutions.org/sites/default/files/CompleteSts_FactSht_20141106.pdf). Published 2014.
52. Zimmerman S, Lieberman M, Kramer K, Sadler B. *At the Intersection of Active Transportation and Equity: Joining Forces to Make Communities Healthier and Fairer*.; 2015. [http://saferoutespartnership.org/sites/default/files/resource\\_files/at-the-intersection-of-active-transportation-and-equity.pdf](http://saferoutespartnership.org/sites/default/files/resource_files/at-the-intersection-of-active-transportation-and-equity.pdf)
53. Gibbs K, Slater S, Nicholson N, Barker D, Chaloupka F. *Income Disparities in Street Features That Encourage Walking*. Chicago, IL; 2012. [www.bridgingthegapresearch.org/\\_asset/02fpi3/btg\\_street\\_walkability\\_FINAL\\_03-09-12.pdf](http://www.bridgingthegapresearch.org/_asset/02fpi3/btg_street_walkability_FINAL_03-09-12.pdf).
54. Mueller BA, Rivara FP, Bergman AB. *Urban-rural location and the risk of dying in a pedestrian-vehicle collision*. *J Trauma*. 1988;28(1):91-94. <http://www.ncbi.nlm.nih.gov/pubmed/3339668>.
55. National Center for Safe Routes to School. *History of SRTS*. <http://www.saferoutesinfo.org/about-us/history-srts>.
56. *Safe Routes to School National Partnership*. The 6 E's. <http://www.saferoutespartnership.org/healthy-communities/101/6Es>.
57. California Safe Routes to School Technical Assistance Resource Center. *Safe Routes to School Programs in Rural California: A Guide for Communities and Partners*. 2015;30-34. <https://archive.cdph.ca.gov/HealthInfo/injviosaaf/Documents/SRTSProgramsInRuralCA.pdf>.
58. Dr. Jyoti Rau. Personal Communication. 2017.
59. City of Cupertino. *What is Cupertino Safe Routes to School (SR2S)?* <http://www.cupertino.org/index.aspx?page=1353>. Published 2017.
60. City of Cupertino. *Cupertino Safe Routes to School: November 10, 2016 Working Group Meeting*. 2010. <http://www.cupertino.org/Modules/ShowDocument.aspx?documentid=12668>.
61. Harvard School of Public Health Obesity Prevention Source. *Environmental Barriers to Activity*. <https://www.hsph.harvard.edu/obesity-prevention-source/obesity-causes/physical-activity-environment/>. Published 2013.
62. Dohm D, Wooten H. *A Guide to Building Healthy Streets*.; 2016. [http://www.changelabsolutions.org/sites/default/files/Building\\_Healthy\\_Streets\\_FINAL\\_20160630.pdf](http://www.changelabsolutions.org/sites/default/files/Building_Healthy_Streets_FINAL_20160630.pdf).
63. The Centers for Disease Control and Prevention. *Physical Activity Opportunities in School, Afterschool, and Early Care and Education Settings: A Health Equity Guide*. 2015. <https://www.cdc.gov/nccdphp/dch/pdfs/health-equity-guide/health-equity-guide-sect-4-4.pdf>.
64. National Recreation and Park Association. *Parks and Recreation in Underserved Areas: A Public Health Perspective*. 2013. [http://www.nrpa.org/uploadedFiles/nrpa.org/Publications\\_and\\_Research/Research/Papers/Parks-Rec-Underserved-Areas.pdf](http://www.nrpa.org/uploadedFiles/nrpa.org/Publications_and_Research/Research/Papers/Parks-Rec-Underserved-Areas.pdf).
65. Flourmoy R. *Regional Development and Physical Activity: Issues and Strategies for Promoting Health Equity*.; 2002.
66. Brownson RC, Housemann RA, Brown DR, et al. *Promoting physical activity in rural communities*. *Am J Prev Med*. 2000;18(3):235-241. doi:10.1016/S0749-3797(99)00165-8.
67. Fletcher AJ. *Afterschool and Childhood Obesity: Two Case Studies*. [https://www.ccscenter.org/afterschool/documents/Final\\_Fall\\_2010\\_Two\\_Case\\_Studies.pdf](https://www.ccscenter.org/afterschool/documents/Final_Fall_2010_Two_Case_Studies.pdf).
68. Bruno J. Personal Communication. 2017.
69. Dr. Nooshin Razani. Personal Communication. 2017.
70. East Bay Regional Park District. *Park Prescriptions: Stay Healthy in Nature Every Day (SHINE)*. <http://www.ebparks.org/activities/hphp/shine>.
71. *Clinical Trials*. *Stay Healthy In Nature Everyday: Family Nature Outings in a Low Income Population (SHINE)*. <https://clinicaltrials.gov/ct2/show/NCT02623855>.

**Images:** Cover: Gemma Evans (sign) • Table of Contents: Claudio Testa • pg 3 Claudio Testa • "What Is PSE Change?" Jordan Whitt • pg 9 Icons by FreePik from www.flaticon.com • pg 24 Leonie Wise • pg 36 Jimmy Lopes • pg 40 Jewell Edlion • pg 43 Jamie Taylor • pg 46 Markus Spiske • pg 50 UCSF Benioff Children's Hospital Oakland



## A Powerful Approach to Healthier Communities

For more information, visit [championprovider.ucsf.edu](http://championprovider.ucsf.edu).

Playbook Version 2.0. April 2018.



Funded, in part, by USDA SNAP-Ed, an equal opportunity provider and employer.