South Santa Rosa
HEAL-CHI Collaborative

Summary Report
Progress and Accomplishments 2006-2010

June 2011
The South Santa Rosa HEAL-CHI Collaborative described in this case study is one of three initiatives in Northern California that are part of the Kaiser Permanente (KP) Community Health Initiative (CHI). CHI is a program-wide strategy for achieving a significant and measurable impact on the health of communities served by KP. The thematic focus is "Healthy Eating, Active Living"—promoting improvements in nutrition and physical activity and reductions in overweight and obesity. Nine communities in five KP regions have active CHI initiatives under way.

Report prepared by:

Center for Community Health and Evaluation
Part of Group Health Research Institute

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Maps

South Santa Rosa
Executive Summary

Community Description

The South Santa Rosa Healthy Eating, Active Living-Community Health Initiative (HEAL-CHI) Collaborative worked to promote healthy eating and active living in two distinct but contiguous communities: southwest and southeast Santa Rosa. Both communities are positioned on the southernmost edge of Santa Rosa and lie within the jurisdiction of both the city and the county. Many of the county's poorest families, often recent Latino immigrants, live in clusters of small, semi-rural neighborhoods in these communities. Among those ages five and older, 43% speak a language other than English as their primary language. One-third of residents ages 25 and older have less than a high school diploma.

The South Santa Rosa HEAL-CHI Collaborative grew out of an existing organization, the Community Activity and Nutrition Coalition of Sonoma County (CAN-C). CAN-C was formed in 1998 through the merger of two child and nutrition-focused, county-wide prevention coalitions. The combined organization has an expanded focus on both nutrition and physical activity for residents of all ages. CAN-C membership includes community members, health organizations, schools, childcare and recreation providers, community action agencies, business people and voluntary groups. The South Santa Rosa HEAL-CHI Collaborative facilitated its work through staff housed in the County Health Department.

Community Change Strategies and Accomplishments

The South Santa Rosa HEAL-CHI Collaborative is one of three Northern California HEAL-CHI sites funded in 2006, for $1.5 million for five years. The HEAL-CHI approach in Northern California assumed that multi-sectoral, multi-level interventions would have the greatest chance of producing long-term changes in HEAL outcomes.

The Collaborative's main objective was to promote healthy eating and physical activity in all the environments where South Santa Rosa residents live, work, learn and play. Like all three Northern California HEAL-CHI sites, they worked in four community sectors—schools, worksites, health care settings and neighborhoods, and their strategies targeted programs, policy and environmental change. The Collaborative used a model that combined sector workgroups made up of community partner organizations that helped plan the interventions with HEAL-CHI staff; and contractors who did much of the implementation. Staff and contractors worked closely with key institutions in each sector (e.g., schools, worksites, health clinics, food outlets, restaurants) to implement organizational changes that were
both high dose (i.e., reach large numbers of people with interventions of sufficient strength) and sustainable beyond the period of grant funding.

Out of 26 strategies in their Community Action Plan, 23 were implemented successfully. Five strategies were relatively “high dose,” meaning a combination of a relatively high number of people reached and the relatively high strength of the strategy (the likelihood of a behavioral impact on the people reached). The most promising of these were school strategies focused on nutrition (e.g., introduction of a new food services vendor with improved healthy offerings and the installation of salad bars) and physical activity (e.g., training teachers, purchasing PE equipment, starting student mileage clubs). This intermix of several relatively high reach and strength strategies targeting school-aged children potentially leads to an overall high “population dose,” as these strategies are sustained over time in the school sector.

Possibly sustainable strategies included: implementing worksite wellness policies that led to program and internal policy changes at participating worksites; Body Mass Index (BMI) and breastfeeding screenings and counseling in health clinics; and changes to the built environment around schools to promote more walking and bicycling to school. Other strategies included increasing fresh produce in small markets and community gardens; and mobilizing physician advocates, school wellness teams, and resident action teams that developed fitness programs and advocated for other neighborhood improvements.

![Walk 'N Roll to School Day at Kawana Elementary](image-url)
Conclusions

The three highest reach and strength strategies implemented by the Collaborative were in South Santa Rosa schools. These included improvements in the PE curriculum, adding salad bars and other improvements to school food, and setting snack standards and reward food limits. Of these, the strategies that appear to be sustainable long-term are the changes in school food. In addition, while not the highest in terms of reach and strength, clinic BMI screening and counseling at well-child checks and referral to weight management classes, and neighborhood amenities such as improved streets and paths for walking and biking, are also likely to be sustainable.

Synergies were created among many of the strategies. For example, changes in food served in schools paralleled the passage of an ordinance banning mobile food vendors within 500 feet of school property. A Safe Routes to School grant led to infrastructure improvements at several elementary schools, while resident leaders advocated for bike trails, green spaces and the connections between them. Clinics institutionalized BMI screening and counseling within the community clinics, while resident leadership teams developed fitness and exercise programs to support a healthy weight. Over time, there is the potential that many residents will make positive changes to their eating and physical activity patterns supported by permanent changes in the environments where they live in South Santa Rosa.

The South Santa Rosa HEAL-CHI Collaborative successfully put in place a model for promoting healthy eating and active living in each of the four target sectors (schools, worksites, health care and neighborhoods). In all, over 5,000 children were reached by the school-based interventions and over half of the neighborhood residents (19,000) were touched by changes to the neighborhood nutrition environment. If the changes are sustained, measurable improvements in nutrition and physical activity behaviors can be expected in the future.

Resident-started exercise class, Kawana Springs
I. Community Description

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. Both communities are positioned on the southernmost edge of Santa Rosa and lie within the jurisdiction of both the city and the county. Within the project area there are 13 schools (nine elementary, two middle, two high) represented by four different school districts.

Many of the county’s poorest families, including recently immigrated Latinos, live in clusters of small, semi-rural communities in this area. Over 40% of the residents are Latino. The median household income is 20% below that of the rest of the city. Among those ages five and older, 43% primarily speak a language other than English and of this group, 37% report that they speak English "not well" or "not at all." One-third of residents ages 25 and older have less than a high school diploma.

Table 1. Community Demographics—South Santa Rosa

<table>
<thead>
<tr>
<th>Demographics</th>
<th>South Santa Rosa</th>
<th>Other Santa Rosa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>37,960</td>
<td>420,650</td>
</tr>
<tr>
<td>% White</td>
<td>46%</td>
<td>77%</td>
</tr>
<tr>
<td>% Latino</td>
<td>41%</td>
<td>15%</td>
</tr>
<tr>
<td>% African American</td>
<td>3%</td>
<td>1%</td>
</tr>
<tr>
<td>% Asian</td>
<td>4%</td>
<td>3%</td>
</tr>
<tr>
<td>% Other</td>
<td>5%</td>
<td>4%</td>
</tr>
<tr>
<td>Median household income</td>
<td>$43,930</td>
<td>$55,166</td>
</tr>
</tbody>
</table>

Source: 2000 Census
II. Community Collaborative—History and Structure

The South Santa Rosa HEAL-CHI Collaborative developed out of the Community Activity and Nutrition Coalition of Sonoma County (CAN-C). CAN-C was formed in 1998 through the merger of two nutrition-focused, county-wide prevention coalitions: the Sonoma County Anemia Task Force and the Sonoma County Family Activity and Nutrition Task Force. The combined organization agreed to focus on shared goals and maximize the use of available resources towards an expanded focus on both nutrition and physical activity. CAN-C membership includes community residents and a range of community organizations: schools, childcare and recreation providers, health organizations, community action agencies, business people and voluntary groups. CAN-C is open to any individual or community organization with a commitment to the CAN-C mission and goals.

CAN-C applied for the HEAL-CHI grant and developed the South Santa Rosa HEAL-CHI Collaborative. Members shared duties in chairing the Collaborative and providing Steering Committee leadership. CAN-C identified the Sonoma County Department of Health Services (SCDHS), a member of CAN-C, to be the lead agency for the Collaborative. SCDHS has a long history of partnerships to promote health—with community residents, health and education organizations, local governments, businesses and advocacy groups. The Collaborative has increased SCDHS’s focus in the policy and environmental change arena and broadened the reach of its work, especially through resident engagement.

In the summers of 2007 and 2010, interviews were conducted with twenty and ten Collaborative members and residents respectively, in order to better understand the work of the Collaborative. Areas of inquiry included the roles of the partners, the successes and challenges, the potential for sustainability and the process of working together on HEAL-related issues.

The work of the Collaborative was carried out by a mix of volunteers, community partners providing in-kind time and paid staff and contractors—bringing together various sectors to improve wellness in the neighborhoods. The Collaborative structured its work into school, business, health care and neighborhood sectors. Each sector had a task force and built consensus within the sector groups. Major decisions that might affect the whole project, such as budget issues, required approval by the HEAL Implementation Leadership Team, which was the steering committee for the project. Most of those interviewed thought this structure worked well. A few suggested that more cross-sector pollination would be useful. As one interview respondent said, “I think it would be more inspiring to hear what others are doing—to have more collaborative efforts between the sectors.”
III. Creating Sustainable Community Change—Goals, Process, and Strategies

Goals and Vision

The goal of the South Santa Rosa HEAL-CHI Collaborative was to create a multi-sectoral effort to promote community health in South Santa Rosa by improving the nutrition and physical activity status of children and adults. Collaborative objectives were:

- Increasing public awareness of nutrition and physical activity issues and potential solutions,
- Promoting healthy eating and activity choices in all environments where children and adults live, work, learn and play,
- Advocating for health-focused changes in school and community policies and practices,
- Connecting local farm suppliers to school and community food sales and service systems,
- Expanding prevention and treatment options for those at risk for or experiencing overweight, anemia or related health problems,
- Promoting the institutionalization of routine screening and effective interventions within the primary care system.

“I’ve seen more activity in my neighborhood. I’ve seen more communication...we were able to talk to people in charge and make things happen.”

South Santa Rosa Leadership Training Program Workshop
Collaborative Process

The Collaborative had two key staff housed in the health department who provided overall coordination, and reporting and staffing for the worksite, neighborhood, school and healthcare sectors. They also employed a paid community liaison to help with resident engagement and contractors to assist with coordination and implementation of some strategy-specific work including the worksite wellness assessment and food outlet engagement.

Most decisions were made in the sectors or other committees. The steering committee leadership team had a stronger design role in the beginning. This evolved into primarily a problem solving and approval role of the overall plans. There was a written decision-making process in place. Usually there was an inclusive discussion, issues were prioritized and then the majority rules. Sometimes the coordinator would poll by e-mail to make decisions between meetings.

Issues were openly discussed and worked out until everyone felt comfortable with the results. There was a spirit of partnership and collective agreement. Most sector partner organizations received some funding to implement HEAL efforts, e.g., in schools and clinics. Several interview respondents said that the coordinator was a strong listener and that members generally felt heard and respected. As one person commented, “we tease through each issue until everyone feels pretty good about the outcomes.”

Initially, about 20 individual strategies were planned. The first two years of implementation were challenging—they were spent trying to engage residents and launching activities in all the sectors. Over time, the Collaborative built on early wins and dropped or changed some strategies to take advantage of opportunities and early successes. For example, they obtained a Safe Routes to School grant, found a partner to develop a plot of land for a community and school garden, and capitalized on two receptive school districts that were willing to install salad bars in their school cafeterias.

To achieve the HEAL-CHI goals, the Collaborative started in each sector with assessment, engagement and capacity building activities and then built up to policy changes, programs and environmental change. For example, they spent time initially supporting and building wellness teams in the schools, and institutionalizing BMI screening in health clinics. They also laid the groundwork for worksite wellness activities in businesses through an assessment and engagement process that led to practice changes over time. They implemented these and other strategies through a number of local subcontractors with specific skills needed to carry out the work.
Community Change Strategies

The HEAL-CHI approach in Northern California assumed that multi-sectoral, multi-level interventions have the greatest chance of producing long-term changes in HEAL outcomes. Multi-sectoral interventions targeted all major sectors of the community including schools, worksites, health care settings and the neighborhood overall. Multi-level interventions attempted to influence behavior at the program, environment and policy levels.

Figure 1 briefly lists the major Santa Rosa HEAL Collaborative strategies according to the levels of the ecological model for health promotion, in which the most immediate, proximal influences on individual behavior (e.g., programs, organizational environment) are shown on the inner rings and the more distal (e.g., public policy, community environment) are shown in the outer rings. While it is important to intervene at all levels of the spectrum, focusing on the outer rings of policy and environmental changes, which was the goal of the HEAL-CHI project, has the potential for greater impact and sustainability using potentially fewer resources.

![Image of healthier menu options at a Smart Meal restaurant](image)

*Healthier menu options at a Smart Meal restaurant*

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The following is a description of the South Santa Rosa HEAL-CHI Collaborative’s strategies in more detail. Reach was determined by the Collaborative from actual numbers when available (e.g., tracking sheets of participants in programs or tallies of gardeners using plots) and estimates of the numbers likely touched by a strategy (e.g., number of store customers or residents living within a certain radius of a new walking path).

**Policy Strategies**

The Collaborative policy strategies centered on making organizational policy changes in schools, health care clinics and worksites. These strategies included:

- **BMI and breastfeeding screening in clinics.** Institutionalized height and weight measurement for BMI screening and breastfeeding screening in community clinics (reached 1,232 patients).
• **School nutrition standards.** Implemented new policy and environmental changes that support school healthy eating including: the introduction of a new food services vendor with improved healthy offerings, installation of salad bars, limiting of unhealthy food in classroom parties and fundraisers, and a pilot of Second Chance Breakfast program (reached 5,260 children).

• **School physical activities.** Implemented the physical activity component of school wellness policies and the state physical education standards by implementing the CATCH (Coordinated Approach to Child Health) program and offering additional opportunities for physical activity in the after school program, such as the Cool School program that incorporates all disciplines—field trips, recess, snack, and homework time (reached 5,260 children).

• **Worksite wellness policies.** Assessed and provided technical assistance to worksites on implementing wellness policies to offer a variety of workplace changes, such as communications about healthy eating, exercise and fitness; walking clubs, bike to work, fitness classes, and stretching; breastfeeding accommodations; enforced lunch or dinner breaks (reached nine worksites employing 2,316 people).

### Environmental Change Strategies

The Collaborative environment strategies focused on both making changes to the built environment near schools to promote physical activity and encouraging grocery stores to stock more fresh produce. Specifically:

• **Built environment.** Increased opportunities for safe, accessible physical activity and recreation options through a range of infrastructure enhancements focused around six schools, including the installation of a footpath, murals along a path to cover graffiti, sidewalk repairs, and speed limit signs. The City of Santa Rosa secured two Safe Routes to School (SRTS) infrastructure improvement grants during FY 2009-2010. The first was $611,700 in federal funds from Caltrans to construct and widen sidewalks near Kawana Elementary and install an all-way stop control and flashing beacons with high-visibility crosswalk near Bellevue Elementary. The second was $336,262 in state funds from Caltrans to, in part, install a pedestrian activated flasher at Kawana Springs Road and Meadow Way to support SRTS near Kawana Elementary and install crosswalk and ramps at West and Delport near Roseland Elementary (reached 2,636 residents).
• **Healthy food outlet project.** Increased quantity and improved product placement for fresh fruits and vegetables within five food outlets through produce section expansion, marketing and promotion, point of sale offering changes, WIC (Women, Infants and Children) conversion and redevelopment project improvements (potentially may reach 19,000 store customers). Also, planning to implement the Smart Meal Restaurant Program focused on identifying and promoting healthy options to customers (now in process).

### Programmatic Strategies

The Collaborative programmatic strategies included counseling in clinics, community gardens/garden education, and resident-led programs:

- **BMI counseling and classes.** Provided follow-up, for clinic families of overweight children, with counseling and goal setting on diet, soda consumption, screen time, and physical activity; on-site and community-based weight classes; and waiting room mini-lessons (reached 387 children identified as being overweight).

- **Breastfeeding counseling.** Institutionalized breastfeeding education in clinics of all women with infants to increase duration of breastfeeding through hiring lactation consultant support, referrals to weekly support classes, and provision of waiting room nutrition-based mini-lessons (reached 1,642 women).

- **Community gardens.** Established community gardens. Increased accessibility with 35 new garden plots (reached 90 people who became regular gardeners).

- **School garden education.** Provided ongoing school garden education (reached 600 students).

- **Resident Leader programs.** Trained residents to be community leaders, media spokespeople and policy advocates. Graduates identified and worked on projects that improved opportunities for healthy eating or physical activity. They initiated and supported multiple opportunities for physical activity in the community including walking groups, exercise classes, and Walk ‘N Roll to School Days. Additionally, they participated in redevelopment, park development, planning meetings, and media advocacy (reached 795 with program specific activities).
Capacity Building Strategies

The Collaborative strategies include several activities designed to increase resident involvement and awareness around healthy eating and active living, and to build capacity within schools and worksites to conduct HEAL efforts:

- **Resident mobilization.** Trained and mobilized 35 residents to create an ongoing grassroots effort to engage the community and advocate for healthy eating and physical activity options in their neighborhoods.

- **Worksite promotion.** Encouraged the adoption of worksite wellness policies and programs in local businesses, and connected them with resources to increase their capacity to offer wellness opportunities at work.

- **School wellness committees.** Helped build wellness teams at schools that would take responsibility for implementing and sustaining their district's wellness policy with a focus on healthy fundraisers, healthy rewards and integrating physical activity into the school day.

- **Physician advocates.** Developed 15 physician advocates to engage in advocacy with the schools, city council, and clinic leaders. Participated in media advocacy (radio, TV and print).
Figures 2 through 6 describe the types of strategies that were pursued by the Collaborative. Figure 2 shows the breakdown of strategies by the health target area focus. The target area could be primarily nutrition, physical activity or both. Thirty-eight percent of the strategies focused on nutrition, 35% on both physical activity and nutrition, and 27% on physical activity. Figure 2 shows the breakdown of strategies by sector. The majority of strategies were focused in either the neighborhood (39%) or the schools (31%).

**Figure 2. Distribution of the South Santa Rosa HEAL-CHI Collaborative strategies, by sector and health target (n=26)**

- Health target:
  - Nutrition: 38%
  - Physical activity: 27%
  - Both nutrition & physical activity: 35%

- Sector:
  - Neighborhood: 39%
  - School: 31%
  - Worksite: 8%
  - Healthcare: 11%
  - Cross-sector: 11%

Figure 3 shows the breakdown of strategies by objective. The majority of the strategies were focused on policy change (42%), about one-quarter were programs (23%), and the rest were environmental change (16%) and capacity building (19%).

**Figure 3. Distribution of the South Santa Rosa HEAL-CHI Collaborative strategies, by objective (n=26)**

- Objective:
  - Policy change: 42%
  - Programs: 23%
  - Capacity building: 19%
  - Environmental change: 16%
  - Cross-sector: 11%
Figure 4 shows the breakdown of 26 strategies in place at the end of the Initiative. Twenty-three of the strategies were fully implemented successfully by the end of the Initiative and out of these, 65% (n=15) are likely to be sustained to some degree. Sustainable strategies included installing a Safe Routes to School path and footbridge to a school, and the passage of a mobile food vendor ordinance limiting access to nearby schools.

Figure 4. Distribution of the South Santa Rosa HEAL-CHI Collaborative strategies, by status

*CAP = Community Action Plan
Figure 5 shows the reach penetration of strategies by sector. The greatest penetration was in the schools, where all of the children were reached through strategies targeting garden and nutrition education programs and changes to the school food environment. By contrast, just over 50% of residents were reached by neighborhood nutrition environment strategies (e.g., healthy food in small markets) and 7% by gardening and other resident programs.

The highest reach strategies in the largest sectors, schools and neighborhood, were school nutrition and physical activity policy changes, and healthy food in grocery stores. These strategies are possibly sustainable.

**Figure 5. Percent reached\(^1\) by the South Santa Rosa HEAL-CHI Collaborative strategies,\(^2\) by objective and sector**

<table>
<thead>
<tr>
<th>Objective</th>
<th>Programs</th>
<th>Nutrition environment</th>
<th>Physical activity environment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sector</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neighborhood (n=37,960)</td>
<td>100%</td>
<td>52%</td>
<td>7%</td>
</tr>
<tr>
<td>Schools (n=5,260)</td>
<td>100%</td>
<td>0%</td>
<td>7%</td>
</tr>
</tbody>
</table>

\(^1\) The number reached is an estimate. Some duplication is possible. 
\(^2\) Does not include implemented capacity and some incomplete strategies.
Examining the number of people reached by the Collaborative’s strategies helps inform the extent to which the target population is touched in some way. It’s also important to look at the strength of the strategies to affect behavior change. Figure 6 breaks down 18 implemented strategies (does not include capacity strategies) by their population dose—a combination of the number reached and the strength, or likely behavioral impact on each person reached. Because of limited information from the literature on the effect of HEAL-CHI environmental and policy strategies, the strength ratings are very rough approximations based on the intensity. For example, media campaigns are rated low strength, while environmental interventions in schools, where the students encounter the changed environment every day, are higher strength. Reach and strength were estimated with Collaborative members and placed into three categories—high, medium and low as shown in figure 6.

Approximately eight of the Collaborative’s strategies were high reach (none were high strength) and five (see green box in figure 6), or about 28%, were both relatively high reach and strength, i.e., high dose. Future efforts will focus on higher dose strategies that have potential for even greater impact.

The three strategies with the highest dose (high reach and medium strength) were all school-based—one that made improvements to the PE curriculum and two related to nutrition: adding salad bars and changing food service vendors, and removing unhealthy snacks and setting healthy food reward standards. All three are possibly sustainable.

Figure 6. Number of the South Santa Rosa HEAL-CHI Collaborative strategies and potential Impact
The Santa Rosa Healthy Eating Active Living (HEAL) Collaborative encountered the challenges of trying to engage new community groups in the policy process: initial enthusiasm, some early struggles to form a vision and plan of action, followed by a drop in participation over time.

Determined to engage community members for the long haul and avoid this familiar pattern, the Collaborative’s staff sought ways to use recruiting, training, mentoring, and coaching to help community members form, and sustain, groups that could influence community health and wellness policies.

To achieve this goal, the Collaborative partnered with a leadership training program with a long history in the community, based within St. Joseph’s Health System. The St. Joseph’s model, called A.C.T.I.O.N. (Agents of Change Training In Our Neighborhoods) leadership training, explores leadership from a social justice lens, emphasizing relationship-building and a shared leadership model designed to help people work together in groups. They trained 35 resident leaders that included youth and Latina women.

In partnership with the Collaborative, two paired modules—advocacy and media spokesperson training—were added to the A.C.T.I.O.N. training. These were specifically designed to help residents raise their voices on behalf of policies that would make the community a healthier place. The modules proved to be popular additions to the training. Through the advocacy module, residents met with city and county representatives, establishing an initial contact that could be built upon in the future, and participated in activities that helped make the connection between policy and the health of the community. Through the media training, residents practiced crafting and delivering their message in front of a camera and gained confidence in doing so in public.

In addition to learning about their untapped potential to influence policies through media and other forms of advocacy, residents also learned about tools to identify and articulate community needs—such as visioning exercises, mapping community assets and deficits—and about proposing specific solutions (such as parks, gardens, and safer sidewalks).

What lessons did the Collaborative’s staff and partners learn along the way?

- **Make mentoring leadership a centerpiece.** Mentoring and coaching builds resident leaders that can approach the School Board or other entities, and can help keep a group’s momentum going even when funds are short.

- **Create a space for residents to step up.** It’s easy for both staff and residents to fall into a pattern of staff solving problems. The Collaborative staff became conscious of this and tried to “step back, so residents can step up,” as one person put it. Support is needed, however, as many residents have not worked together in groups and may need some help dealing with conflict and other issues common to the early stages of group formation. “Help the group understand that conflict is part of the process, and overcoming struggles will deepen relationships,” offered one of the trainers.

- **Make it easy for residents to participate.** Simultaneous translation, bilingual materials, child care, transportation—all of these can help overcome the isolation and barriers that keep residents from participating in community groups, meetings and workshops.

- **Recruit and screen at the same time.** Both the training and the community action work involved significant time commitments. Offering an initial orientation session, in which residents can get a better idea of what’s involved before committing, helps to reach those with the energy and interest to weather a group’s initial growing pains.

- **Get the conversation going.** Initially, gains may feel small and incremental. In Santa Rosa, one of the action groups formed through the leadership training helped bring several exercise classes to the community. They may be small in number, but their presence is steady—and they are part of engaging more residents in a long-term conversation about improving the community’s health. Sometimes, small starts are on-ramps to bigger and lasting changes.
Photovoice

Background on Photovoice

Photovoice is a community-based approach to documentary photography that provides people with training on photography, ethics, critical discussion and policy advocacy. Once people are trained on the method, they are given cameras to take pictures that represent their ideas, thoughts or feelings about particular issues in their communities. Participants write captions for their photographs using the mnemonic SHOWcD: What do you See here? What is really Happening? How does this relate to Our lives? Why does this problem or strength exist? What can we Do about it? The pictures and related captions about community issues can then be shared with key stakeholders or policy makers in the community in order to advocate for change.

Photovoice in South Santa Rosa

Two Photovoice projects were conducted. The first (Time 1) was intended to capture barriers to healthy eating and active living and the second (Time 2) was adapted to capture the changes in the community from the perspective of the participant as a result of the Collaborative’s efforts in South Santa Rosa.

Time 1: A total of 13 residents from South Santa Rosa participated in the original Photovoice project, in July 2007. The photographers took photos of people, places or things connected with the food and physical activity choices in their communities. These photos included things they liked as well as things they wanted to change. The Collaborative has used the captioned photos at community events, workshops, conferences, and forums to bring the voices of South Santa Rosa residents to the discussions and to promote HEAL goals. These venues included the Latino Health Forum, the Poverty Conference, a CAN-C event, and the Cesar Chavez Health Fair. They also designed an interactive photo exhibit that allowed viewers to write their personal comments and reactions alongside the Photovoice images.

The pictures and related captions highlighting barriers to health were used in several CHI communities to successfully advocate for change.2 Photos from Santa Rosa, California, were also used by one of Kaiser Permanente’s physician champions to successfully advocate at the state level for Safe Routes to School. The Collaborative and the City of Santa Rosa went on to receive $1.5 million in Safe Routes to School grants to make it safer for kids to walk to school.

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The Photovoice images below demonstrate the community’s interest in making infrastructure improvements, such as adding sidewalks where needed.

Because of a lack of sidewalks and an adequate bike lane, the residents have to put their own signs out for the safety of their families and their children to walk in the street without the risk of suffering an accident.

Time 2: Creative methods are needed to document the environmental changes brought about by these interventions and to communicate the results to a range of audiences. An innovative way to apply Photovoice as a qualitative evaluation method was created and piloted. It included asking members of the Collaborative to participate in a second round of photographs and captions to document changes to their community environment, to reflect on the potential impact of those changes and plan for future advocacy efforts.

Participants were recruited from the original Photovoice project and those most familiar with the accomplishments of the Collaborative in an attempt to capture the changes that were created as a result of the funding. Once people were trained on the adapted method, they were given cameras to take pictures that represent the community transformation. Participants wrote captions for their photographs using a revised set of questions: What has changed in your community as a result of the HEAL-CHI? Why are these changes important to your community? What do we still need to do to create a HEAL community?
Findings

A total of 11, two youth and nine adults, participated in the Photovoice project during the summer of 2010. Below are the accomplishments represented by the photographers. Participants were asked to select the greatest achievements from among a list of accomplishments. They chose:

- Increasing access to healthy food and safe places for physical activity through neighborhood gardens and access to healthy food in corner stores,

- Increasing access to physical activities through Safe Routes to School programming, significant infrastructure dollars to improve the built environment surrounding schools, and improving neighborhood safety/walkability, including new bike paths and murals,

- Offering leadership development opportunities for resident youth and adults,

- Establishing BMI screening and referral to on-site classes in community clinics.

The following Photovoice photo is an example of one of the top accomplishments of the Collaborative.

Clinics serving South Santa Rosa now have a new protocol for all children at well child checks and follow overweight and obese children to lower their risk of diabetes and heart disease. These clinics serve 13,000 children.
The following photos are examples, from the community’s perspective, of the changes in their community using Photovoice to assess the impact over time. The first photo illustrates a policy change limiting school children’s access to unhealthy snacks. The subsequent photos show changes to the built environment that were documented as a need in 2007. Over the course of the project, the Collaborative supported sidewalk and other traffic-related changes that make it easier for children to walk or bike to school, organized resident groups who influenced the plans for future neighborhood parks, and worked with small neighborhood markets to improve the stocking of healthy food items.

In 2009, the Sonoma County Board of Supervisors passed an ordinance banning mobile food vendors within 500 feet of all schools in the unincorporated areas of the County. The ordinance, which residents helped to pass, will make it more difficult for students to buy unhealthy foods during or after school.
As new housing developments break ground, safe routes for children are few. This distressed, sidewalk-free road leads to Bellevue School District and elementary school. Will it take a tragic death of another innocent school child to create walking routes to school?

Because of the efforts of a Safe Routes to School Community Partnership, the city of Santa Rosa was awarded a $600,000 grant to, in part, install a sidewalk, crosswalk, and crossing signs on this street next to Kawana Elementary. The improvements will make it safer for students and their families to walk and bike to school. More funding is needed to help cities and the county to continue making infrastructure improvements near schools.
This unused lot on McMinn Ave. would make a great park! There are only about half a dozen parks in South Santa Rosa. More parks would give us more options for places to take our families.

As a result of their participation in the South Santa Rosa Leadership Training, members of Grupo ACTIVO are actively participating in the master planning of several city and regional parks. They are advocating for the needs of young Latino families, a population that traditionally has not been present at the planning table. The proposed park plans now reflect the needs of diverse segments of the population, and hopefully south Santa Rosa residents will get the parks and services we deserve!
Fresh fruits, vegetables, cheeses and healthy beverages once filled the shelves at this Southwest neighborhood market. Today, fruit is scarce while soda and high calorie drinks overtake the produce display and vibrant neon signage promotes beer. Why shop here?

2007 photo

As a direct result of working with the HEAL project, this small food outlet now offers fresh, prepared, packaged fruit at the checkout counter. The owner has taken the time to make sure such fresh produce is visible, accessible, and simple to eat in a neighborhood after beginning work with the HEAL project, this store in Santa Rosa removed pallets of soda from the front of the store and had a water vending machine installed. The bin in front was placed there for seasonal fruit such as watermelon but was recently filled with other items. Work still needs to be done to ensure fresh produce is stocked year round.

2010 photos
Community Impact and Sustainability

For the Collaborative to produce measurable community-level change in healthier eating and increased physical activity, their activities must reach a substantial portion of the 43,930 residents within the target neighborhood in a meaningful and lasting way. Key informant interview respondents said that the policy and environmental changes they have put in place that are the most likely to continue are: BMI counseling in clinics, classes for families of overweight children as well as breastfeeding support classes, banning mobile food carts near schools, the planned Smart Meals and menu changes in restaurants, and biking and walking path improvements. They see more work still left to do. Several respondents said they need to continue these efforts as well as find other ways to work together to create behavior change.

Most interview respondents believed that the Collaborative will continue to exist beyond the grant period. They cited several reasons for this: the people and organizations are invested in it, they can support the work, and the HEAL projects are likely to merge into broader initiatives that are now taking place in the community. Several respondents said they have also benefited from multi-year funding, good timing, and their own persistence. The Health Department HEAL staff focused on sustainability from the beginning, and built this expectation into their subcontractors who helped design and implement the work.

“I think it will blend in with other like-minded wellness groups that have formed in our community over the last couple of years.”

“We’ve done a good job of sustainable models in schools and clinics. ...because we’ve always got the wellness policies, it’s implanted and will continue.”

Planning HEAL activities in South Santa Rosa
IV. Results: Strategy and Population-Level Change

The ultimate goal of the Collaborative is to produce population-level change. That is, a representative (i.e., randomly-sampled) community resident could be expected to be eating more fresh produce and becoming more physically active as a result of the intervention. Strategy-level change was tracked using various evaluation methods to capture results from key strategies to complement and inform the population-level measures. Population-level change was tracked for adults using an automated telephone survey, and for youth, using a school-based survey.

Strategy-Level Results

Strategy-level evaluations help us understand the impacts of promising high dose strategies in more detail.

The Collaborative conducted multiple assessments in their worksite wellness strategy at nine worksites that ranged from having approximately 40 to over 300 employees. Worksite environmental assessments, retrospective surveys of employees to measure the impact of their worksite wellness program, and surveys of employers to learn about the worksite, their accomplishments, and potential return on investment, were all carried out.

Environmental assessments were conducted at baseline and one year after working with the worksites in order to identify areas of potential focus and track changes as they were made. To date, findings for nine of the worksites have been completed. All nine showed some improvements. The assessments covered over 120 indicators including health promotion programming and services, the food environment, physical activity, and wellness policies and incentives. Examples of changes made in several worksites included promoting group physical activity such as walking clubs, bike to work, fitness classes, and stretching; regular postings and communications on healthy eating, exercise, and fitness; provision of healthy food and beverage options at company meetings and events; breastfeeding or pumping promotion; enforced lunch or dinner breaks; and incentives for engaging in physical activity.

BMI screening and follow-up with children in health clinics was tracked. In the period July-December, 2008, BMI screening was conducted at well-check visits in four Santa Rosa clinics with 34% of children ages 2-4, 49% ages 5-11, and 74% ages 12-19. By the period July-December, 2010, BMI screening was conducted on nearly 100% of children of all age groups. The percent of children overweight and obese remained consistent from 2008-2010—approximately 30% of children ages 2-4, and 40% of children ages...
5-11 and 12-19. By 2010, the clinics were working on increasing the number of follow-up visits with overweight and obese children screened in the clinics. As these numbers increase, trends in behavioral outcomes and impact on BMI can be assessed.

Key informant interviews were conducted with representatives of the three Santa Rosa school districts every six months, in 2009 and 2010. Participants were asked to identify HEAL physical activity and nutrition interventions that had the greatest impact in their district and to share anecdotes about how these interventions impacted the culture of their districts. The physical activity interventions they perceived as having the greatest impact in their schools included the Mileage Club; Walk ‘N Roll to School Days; Dance, Dance Revolution; hiring a PE consultant; applying the CATCH teacher training; and Eat and Run classes. Other projects mentioned were use of the school track, student and parent education about the importance of physical activity, expansion of summer skills-based sports camps and school year team sports, and community walking trips offered to both students and teachers.

The nutrition-related projects cited as having the greatest impact included the change to a new food service vendor (Revolution Foods), maintenance of a healthy food/snack policy, the Health and Wellness Festival, nutrition education (for students and parents), and salad bars at lunch. Other projects mentioned that had an impact included student surveys to improve communications with new food service vendors, hiring a garden coordinator, working with parents and student leadership groups to generate a list of healthy food alternatives, and the Harvest of the Month newsletter.

The Collaborative conducted focus groups with 26 Spanish-speaking participants of a HEAL community engagement campaign targeting families with children ages 0-11. Participating families attended a training and received support materials including a calendar, recipe books, posters, and a resource guide to encourage goal setting around twice weekly family meal preparation and 30 minutes weekly of family exercise. The support materials were well received by participants in the focus groups and helped participants successfully set and achieve goals around healthy eating and physical activity. Participants cited the organizational tools as being helpful, felt that they supported family togetherness, and helped them model and instill healthy habits in their children. Most children enjoyed participating in the program although some parents reported that they found it difficult to get their children to participate in the physical activity because children preferred to stay inside or watch TV. However, one participant reported that their children woke them early on weekend mornings to go for walks and another stated that it encouraged her daughter to learn to ride her bike. The participants also said that the children enjoyed participating in the cooking. They liked many of the recipes but many did not try those with unfamiliar ingredients or ingredients perceived as expensive.
Population-Level Results

Population-level surveys of youth and adults were conducted to see if there were broad-based improvements in food and physical activity behavior outcomes. However, given the Collaborative’s focus on policy change and environment improvements, which generally require more time to achieve impact, widespread changes in population measures were not expected. Detailed results are shown below and showed few significant behavioral changes to date.

Surveying Adults—Interactive Voice Response

Interactive Voice Response or IVR is an automated approach to phone surveying. In IVR surveys, a recorded voice programmed by computer asks the questions rather than a live person. Names and phone numbers are obtained from a commercial list company for everyone with a listed phone number and address. Unlisted numbers and cell phones are not called. Community members whose numbers have been selected are notified in advance via postcard that they have been selected and that they may opt out by calling a telephone number on the postcard. They are also eligible to be entered into a drawing for a prize, an incentive to complete the survey.

The main advantage of IVR surveys is that they can be less expensive than other survey methods—once the programming is done a whole list of people can be called at virtually no additional cost. The method also provides an opportunity to get community-specific, micro-level data and track it over time; and to customize the survey to include the community’s own questions. The main disadvantage is that people are much less likely to respond to them than to a live person. The lower response rates (approximately 15% of those eligible to be interviewed) mean that the people surveyed may be less representative of the entire community.

Table 2 shows results collected in 2007 and in 2010 in the South Santa Rosa HEAL-CHI Collaborative neighborhoods. Half of the respondents reported eating five fruits and vegetables per day in 2007 and 39% reported they were exercising the recommended amount. By 2010, the percentage of respondents stayed about the same for fruits and vegetable consumption, however, the percentage of respondents increased to 52% for physical activity. This was the only behavior measure in the table that reflected a statistically significant change. Also of note, the initiative awareness measures all improved significantly from 2007 to 2010. This may be related to extensive social marketing efforts undertaken by the Collaborative. Nearly a third surveyed had heard of the initiative and almost half reported that they had participated in a HEAL program in the last year of the project.
## Table 2. IVR survey responses: Initiative awareness, diet, physical activity, overweight

<table>
<thead>
<tr>
<th></th>
<th>2007</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total N (any responses)</strong></td>
<td>270</td>
<td>146</td>
</tr>
<tr>
<td><strong>Initiative awareness</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heard of the HEAL Initiative</td>
<td>13%</td>
<td>29%*</td>
</tr>
<tr>
<td>Seen healthy changes in the community</td>
<td>29%</td>
<td>44%*</td>
</tr>
<tr>
<td>Participated in the HEAL program</td>
<td>11%</td>
<td>48%*</td>
</tr>
<tr>
<td><strong>Diet/nutrition</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eat 5+ fruits and vegetables/day</td>
<td>50%</td>
<td>52%</td>
</tr>
<tr>
<td>Mean number of F&amp;V</td>
<td>4.7</td>
<td>5.2</td>
</tr>
<tr>
<td><strong>Physical activity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recommended level**</td>
<td>39%</td>
<td>52%*</td>
</tr>
<tr>
<td>Some activity</td>
<td>44%</td>
<td>43%</td>
</tr>
<tr>
<td>No activity</td>
<td>17%</td>
<td>13%</td>
</tr>
<tr>
<td><strong>Body Mass Index (BMI)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normal weight (&lt;25)</td>
<td>40%</td>
<td>36%</td>
</tr>
<tr>
<td>Overweight (25-30)</td>
<td>33%</td>
<td>32%</td>
</tr>
<tr>
<td>Obese (30+)</td>
<td>27%</td>
<td>32%</td>
</tr>
</tbody>
</table>

* Difference between baseline and follow-up response = p<.05.

** Note: Recommended level is moderate exercise 5/week, 30 minutes/occasion OR vigorous exercise 3 days/week, 20 minutes/occasion.
Surveying Youth—School Surveys

Youth HEAL behaviors were measured using a self-administered survey conducted in the 7th and 9th grades at middle and high schools. Surveys for these ages were used because older students are better able to complete questionnaires about eating and physical activity behaviors than younger children.

Baseline surveys were conducted in spring 2007, early in the implementation of the Collaborative strategies. Follow-up surveys were conducted in spring 2010. While the Collaborative school sector did work on district-wide policies, most of the school strategies that were successfully implemented occurred at the elementary school level. Therefore, the survey results shown in Table 3 are trends in HEAL behaviors among youth attending schools in the neighborhood. They may not, however, reflect exposure to all the specific school strategies carried out by the Collaborative. Results do illustrate some interesting trends among youth in the neighborhood and can be used to target future strategies in areas needing improvement.

Table 3 gives examples of questions asked on the survey along with baseline and follow-up results from two schools (one middle school and one high school). The percentage of 7th graders who reported taking PE year-round was high at baseline (85%), and increased to nearly all (96%) at follow-up. Very few 9th graders (2%) reported taking PE year round at baseline, but this jumped to nearly all (96%) at follow-up, perhaps reflecting a high school’s decision to add year-round PE at the one high school that participated in the survey. About 60% of 7th graders and about 40% of 9th graders reported exercising vigorously for 20 minutes or more, and this remained consistent from baseline to follow-up.

About 70% of both 7th and 9th graders reported that there are safe places to walk or ride a bike in their neighborhood, at both baseline and follow-up. Similarly, nearly 70% of 7th and 9th graders reported feeling safe outdoors at baseline and follow-up.

In 2007, a little more than a third of 7th grade students and a quarter of 9th grade students reported eating five or more servings of fruits and vegetables the day before, (38% 7th graders and 26% 9th graders). This remained consistent from baseline to follow-up. One significant finding is that the perception about whether school lunch is healthy greatly improved among both 7th and 9th graders from 2007 to 2010 (from 29% to 65% of 7th graders and from 15% to 43% of 9th graders), which may indicate a positive perception of the school food changes made during the HEAL-CHI project.
Table 3. School survey baseline and follow-up: diet, physical activity

<table>
<thead>
<tr>
<th>Perceptions about neighborhood</th>
<th>7th Graders</th>
<th>9th Graders</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2007</td>
<td>2010</td>
</tr>
<tr>
<td>It is easy to find a place to buy fruits and vegetables</td>
<td>62%</td>
<td>64%</td>
</tr>
<tr>
<td>It is easy to find a place to buy candy, soda, sweets</td>
<td>70%</td>
<td>69%</td>
</tr>
<tr>
<td>I feel safe outdoors in my neighborhood</td>
<td>69%</td>
<td>70%</td>
</tr>
<tr>
<td>There are safe places to walk or ride a bike</td>
<td>75%</td>
<td>69%</td>
</tr>
<tr>
<td>I like to go to places in neighborhood to do physical activity</td>
<td>32%</td>
<td>32%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Perceptions about school</th>
<th>7th Graders</th>
<th>9th Graders</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2007</td>
<td>2010</td>
</tr>
<tr>
<td>School lunch is healthy</td>
<td>29%</td>
<td>65%*</td>
</tr>
<tr>
<td>School lunch tastes good</td>
<td>16%</td>
<td>24%</td>
</tr>
<tr>
<td>Foods sold in school vending/stores are healthy</td>
<td>11%</td>
<td>20%</td>
</tr>
<tr>
<td>I am given candy/sweets few times a year or more</td>
<td>87%</td>
<td>82%</td>
</tr>
<tr>
<td>I take PE year round</td>
<td>85%</td>
<td>96%*</td>
</tr>
<tr>
<td>I learned about healthy food in a class</td>
<td>41%</td>
<td>44%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Eating behaviors</th>
<th>7th Graders</th>
<th>9th Graders</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2007</td>
<td>2010</td>
</tr>
<tr>
<td>Ate 5 servings of fruits and vegetables yesterday</td>
<td>38%</td>
<td>38%</td>
</tr>
<tr>
<td>Ate salad yesterday at home or school</td>
<td>36%</td>
<td>22%*</td>
</tr>
<tr>
<td>Ate baked chips yesterday at home or school</td>
<td>26%</td>
<td>29%</td>
</tr>
<tr>
<td>Ate fast food 2 or more times in last 7 days</td>
<td>23%</td>
<td>38%*</td>
</tr>
<tr>
<td>Ate candy or sweets yesterday any place</td>
<td>75%</td>
<td>80%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Activity behaviors</th>
<th>7th Graders</th>
<th>9th Graders</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2007</td>
<td>2010</td>
</tr>
<tr>
<td>I walked or biked to/from school yesterday</td>
<td>48%</td>
<td>37%</td>
</tr>
<tr>
<td>I spent 20 min. or more doing vigorous activity yesterday</td>
<td>63%</td>
<td>59%</td>
</tr>
<tr>
<td>I was physically active at a park or field outside school in the last 7 days</td>
<td>79%</td>
<td>71%</td>
</tr>
<tr>
<td>I watched programs on a TV or computer for 2 or more hours yesterday</td>
<td>20%</td>
<td>43%*</td>
</tr>
</tbody>
</table>

*Difference between baseline and follow-up response = p<.05.

1PE was not offered in the high school this year.
School Fitnessgram Testing

Fitnessgram testing involves a battery of health-related physical fitness tests administered annually to all 5th, 7th, and 9th grade students in California. These include assessments of body composition and aerobic capacity.

Body Mass Index

The Fitnessgram includes an assessment of all students’ body composition, typically measured by height and weight. While the State of California assesses body composition using a Cooper Institute defined “Healthy Fitness Zone,” body composition was assessed using BMI percentiles. Overweight is defined as Body Mass Index-for-age between the 85th and 95th percentile and obesity is defined as Body Mass Index-for-age at or above the 95th percentile.

Figures 7-9 show baseline and follow-up BMI results by grade for 5th, 7th and 9th graders from five schools (one elementary school, two middle schools, two high schools) in Santa Rosa. Rates of overweight in all five schools combined ranged from 50-54% in 2007 and 49-54% in 2010. Rates of obese students ranged from 27-38% at baseline and 28-34% at follow-up in 2010. While small changes in overweight and obesity rates between 2007 and 2010 can be observed at many of the schools, the changes were not statistically significant. This means that while trends may be occurring, they are not yet large enough to say that the change is any different from what would be expected due to chance alone.

Figure 7. Fitnessgram test weight percentile: 5th graders at baseline and follow-up

![Figure 7](image_url)
Figure 8. Fitnessgram test: 7th graders at baseline and follow-up

Overweight and Obese
> 85th percentile

Obese
> 95th percentile

1 Santa Rosa N=345 (2007); N=363 (2010)

Figure 9. Fitnessgram test: 9th graders at baseline and follow-up

Overweight and Obese
> 85th percentile

Obese
> 95th percentile

1 Santa Rosa N=317 (2007); N=340 (2010)
Aerobic Capacity

The Fitnessgram also includes measurement of aerobic capacity, the rate at which oxygen is taken in and used by the body during exercise. This assessment attempts to quantify students’ physical fitness for engaging in activities that involve the use of large muscle groups, such as running.

Aerobic capacity is measured using either a one-mile run test or the PACER (Progressive Aerobic Cardiovascular Endurance Run) test. In the one-mile run, students are timed as they run (and walk if needed) a distance of one mile at the fastest pace possible. In the PACER test, students run back and forth across a 20-meter distance to exhaustion and count the number of laps they are able to complete. Both tests have age-appropriate definitions of the score needed for a student to be considered physically fit, or in the “Healthy Fitness Zone” for aerobic capacity.

Figure 10 shows baseline and follow-up results by grade from four of the five participating schools (one elementary school, two middle schools, and one high school). Most schools conducted the one-mile test. One high school used the one-mile run test at baseline and the PACER test at follow-up and is not included in the results. Only schools that did the same test at baseline and follow-up are included in the analysis.

Results for the 7th and 9th graders show no statistically significant change between baseline and follow-up measurements three years later. The results for the 5th graders show a statistically significant improvement with 54% of students in 2007 and 70% of students in 2010 in the Healthy Fitness Zone for aerobic capacity. While many factors may have contributed to this improvement, attempts were made at elementary schools to increase the weekly number of physical activity minutes.
Figure 10. Aerobic capacity: Percent of students in the Healthy Fitness Zone

![Bar chart showing aerobic capacity for 5th, 7th, and 9th grades in 2007 and 2010.]

1 Santa Rosa 5th grade N=73 (2007); N=86 (2010)
Santa Rosa 7th grade N=345 (2007); N=363 (2010)
Santa Rosa 9th grade N=65 (2007); N=118 (2010)
*Difference between baseline and follow-up = p< 0.05.
Clinical Measures—KP Member Data

Another source of information about long-term population-level trends in healthy eating and active living are clinical data on Kaiser Permanente (KP) members. In many HEAL-CHI communities, KP members make up a big percentage of the population. In the South Santa Rosa area there are approximately 7,400 adult KP members—20% of the ages 18 and older population. Therefore, tracking changes among KP members gives a rough estimate of changes going on in the community as a whole.

Another advantage of using the KP member data is that it also provides comparison data on KP members not living within the HEAL-CHI community boundaries. By selecting comparison neighborhoods that have similar demographics (ethnicity and income), chances of separating out the long-term effect of the Collaborative on health status and behavior are increased.

A key measure for evaluating HEAL-CHI in the KP member data is the BMI, a measure of overweight and obesity that takes into account both height and weight. An adult with a BMI score greater than 30 is usually considered obese. Figure 11 shows trends in obesity from 2007 (2nd quarter) to 2010 (2nd quarter), comparing South Santa Rosa to areas with similar demographics in the rest of Sonoma County. Figure 12 shows trends in child obesity for the same time period. Results are presented for obesity (BMI>30) and mean BMI for adults, and for obesity (BMI>95th percentile) for children. Comparison census tracts were selected from the same county, matching as closely as possible on income and ethnicity. Enough comparison tracts were selected to produce a roughly three to one KP member population ratio, comparison to intervention.

Results showed little change in the percentage of obese adults and children in Santa Rosa from 2007 to 2010 (nearly 40% of adults and slightly more than 20% of children). These rates were slightly less in the comparison group that also showed little change in the rate over time.
Figure 11. Adult obesity rates\(^1\) among Santa Rosa KP members vs. comparison neighborhoods

```
\begin{figure}
\centering
\includegraphics[width=\textwidth]{figure11.png}
\caption{Adult obesity rates\(^1\) among Santa Rosa KP members vs. comparison neighborhoods}
\end{figure}
```

\(^1\) Santa Rosa N=3,300 (2007); N=3,300 (2010)  
Comparison N=9,000 (2007); N=9,000 (2010)

Figure 12. Child obesity rates\(^1\) among Santa Rosa KP members vs. comparison neighborhoods

```
\begin{figure}
\centering
\includegraphics[width=\textwidth]{figure12.png}
\caption{Child obesity rates\(^1\) among Santa Rosa KP members vs. comparison neighborhoods}
\end{figure}
```

\(^1\) Santa Rosa N=500 (2007); N=1,200 (2010)  
Comparison N=1,100 (2007); N=2,300 (2010)
V. Challenges, Lessons Learned

A number of challenges arose in the process of implementing the HEAL-CHI work in South Santa Rosa, and the lessons learned in responding to these challenges may be useful for other communities undertaking similar initiatives. Information about challenges came both from interviews with Collaborative members and staff describing overall challenges and lessons learned from implemented strategies, and from the results of the evaluation.

Respondents mentioned several challenges they faced in the HEAL-CHI project. Several said they were spread too thin, some strategies took a lot longer than they anticipated, and they didn’t have enough time to work with challenging partners. For instance, it took much longer to get time and attention from the restaurant and store owners and worksites as they attended to their businesses during an economic recession. As one respondent said, “In a recession, they’re not seeing where they could invest time and energy on this effort.”

Here is a summary of the major challenges faced by the Collaborative:

**Engaging residents.** It took a long time to find the right way to connect with residents. At first, the Collaborative offered advocacy workshops but residents said they had limited time or interest in them. The Collaborative then added a staff person from the community and made progress building trust through regular face-to-face interactions with neighborhood leaders. Eventually, the Collaborative found a partner to conduct resident leadership trainings. This allowed the Collaborative to engage with residents and have them identify projects that aligned with HEAL goals. The leadership training graduates chose the issues they were passionate about and built on their early successes over time.

**Connecting with businesses.** The Collaborative developed plans to increase the healthy food offerings in small markets and restaurants. They found that working with these businesses took time and patience. Food outlets were more motivated to make changes if incentives were offered (e.g., grant and loan resources, in-store advertising, pre-developed healthy checkout program, or local produce resources to bring down prices).

**Prioritizing wellness in schools.** The Collaborative’s target area crossed the boundaries of several school districts, making it difficult to make uniform progress in the schools located in the South Santa Rosa neighborhood. Many of the schools had little time or staff to focus on wellness, so progress was slow at first. It was also challenging to work with schools that were undergoing academic performance improvement measures, and increasing PE minutes was harder than anticipated. The Collaborative focused on developing wellness committees and making
policy changes that set the stage for changes in school food over time. The Collaborative found that it was important to work with schools where they are at, rather than try to get them to adopt a model program from the start.

**Competing priorities in clinics.** Adding BMI screening into the health clinics’ protocols was challenging. Numerous data priorities made it difficult to monitor, and other screening requirements slowed the expansion of BMI screening and counseling to adults. Clinic transitions and staff turnover also made it difficult to implement and maintain these systematic changes.

**Contracting and communications.** Executing many small contracts for implementation and evaluation services from experienced contractors was time consuming and slow when run through a county agency (the health department). The Collaborative discovered they needed to plan far in advance to arrange for the needed services to support some of the sector work. In addition, some respondents also mentioned that more advertising and media about the HEAL-CHI project could have been helpful.
VI. Conclusions

The South Santa Rosa HEAL-CHI Collaborative has successfully put in place a model for promoting healthy eating and active living in each of the four target sectors (schools, worksites, health care, neighborhoods). The model combines sector workgroups made up of community partner organizations that help plan the interventions as well as HEAL-CHI staff and contracted consultants who do the bulk of the implementation. Staff and consultants worked closely with key institutions in each sector (e.g., schools, worksites, health clinics, food outlets, restaurants) to implement organizational changes that are both high dose (i.e., reach large numbers of people with interventions of sufficient strength) and sustainable beyond the period of grant funding.

The sustainable strategies with the greatest potential reach and impact were changes in schools that promoted both nutrition and physical activity. Policy and environmental changes that supported school healthy eating included introduction of a new food services vendor with improved healthy offerings, installation of salad bars, limiting of unhealthy food in classroom parties and fundraisers, and pilot of Second Chance Breakfast program. Physical activity strategies included implementing the physical activity component of school wellness policies and the state physical education standards.

Other strategies included implementing worksite wellness policies that led to changes in programs and policies at participating worksites, BMI screening, classes and counseling in health clinics, and changes to the built environment around schools to promote greater walking and biking to school.

Over time, the achievements in one sector worked in concert with those from other sectors. For example, changes were made in the food served in school cafeterias and vending machines, while a neighborhood strategy was successful in passing an ordinance that banned mobile food vendors within 500 feet of school property. Clinics institutionalized BMI screening and counseling within the community clinics, while resident leaders developed fitness and exercise programs to support a healthy weight. Two Safe Route to School grants launched an education program prompting more students walking and biking to school and infrastructure improvements near schools. Resident leaders advocated for other improvements such as bike trails and green spaces. The Collaborative also engaged in a variety of media releases used to promote HEAL in partnership with trained physician advocates.
In all, over 5,000 children were reached by the school-based interventions and over half of the neighborhood residents (19,000) were touched by changes to the neighborhood nutrition environment. If the changes are sustained and reach large numbers of residents in an effective way, such as the three highest reach and strength strategies implemented by the Collaborative in South Santa Rosa schools—improvements to the PE curriculum, adding salad bars and changing food service vendors, and removing unhealthy snacks and limits on types of food rewards at school—it's possible to expect measurable improvements in nutrition and physical activity behaviors in the future, thereby creating permanent change to the environment where South Santa Rosa residents work, learn and play.

Kawana Community Garden