

# Transforming communities to promote healthy eating and active living



## Kaiser Permanente Northern California's HEAL Zones Initiative: Summary evaluation findings

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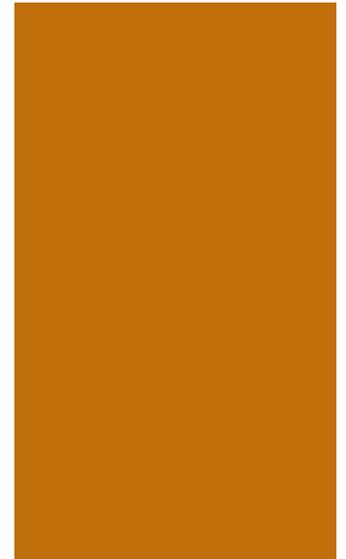
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01

# HEAL Zone Initiative

# Community Health in Kaiser Permanente's Northern California Region: The HEAL Zone Initiative

Widespread obesity is a significant public health challenge. The condition has been implicated in the development of chronic diseases including diabetes, cardiovascular disease and some cancers. While there was a leveling off of the rate of increase in the prevalence of adult obesity in the U.S., and declines in some areas between 1999 and 2008,<sup>1</sup> recent national data from 2011-2012 show no significant change in youth or adults since 2003-2004.<sup>2</sup>

Even without further increases in obesity rates, we are seeing that the impact of the rise in obesity rates over the last several decades will manifest a growing and significant burden. For instance, while obesity rates leveled off, a sharp increase in the prevalence of pre-diabetes/diabetes occurred among adolescents between 1999-2008.<sup>3</sup>

Inspired by its mission to improve community health, Kaiser Permanente (KP) developed the Healthy Eating Active Living (HEAL) Initiative program in 2004 to support healthy behaviors and reduce obesity through clinical practice and sustained community-level change.

In 2005, the HEAL initiative grew to include place-based work, known as Community Health Initiatives (CHI), or HEAL-CHI. Today, six HEAL Zones in Northern California are building on the successes of HEAL-CHI.

HEAL Zones are a prevention-driven approach to health, supporting policies and environmental changes that promote healthy eating and active living in neighborhoods, schools and workplaces.

<sup>1</sup>Flegal, K. M., Carroll, M. D., Ogden, C. L., & Curtin, L. R. (2010). Prevalence and trends in obesity among US adults, 1999-2008. *JAMA*; 303(3), 235-241.

<sup>2</sup>Ogden, C. L., Carroll, M. D., Kit, B. K., & Flegal, K. M. (2014). Prevalence of childhood and adult obesity in the United States, 2011-2012. *JAMA*; 311(8), 806-814.

<sup>3</sup>May, A. L., Kuklina, E. V., & Yoon, P. W. (2012). Prevalence of cardiovascular disease risk factors among US adolescents, 1999- 2008. *Pediatrics*, 129(6), 1035-1041.

# HEAL Zones in Northern California

Kaiser Permanente funded three Northern California communities, called Healthy Eating Physical Activity Community Health Initiative (HEAL CHI) sites, for five years from 2006 – 2010. Starting in 2011, KP funded six HEAL Zones for three years.

Each HEAL Zone encompasses a low resource neighborhood that range in size from 10,000 – 20,000 residents.

HEAL Zone strategies focus on policy, systems and environmental changes, supported by increased health knowledge and cultural norms change.

This report summarizes the NCAL HEAL Zone evaluation findings to date, including a description of the HEAL strategies implemented and their potential impact on behavioral and health outcomes.

Taking Action

## Northern California HEAL Zones



# HEAL Zone Initiative Design

## What is the HEAL Zone approach in Northern California?

HEAL strategies (often called interventions) have a place-based focus; an emphasis on change at multiple levels, particularly environmental and policy change; a multi-sectoral collaboration that involves sectors such as neighborhoods and schools; and community engagement and community ownership.

HEAL Zones were asked to create evidence-based and sustainable strategies, including at least one community infrastructure and one education strategy, for each HEAL goal. Community Infrastructure strategies create an environment that supports or encourages healthy eating and active living, including policies, organizational practices, systems change, and built environment changes. Education strategies increase individual skills and knowledge and promote healthy eating and active living community norms.



# HEAL Zone Goals

The Northern California HEAL Zone sites shared these common goals:

- Decrease calorie consumption (e.g. soda/sugar sweetened beverages, portion sizes, snacking)
- Increase fresh fruits and vegetables consumption
- Increase physical activity in community settings (e.g. safe routes for walking and biking, parks, joint use agreements)
- Increase physical activity in institutional settings (e.g. schools, after school, workplace)

HEAL Zones were asked to implement multiple, overlapping policy, programmatic, and environmental strategies that, in combination, lead to behavior change in nutrition and physical activity and reductions in rates of obesity and overweight.

Community change strategies were created through a community-driven planning process involving a coalition of organizations and residents.

A HEAL Zone strategy is a set of coordinated activities designed to lead to a sustainable “community change,” i.e., a change in community programs, policies, or the environment that supports improved food and physical activity behavior. See Figure 2 on page 16 for examples of the community change strategies being implemented in the NCAL HEAL Zones.



# HEAL Zone Initiative Summary

Table 1 is a summary of both the HEAL CHI and HEAL Zone initiatives in the Northern California KP regions. KP Community Benefit is the lead organization providing funding and technical support.

Table 1. Summary of NCAL KP CHI HEAL and HEAL Zone initiatives

Initiative	Funding	Model
Northern CA Phase I HEAL-CHI 2006-2010	5-year grants of \$1.5 million 3 communities	<ul style="list-style-type: none"> <li>Organized by sector: schools, health care, worksites and neighborhoods settings</li> <li>Strategies from a menu of evidence-based policy and environmental change approaches</li> </ul>
Northern CA Phase II HEAL Zones 2011-2014	3-year grants of \$1 million 6 communities	<ul style="list-style-type: none"> <li>Communities limited in size to 10,000 to 20,000 population</li> <li>Development of a Community Action Plan around four nutrition and physical activity goals and use of evidence-based or evidence-informed strategies</li> <li>Emphasis on community infrastructure changes (environment and HEAL access) re-enforced by education and cultural norms change efforts and a focus on population dose of HEAL strategies</li> </ul>

02

Evaluation  
methods

# What is the focus of the HEAL Zone evaluation?

The evaluation goals are to describe what's changed, **estimate** the impact of these changes and **measure** actual impact after the HEAL Zone strategies have been fully implemented

## What's changed

Community strategies are tracked and categorized to describe how the HEAL Zone communities differ because of the initiative, including new policies and programs and changes to the physical environment.

## Population-focused

The HEAL Zone strategies are designed to improve the health of a population of people living in a neighborhood. That's why the evaluation assesses the "population-level" change in lifestyle behaviors and obesity rates across *all* HEAL Zone residents.

## Impact-focused

Two approaches are used together to assess the population-level impact:

**Estimated impact** (or population dose) is based on the people touched by each of the community change strategies and an estimated change of HEAL behaviors on those people reached.

**Measured impact** from measured changes in key outcomes: food and physical activity behaviors.

## Population change

The community changes describe the intervention and the people reached by it. Estimated impact predicts the potential for change from these interventions across the neighborhood population.

Once actual measurements are completed, we put all three together to identify the impacts likely attributed to the interventions.

The HEAL Zone evaluation is led by the Center for Community Health and Evaluation (CCHE), part of Group Health Research Institute, in partnership with the Atkins Center for Weight and Health at the University of California, Berkeley.

# What measurements are used in the evaluation?

## Progress reporting and site visits

track implementation, numbers reached, strength, and sustainability of the HEAL Zones community change strategies.

**Population-level measures**, including pre/post surveys of youth and adults, and measured height and weight data from youth school-based measures (Fitnessgram) and KP members.

**Strategy level measures**, assessing the behavioral impact of individual strategies; e.g., pre/post surveys of shoppers at corner stores that have added healthier food items.

**Key informant interviews and Photovoice** gather the community perspective on the impacts in their communities, through both photo documentation and interviews.



# What is the value of looking at *estimated* impact?

We add up the estimated impacts of individual community change strategies to project what their combined effect will be at the population level.

But why not just rely on surveys and other population-level data to determine whether HEAL Zones are reducing overweight and promoting healthier lifestyles? Because:

**Effects are likely to be small.** Obesity prevention is a complex problem with decades of entrenched forces that will take enormous resources to change in a short period of time, and surveys are often not sensitive enough to detect those effects.

**Measures are imperfect .** It is difficult to capture changes in lifestyle behaviors such as diet and exercise using self-reported responses from surveys.

Using estimated impact allows us to document small but potentially important behavioral changes taking place in a community.

Estimated impact provides corroboration for the measured population changes we find at the end of the HEAL Zone initiative. If estimated and measured impact align, we can be more confident that the measured impact is attributable to the strategies that were implemented.

# 03

## Findings

# Overview of Findings

The findings are organized by the way we assess impact: changes taking place, and estimated and measured population-level impact. The initiative is just now ending and some key data collection is still ongoing. The following is an overview of the findings and what is still to come (and when).

## **Community changes:**

- An overview of the strategies being implemented
- Examples of the more promising strategies from each community as of September 2014
- Community member perceptions of accomplishments from Photovoice

*Still to come (by end of 2014):*

- Final implementation numbers for strategies
- Updated strategy examples

## **Measured population-level impact:**

- Results from evaluations of selected strategies
- Summary of measured impact from the HEAL CHI initiative (2006-2010)
- KP member data – changes in obesity rates among KP members living in the HEAL Zones communities

*Still to come: (by mid-2015):*

- More comprehensive strategy level results
- Pre/post survey results showing behavior change among youth and adults

## **Estimated population-level impact:**

- Numbers of people reached overall
- Estimated population-level impact of the groups of strategies being implemented

*Still to come: (by end of 2014):*

- Final reach numbers
- Updated estimates of population-level impact

# What community changes are taking place?

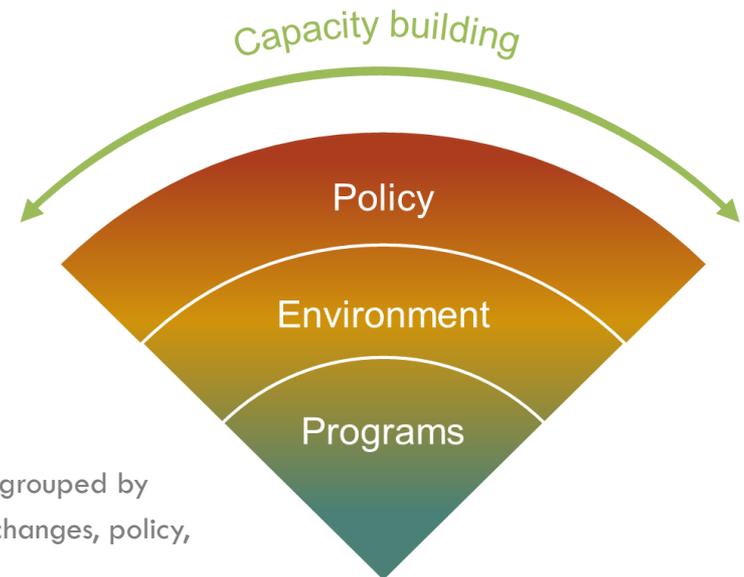
Figure 2 on page 16 shows the distribution of over 150 community change strategies being implemented in six HEAL Zones communities totaling 102,000 people. Well over half (65%) of the strategies are either policy or environmental changes.

The policy change category includes some public policies (e.g., city-level policies such as zoning, transportation, soda taxes), but more often includes organizational policies in schools, worksites, health care institutions and other local organizations.

The environmental change category includes built environment changes—sidewalks, park and trail improvements, healthy food access in stores and restaurants.

**A key guiding principle in the HEAL Zone framework is that changes in policies and environments can reach larger numbers of people and are more sustainable.**

This assumes that policies are fully implemented and there is adequate maintenance of environmental changes, which often requires additional effort and resources.

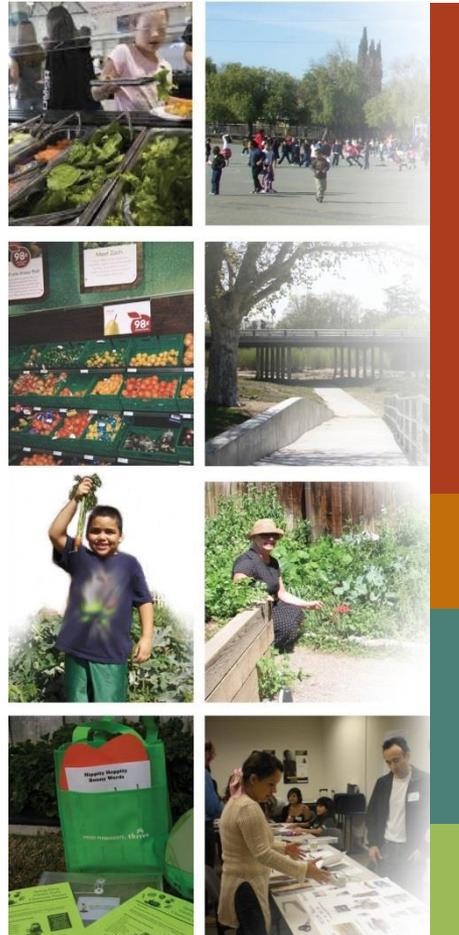


HEAL Zone strategies are grouped by programs, environmental changes, policy, and capacity building.

# What community changes are being implemented?

Figure 2. Distribution of HEAL Zone community change strategies

Total  
population  
102,000



**Policy**  
53%

School nutrition policies  
School PE standards  
Worksite wellness policies

**Environment**  
12%

Built environment  
Healthy corner stores  
Safe Routes to School

**Programs**  
23%

Zumba classes  
Health education  
Promotoras

**Capacity  
building**  
12%

School wellness teams  
Resident mobilization  
Worksite promotion

# Promising community changes

The following pages are examples of successes to date in each of the six HEAL Zones. These are promising strategies where we may see impact in the future.



# Madera

## 20 promotoras promote HEAL



In early 2013, 20 curious mothers packed a meeting at Camarena Health, a HEAL Zone partner, wanting to learn how to improve their personal health and that of their families. These mothers learned from mentors practical tools to make lifestyle changes, often starting with making small changes in their family's meals. Some stopped buying soda and others began exercising.

It wasn't long before personal health concerns led to broader impacts on their communities.

In April 2013 the women began acting as promotoras—sharing nutrition information and referring families to physical activity classes through the HEAL Zone-supported Rx4Health program. The following year the promotoras attended 30 community events including health fairs, summer lunch sites, and activities at apartment complexes and referred over 300 families to both physical activity and nutrition classes.

*They say this work is amor al arte, "labor of love," driven by a desire for a healthier community*



# Madera

The Promotoras have provided information on My Plate, Rethink Your Drink, and the benefits of physical activity to over 1,000 families. They introduced fun educational games including the healthy *loteria* game and physical activity challenges.

After completing a leadership curriculum, the Promotoras identified a list of issues they wanted to address, starting with school lunches. They went before the Madera Unified School District Wellness Committee and presented a comparative analysis of wellness policies and recommended changes—and now the policy is being revised!

**A group of curious mothers wanting to improve their own lifestyle has transformed into an organized grassroots community group working to improve their community's health.**

The Promotoras have expanded their work beyond HEAL to social justice and equity issues. They learned advocacy skills that would help them work towards creating a healthier community that includes these fundamental issues.

Members of this group have accomplished and grown a lot. As the group's coordinator said, "The smiles, the tears, the hugs shared definitely made us feel closer to one another and establish a strong friendship. I have many times been motivated by their passion."



# Modesto

## A new path for safe walking

There had long been a need for a safer place to walk in West Modesto. Children traverse busy streets to get to school and other destinations. Routes contain a patchwork of city and county land marked by stretches with neither sidewalks nor street lighting resulting in pedestrian fatalities.

The collaborative envisioned a trail built on a half mile abandoned canal bank that would link schools and other destinations.

Over the course of a year and a half the collaborative built new relationships and nurtured existing ones to earn project support.

Using a consensus model in which all partners played important roles and “no one partner led the way” was central.



# Modesto



After three years of fundraising, beginning with a pledge from Kaiser Permanente, the collaborative garnered the \$1 million dollar financial support needed to fund the trail and landscaping construction.

Construction was completed in April 2014 with remaining landscaping planned for the fall.

As an added benefit, well water provided free by the city in perpetuity also irrigates the fruit and vegetable plot on an adjacent lot that is farmed by school groups.

In Fall 2013, the groundbreaking celebration was attended by city and county representatives, partners, residents and student groups. “We had to get all the kids here,” said coordinator Carole. “This is their trail.”

The space has been transformed with a meandering paved path, walls, lighting, call boxes and other security features, benches and landscaping.

The trail’s namesake, Ms. Helen White, had long been a pillar in West Modesto. She was described as a fierce advocate for the community and particularly the children. Now the children have a safe place to walk.



# Monument

## Establishing youth baseball and healthy snack policy

Monument Impact petitioned to bring the Junior Giants program to their city in 2013 to implement their HEAL strategy to bring affordable physical activity opportunities to Concord youth.

The program, supported by the San Francisco Giants Community fund, supplies free, non-competitive, co-ed baseball with uniforms, equipment, and training, but relies on local volunteers for administration, promotion, and coaching.

In addition to baseball fundamentals, the program focuses on character development and the importance of education, health and violence prevention.

The HEAL coordinator was insistent something needed to be done to help kids be active during her organization's bid interview with the Giants. The Giants awarded Monument Impact ownership of the league with the provision that the HEAL Zone Coordinator, based on her passion, serve as the Concord Commissioner.

That first year there were 150 kids in the league aged 8-10 and in the second year they expanded to 272 kids up to 14 years of age and 120 volunteer coaches and support staff.

“That was never the plan! I don't know anything about baseball,” laughed the coordinator recalling that day. “Knowing nothing about baseball was not enough to make our group stop doing this good work.”

They conducted a promotional campaign at four schools to recruit parent volunteers and enlist kids. In the second year, as a violence prevention approach, they expanded to an older age group.



# Monument

Besides providing an outlet for physical activity, the league promotes healthy eating. Participants are reminded to emulate the pros and keep their energy levels high and mind alert by eating nutritious foods, including drinking water instead of sugary drinks. They are encouraged to track their fruit and vegetable intake and physical activity in order to earn a water bottle.



As a HEAL strategy, they passed a healthy food and beverage policy for the Concord league. Then they worked with the national leadership to adopt a healthy food and beverage policy and practice guidelines across all 90 Junior Giants leagues in 2014.

The guidelines added to the commissioner's handbooks apply a "zero tolerance" policy for soda and junk food, encourage parents to bring healthy food and drinks for snacks at practices and games, challenge leagues to have a "Soda Free Summer" focused on drinking water, and ask coaches to set an example by drinking only water and participating in physical activity with the kids.

The reach and impact of the HEAL Zone's healthy policy efforts now extend far beyond Concord to over 21,000 children in 200 cities across California and into Nevada and Oregon.

# Sacramento

## Safety and programming to increase park use

HEAL Zone staff and partners embarked on a community walk audit in 2012. The audit included Valley Hi Park, an underused resource with rundown recreational equipment, a history of crime and gang activity, and nearby traffic safety concerns.

While conducting the assessment, gunshots were fired. The work was halted; fortunately no one was injured.

Instead of deterring progress, this event served as a catalyst for non-traditional partners in an array of fields such as violence, obesity, law enforcement, business, youth development, redevelopment, and others to rally with residents to improve conditions.

**New partnerships were forged to support a common agenda: increasing safety**



To provide a safe outlet for activity, they helped organize a youth basketball league and built an alliance with law enforcement. Neighborhood watch programs and police patrols intensified.



Advocacy to support streetscape changes and park improvements led to the installation of a new street crossing HAWK (**high-intensity activated Crosswalk**) light used to stop road traffic and allow pedestrians to cross safely on a busy road. A new play structure, benches, and exercise equipment were also installed.

# Sacramento

After immediate safety issues were secured, new programming was steadily added to the park to draw residents to the new facilities including sports leagues, exercise classes, and a weekly walking group.

In spring 2014 the reclamation of the park got a boost from Re-Imagine Mack Road, a volunteer-driven, one-day event to transform the Mack Road corridor area with landscaping, painting, lighting, home renovations, and a new community center. Over 1,000 volunteers made more than 30 improvements, mostly in the HEAL Zone.

Not long after, Summer Night Lights, a violence prevention program, launched its weekly community building events in the park involving food, music, dancing, sports, cooking classes, and other workshops.

**Strong partnerships and commitment have led to community changes focused around park safety**

The collaborative reports increased park usage, reduced violence, improved morale, improved economic vitality, and increased community cohesion.

Now people from several different sectors attend one another's meetings, provide input into work plans, and coordinate their efforts.



# Bayview

## Transforming corner stores

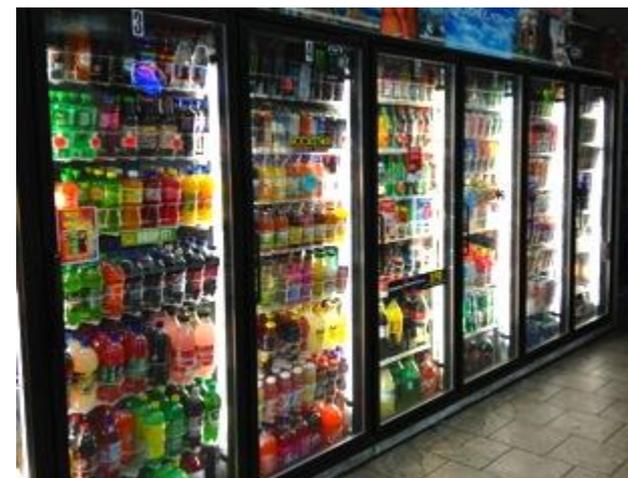
The HEAL initiative helped set into motion the transformation of three Bayview corner stores based on a framework that built on existing community resources and assets. The goal was to increase access to fresh fruits and vegetables and other healthy foods in these small neighborhood stores.

However, even with a documented need and community will, the changes were hard-won. Alternative financing did not materialize when needed. A store owner was forced to attend to personal health issues. And there were very real and ongoing challenges managing and sustaining a new kind of store with more perishable items while encouraging new purchasing patterns.

First, resident Food Guardians assessed and provided feedback to support healthy changes at 24 corner stores. These Food Guardians gained the trust and willingness of 3 food retailers: Lee's Market, Ford's Grocery, and later Kennedy's Market.

Three resident Food Guardians trained in food justice issues and tasked with serving as liaisons with store owners and managers, provided education, technical assistance, equipment, and funding to keep up support for the changes.

Stores gained the support of HEAL partners which included a combination of grants and loans in the amount of \$4,000 to retrofit the stores based on designs by an architect to include new shelving, prominent fruit and vegetable displays, and refrigeration units.



# Bayview

The Food Guardians provided substantial support and helped to build store capacity to sustain the changes. Alongside these store conversions came the removal of unhealthy food and beverage signage and the addition of new healthy promotions such as the local campaign, Nutrition is Our Tradition.

The Food Guardians report that store managers remain engaged and are successfully managing the new products introduced at their stores.

The momentum of the corner store conversion movement to spread this model has gained support and has taken off among other partners. A coalition in San Francisco's Tenderloin neighborhood has adopted this model in two stores.

They realized there is a need for tailored technical assistance and incentives for participating retail stores to make these kind of changes. These successes have the potential to create a sea change in corner stores throughout San Francisco neighborhoods.

The changes and lessons learned from this initiative have not escaped the notice of local city government and serve as a direct model for a citywide Healthy Retail SF pilot initiative put forth by Supervisor Eric Mar in August 2012.



# Santa Rosa

## Parents club members change themselves and their community

Faced with few affordable physical activity opportunities, the Roseland Roadrunners parents club took on changes in their South Santa Rosa community. Key members of the group were trained by HEAL Zone partner, Saint Joseph's Health, to address nutrition and physical activity needs in their community.

Early on changes did not come as quickly as the collaborative and residents had hoped. Despite initial enthusiasm, participation dwindled and residents expressed feeling ill-equipped to face the challenges of making substantive community changes. It was clear that the original resident engagement paradigm did not provide adequate support for residents.

Together with Saint Joseph's Health, they overhauled the program to offer a 5-day training and ongoing mentoring program designed to give residents the knowledge, confidence and skills to help them raise their voices to make the community a healthier place.

The training modules incorporated community organizing principles, information about how neighborhoods influence health, guidance on engaging local government representatives, media spokesperson training, and strategic planning to put their skills into practice.



The HEAL collaborative adjusted their approach to emphasize community organizing skills, which led to the desired changes and ultimately a more effective and sustainable engagement model

# Santa Rosa

The newly trained residents leading the Roseland Roadrunners grew their group to 44 members. They brought on a certified Zumba instructor to provide low-cost exercise classes for Roseland Elementary parents, conducted fundraising to purchase exercise supplies, and added a weekly 45-minute parent nutrition education class.

Upon hearing about the success of the Zumba classes, nearby schools Robert L. Stevens and J.X. Wilson, requested the classes for their schools.

Roadrunner members had their sites on more substantial changes. Armed with confidence and new advocacy tools, they took their concerns to the Roseland principal to press for the installation of circuit course exercise stations to encourage parents to be active after dropping off their children at school.

**Upon attaining the principal's support, they assisted with fundraising for the new equipment. With a fresh success at their heels, they partnered with Parks and Recreation to install similar exercise stations at Southwest Community Park.**

The group's advocacy contributed to the decision of the Roseland Elementary School principal to expand joint use agreements to make adjacent school fields open to the community during non-school hours.

The space had been used by gangs, but inviting residents to use it for walking and other exercise helped reclaim the space. The Roadrunners are now poised to take their training and enthusiasm to make other change in their community—and run with it!



# Photovoice: Resident perceptions of impact

The following pages show several examples of Photovoice pictures that are intended to capture the perceived impact of HEAL Zones in the community from the perspective of residents.

These include some photos showing conditions before and now (pages 31 – 32), and others showing the final result (pages 33 – 34).

Photovoice is a community-based participatory research method that provides participants who traditionally have little voice in community policy decisions, with training in photography, ethics, critical dialogue, photo captioning, and policy advocacy.



# Photovoice

Before (2012)



## Scene of the crime

Numerous lives are being lost at the Gateway Road railroad crossing due to lack of a safer, easier and more accessible alternative to cross from a residential to commerce area. The Gateway Road lacks a gateway. The other alternative is 5 crosswalks away and would add about 1.5 miles to the commute. Would it matter if it were your loved one? Pedestrians need safer, easier and more accessible walking paths.

Now (2014)



Promoting physical activity by allowing residents to safely cross the road. However, be cautious at night.

# Photovoice

Before (2012)



Here's a Budweiser truck blocking 3<sup>rd</sup> Street. Why is it so easy for Budweiser to bring beer and sugary beverages into our neighborhood, and so difficult to do the same for fresh fruits and vegetables? Let's change that.

Now (2014)



Look at all of the varieties of fruits and vegetables with in these bins. Local residents can now purchase healthier foods, but what of all of the families in the Bayview whose corner store hasn't gone through this transformation? Every retail store in Bayview should balance our stores with healthy food. Every Bayview resident deserves to walk into a store that looks like this. Raise the standards.

– concerned community health worker

# What's changed (2014)



Prior to 2013 there was no crosswalk or pedestrian light for adults and children to cross the street, resulting in dangerous road crossing conditions. With persistence from neighborhood leaders, there is now a crosswalk and pedestrian light, making it safer for adults and children to cross the street, without dodging cars and sprinting to get to the other side. There must be pedestrian lights with all crosswalks in high traffic areas, no matter where the neighborhood is located.

– concerned mother of two pre-teens

## What's changed (2014)



Valley Hi HEAL Zone efforts have provided opportunities for law enforcement and community to see each other in a different light. Police were able to engage with the community in a positive way while residents got to see police as more than just enforcers. Relationship building is at the core of positive work in the communities like Valley Hi and supports the sustainability of initiatives like HEAL Zone.

# Estimated population-level impact

## Estimated population-level impact combines reach with impact

The following pages show:

- Estimates of the numbers of people reached
- A description of how we combine the strategy level estimates with reach to estimate the impact of clusters of community change strategies
- A definition of a “significant” impact of strategy clusters on population-level health behaviors
- Overall estimates of population-level impact for school and community strategies



# How many people are being reached?

All residents and virtually all school-age children are being touched by at least one community change strategy, including policy and environmental changes, health education, and social marketing

We estimate reach for two different target populations—all residents living in a HEAL Zone community and the number of students in schools located in that community. Most HEAL Zone communities included significant education and marketing campaigns which touched the majority of residents. Adding up the number of people reached across all six communities, and accounting as much as possible for strategy overlap (i.e., avoiding double-counting people reached by multiple strategies), approximately:

**102,000 people** have been touched by community strategies—the entire population by at least one community intervention.

**15,500 youth** enrolled in K-12 schools (96% of the total student population) have been touched by school-based strategies or by community-based strategies specifically targeting youth (e.g., after-school programs in community centers).

# Estimating the impact of a cluster of strategies

The HEAL Zone impact comes from many overlapping strategies targeting the same people and health outcomes. To estimate the impact of combined groups of strategies, we estimate the impact of each individual strategy and add them up.

To have a common yardstick, individual strategy impact is estimated as the impact averaged across the entire population—that is, including people not touched by the community change

For example, in one Colorado community, there were five school-based strategies targeting youth physical activity in one school:

1. Revised PE curriculum
2. School wellness policy changes to promote physical activity
3. After-school physical activity
4. Active Transport to School
5. Action-based learning in classrooms

Adding the estimated impact of these five strategies together gives an estimate of their combined effect on physical activity of students. Individual students may be touched by none, some, or all of the five strategies. This provides an approximation of the average impact across the entire school population, or all the students.



# How much is a high impact?

The power of population-level initiatives such as HEAL Zones is that small changes in each person can produce a big overall effect. One estimate is that a 2% average increase in physical activity minutes can result in a 1% decline each year in obesity rates and a 0.5% long-term decline in the prevalence of diabetes.<sup>6</sup>

In a community of 10,000 people that means 100 fewer people are categorized as obese each year and 50 fewer people with diabetes

Given the fact that small percent changes can result in meaningful impacts at a population level, we consider any estimated impact above 2% that is based on solid evidence to be “significant.” Because population-based surveys such as our youth surveys have limited ability to detect small changes, we further distinguish between changes that are “measurable” and not measurable. We categorize estimated impact into three categories:



**Lower impact:** Estimated impact of less than 2%; not a meaningful effect



**Higher impact, not measurable:** Estimated impact in the 2%–5% range; meaningful change but difficult to capture with population surveys



**Higher impact and measurable:** Dose in the 5%–10% range or higher; good chance of finding measurable change in surveys with reasonable sample sizes

<sup>6</sup>Based on estimates from PRISM – a CDC-developed model that predicts effects from a variety of public health interventions; see Homer \, J., Milstein, B., Wile, K., Trogdon, J., Huang, P., Labarthe, D., et al. (2010). Simulating and evaluating local interventions to improve cardiovascular health. Preventing Chronic Disease; 7(1): A18. [http://www.cdc.gov/pcd/issues/2010/jan/08\\_0231.htm](http://www.cdc.gov/pcd/issues/2010/jan/08_0231.htm).

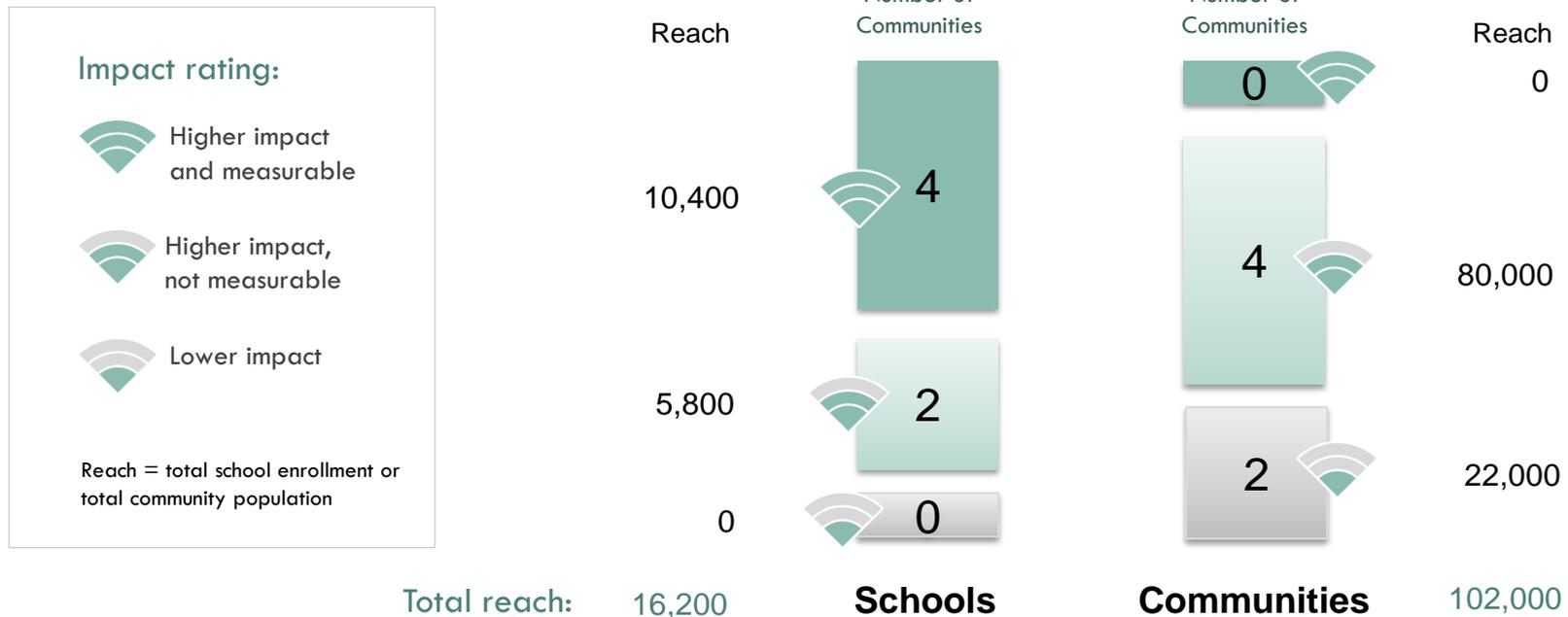
# FINDINGS: Estimated impact of HEAL Zones strategies

We estimate that for youth in schools there will be significant improvements (estimated impact >2%) in all 6 communities, and higher impact and measurable improvements in 4 of those communities.

Achieving high-dose strategy clusters in communities is much more challenging. The denominator (number of people to be impacted is much larger than in schools and there isn't a "captive" population in the community as there is in schools.

Nonetheless, we expect that 4 of 6 communities comprising 80,000 people will be reached by significant strategies (estimated impact > 2%).

Figure 4. Estimated impact of strategy clusters



# Measured population-level impact

The following pages describe the targeted evaluations of specific strategies including the results available to date:

- Individual community change strategies in apartment complexes, corner stores
- Results from the 2006-2010 HEAL-CHI initiative
- KP member data results showing trends in obesity rates among KP members living in the HEAL Zone communities



# What is the measured impact of individual strategies?

## Strategy-level evaluations

Targeted evaluations of a selected number of individual strategies in each HEAL Zone were conducted to measure their actual impact on desired outcomes (figure 5).

These were selected based on estimates of their potential impact, if they were occurring in more than one HEAL Zone, and if the communities were interested in more in-depth feedback on their promising and innovative strategies.

Baseline reports of these strategy level evaluations were completed for all these strategy-level evaluations. Final reports with endpoint data and changes that have occurred from baseline will be completed at the end of 2014.

Pages 42 – 45 show the results of a few of the strategy-level evaluations that are now available.

Figure 5. Type and place where strategy level evaluations took place

Strategies	Bayview	Madera	Modesto	Monument	Sacramento	Santa Rosa
Apartment complexes				✓	✓	
Childcare sites				✓		
Churches	✓		✓		✓	
Farmers' markets		✓				
Schools	✓	✓	✓	✓	✓	✓
Corner stores	✓		✓			✓

# Impact

## HEAL in apartment complexes in Monument HEAL Zone

### What was the strategy?

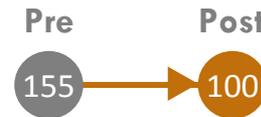
The Monument HEAL Zone offered HEAL programs in three apartment complexes. Cooking / nutrition classes were set up, an organized walking group, sports league, and exercise (Zumba) classes were offered, a health fair was held, and health information combined with a movie and popcorn night were held.

### What did we measure?

Surveys were conducted in two apartment complexes in the Monument HEAL Zone in September/October 2012 and again in September/October 2013. The surveys were completed by 85 residents at baseline and 176 at follow up.

### Key findings

The average minutes of physical activity per week decreased



Servings of fruits/vegetables and sodas per week did not improve or change significantly

### What changes occurred?

#### Physical activity

*Perceptions and intentions:*

↑ intention to be physically active

↑ perceived access to low-cost PA

↑ social support for PA

↔ barriers to PA

#### Healthy eating

*Perceptions and intentions:*

↑ the use of fruits and vegetables as snacks and with meals

↔ perceived access to fruits and vegetables in neighborhood

↑ the number of evening meals cooked at home each week

↓ barriers to healthy eating`

# Impact

## HEAL in apartment complexes in Sacramento HEAL Zone

### What was the strategy?

The Sacramento HEAL Zone promoted healthy eating and active living within four apartment complexes. They offered cooking / nutrition classes, organized an exercise group, promoted the Rethink Your Drink Program and served water at events.

### What did we measure?

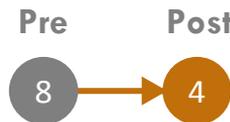
In two of these apartment complexes, 248 residents were surveyed in May/June 2013 and 318 residents at follow up in May/June 2014.



### Key findings

The average minutes of physical activity per week stayed about the same

The average number of sugar sweetened beverages per week decreased



### What changes occurred?

#### Physical activity

*Perceptions and intentions:*

↔ intention to be physically active

↑ perceived access to low-cost PA

↔ social support for PA

↑ barriers to PA

#### Healthy eating

*Perceptions and intentions:*

↑ the use of fruits and vegetables as snacks and with meals

↑ perceived access to fruits and vegetables in neighborhood

↑ the number of evening meals cooked at home each week

↑ barriers to healthy eating`

# Impact

## HEAL at corner stores in Modesto HEAL Zone

### What was the strategy?

The Modesto HEAL Zone worked with four small stores to enhance healthy eating by offering cooking demos and healthy recipe cards and healthy food and beverage promotions and signage.

### What did we measure?

391 store customers were surveyed at baseline in June 2012 and 418 were surveyed at follow up in June 2013.

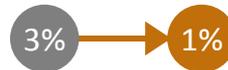


### Key findings

There was no change in percent who purchased a sugar sweetened beverage



Very few people purchased fruits and vegetables at either time point



### What changes occurred?

The impacts varied by store, with most changes related to beverages and snack food purchases. Note, at both time points, less than 5% of customers surveyed bought these products from convenience stores: fruits or vegetables, baked chips, rice, tortillas, or cereal.

# stores	↑	↓	↔
soda	2	1	1
sports drinks	0	1	3
energy drinks	0	2	2
water	1	0	3
candy	1	1	2
cookies	1	1	2
chips	1	2	1

# Impact

## HEAL at corner stores in Modesto HEAL Zone

### What did we learn from interviews with store managers?

- Some increase in sales of healthy items
- Positive consumer response
- No changes to overall sales and profits
- No impact on staffing levels

### What were some challenges?

- Healthy items have a shorter shelf life and slower turnover
- Competing with the unhealthy food in the surrounding environment

### Key findings

Despite challenges and lack of immediate financial gain, the store managers still wanted to offer healthy options, explaining that “customers appreciate choices.”

““ Have a good variety of produce to keep steady clientele. ””

– Store manager

### What did we learn from observations?

- One store improved the quality and availability of healthy foods; one store offered less.
- Minimal change occurred in amount of marketing and promotion of healthy foods.
- No stores reached the maximum scores for quality and availability or marketing and promotion.



# Measured population-level impact: HEAL CHI

The HEAL CHI initiative was the first case across all the KP regions where estimates were made of the population level impact and then compared to measured population-level changes

The results from the three HEAL CHI communities showed that the estimated and measured population change did line up, especially for youth interventions in schools targeting physical activity.

A 2012 peer-reviewed publication described the results:<sup>7</sup>

*The HEAL-CHI initiative was successful in implementing policy and environmental strategies, the majority of which are potentially sustainable.*

*The population-level results were inconclusive overall, but showed positive and significant findings for four of the nine youth survey comparisons where “high dose” (i.e., greater than 20% of the population reached and high strength) strategies were implemented, primarily physical activity interventions targeting elementary and middle school-age youth.*

*These high dose interventions included the district-wide implementation of an evidence-based PE curriculum in one community, and revising an after-school program to include 20 minutes of regular exercise in another community.*

Pages 47 – 48 show examples of community impact from HEAL-CHI in Modesto and Santa Rosa.

<sup>7</sup> Cheadle, A., Rauzon, S., Spring, R., Schwartz, P. M., Gee, S., Gonzalez, E., Ravel, J., Reilly, C., Taylor, A., Williamson, D. (2012). Kaiser Permanente's Community Health Initiative in Northern California: evaluation findings and lessons learned. *Am J Health Promot*, 27(2), e59-68. doi: 10.4278/ajhp.111222-QUAN-462

# Measured impact: HEAL CHI

## Modesto

The West Modesto/King Kennedy Neighborhood Collaborative promoted healthy eating and active living within the area of West Modesto. West Modesto is a diverse low-income community that is 50% Hispanic, with more than 80% of students enrolled in the subsidized school meals program.

The Collaborative is the lead organization for the Healthy Eating Active Living Community Health Initiative (HEAL CHI) work in West Modesto. The Collaborative has been in existence for over 15 years, and partners include local businesses, city and county government, and members of the community.

The greatest impact observed during HEAL CHI for Modesto was increased physical activity in schools. The strategies included:

- Strengthening PE standards
- Adding physical activity breaks to after-school programs
- Implementing Safe Routes to School, including a walking school bus
- Carrying out a community physical activity media campaign and school-based awareness activities



Increase in percentage of children doing at least 20 minutes of vigorous PA per day



# Measured impact: HEAL CHI

## Santa Rosa

The South Santa Rosa HEAL-CHI Collaborative worked to promote healthy eating and active living in two distinct but contiguous communities: southwest and southeast Santa Rosa.

Many of the county's poorest families, often recent Latino immigrants, live in clusters of small, semi-rural neighborhoods in these communities. Nearly half speak a language other than English and a third of adults have not completed high school.

The collaborative grew out of an existing organization, the Community Activity and Nutrition Coalition for Sonoma County (CAN-C). Membership includes community members, health organizations, schools, childcare and recreation providers, community action agencies, business people, and voluntary groups.

The greatest impact observed during HEAL CHI for Santa Rosa was increased physical activity in schools. The strategies included:

- Strengthening PE standards
- After-school physical activity programs
- Safe Routes to School
- Community infrastructure enhancements

The impact of the Santa Rosa strategies was found in Fitnessgram data, particularly aerobic capacity measures among fifth graders.



Significant increase in the percent of children in the “healthy fitness zone” for the one mile run test



# Measured impact

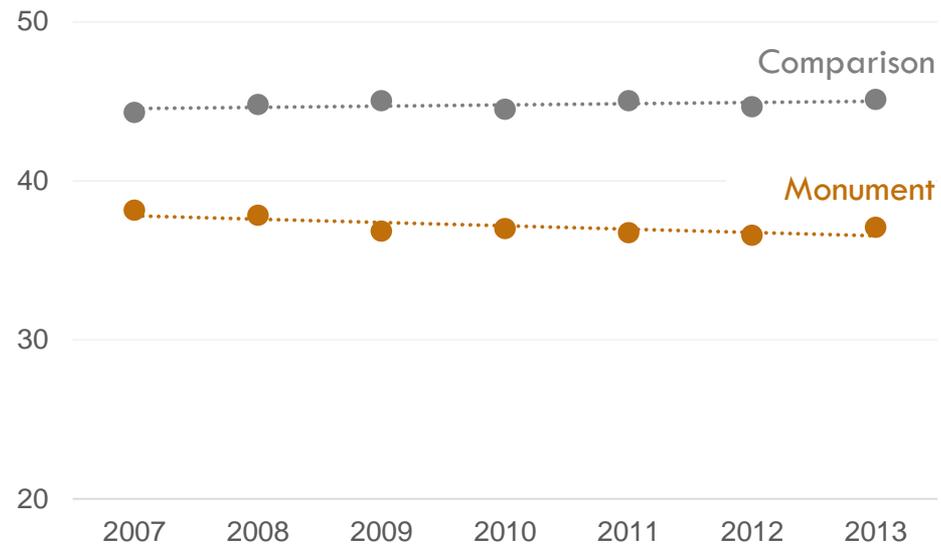
## KP member data

KP provides health care to a significant number of residents in the HEAL Zone communities—greater than 20% of adult residents in four of the HEAL Zones. This allows us to have rich clinical information—including height and weight on many residents.

Figure 6 shows an example from Monument. Obesity rates declined about 5% over the last six years compared to a slight increase in the comparison group. Note that these differences were not statistically significant, and the trends from 2011-2013 (during the HEAL Zones initiative) were comparable.

These data will be most useful for tracking trends in obesity rates over the long term – after HEAL Zones funding ends.

Figure 6. Percent obese (BMI>30)  
2007-2013 with trendline



In Monument, obesity rates declined compared to a slight increase in the comparison group.

# 04

## Conclusions and next steps

# Summary and conclusions

The HEAL Zones initiative has been successfully implemented in six Northern California communities. Over 150 community change strategies are either implemented or close to being implemented, encompassing policy, environmental, and programmatic changes as well as efforts to build community capacity to sustain strategies and make changes in the future.

**HEAL Zone community changes, two-thirds of which have been implemented, touch 102,000 residents, including 15,500 school-age youth**

The *estimated* impact of combined strategies in schools (strategy clusters that target the same health outcome, e.g., minutes of physical activity) in all six communities, are expected to result in significant population changes (greater than 2% estimated population-level change).

The community strategies were somewhat weaker – only 4 of the 6 communities had strategy clusters targeting all residents of greater than 2% estimated population-level change.

The key *measured* impact data is still to be collected—follow-up surveys of youth and adults. However, preliminary strategy-level evaluations show positive changes in attitudes and behavior in several sectors, including corner stores and apartment complexes. KP member data also show promising trends in obesity rates.

# HEAL Zone Next Steps

Northern California Kaiser Permanente's Healthy Eating and Active Living (HEAL) approach has been evolving since its inception in 2005.

The original “place-based” investments, called HEAL CHI (Healthy Eating Active Living, Community Health Initiatives), were focused primarily on policy, systems, and environmental changes to improve healthy eating and increase physical activity in the most effective and sustainable way.

Throughout the HEAL Initiative evolution, KP also heard and learned more about major barriers to achieving HEAL goals in the community, including community violence, perceptions of lack of safety, and other realities and struggles, such as stress and lack of social support, that prevent individuals and families from engaging in healthy eating and active living.

In the next two-year phase beginning in 2015, HEAL Zones will build strategies that improve community safety, neighborhood cohesion, social and emotional health, and family resiliency as part of their pursuit to improve healthy eating and physical activity.

These four factors—called “facilitators”—can have a positive impact on an individual's or family's ability to adopt healthy behaviors.

