Transforming Population Health: Case Studies of Place-Based Approaches

The following is one in a series of four case studies that provide examples of place-based, multi-sector, population-based approaches to chronic disease prevention and health promotion. Many of these initiatives are working to achieve the Triple Aim, and they have varying levels of evidence of their progress towards meeting each of the three aims of better health, improved care experience, and reduced costs. All of the cases include evidence of improvements in health outcomes, and some also show improvements in quality of care. A subset include evidence of reductions in utilization of health care services, and a few include data on concomitant cost reduction.

Nemours developed these cases to provide examples of population health innovation in the field. For the purpose of these case studies, the working definition of a “population health initiative” is one that attempts to impact the interrelated conditions and factors that influence the health of populations over the life course, be they social, economic, or physical environments; personal health practices; individual capacity and coping skills; human biology; early childhood development; and/or health services. The initiatives outlined in these case studies identify systemic variations in these interrelated conditions and factors and use the resulting knowledge to develop and implement policies and actions to improve the health and well-being of geographic populations. The glue that binds each initiative is the presence of an “integrator” that serves a convening role and works at a systems level to promote prevention and improve health and well-being. The cases span the country, illustrating successful models that improve the health of geographically defined communities in rural, suburban and urban areas; states; chronic disease populations; and populations defined by risk factors and/or socio-demographics.

While all the cases describe initiatives that are specific to their communities or states, they share common features. These population-based prevention initiatives:

1. Target a geographic population;
2. Focus on achieving a shared health outcome, which is usually prevention-related;
3. Engage public and private partners in multiple sectors, including community (child care, schools, work places, etc.), as well as health/health care;
4. Change policies at the systems level and practices at the individual, provider/practitioner level;
5. Use data to measure progress and continually improve interventions;
6. Work toward sustainability via innovative financing, for example developing new funding sources and payment mechanisms and reducing health care costs; and
7. Are facilitated by an “integrator”, an entity operating at the systems or population level to promote the health and well-being of a geographically defined population. An integrator is needed since historically the “systems” serving children and families are disconnected, funded by different sources, and therefore rarely well coordinated to meet the needs of individuals, families and communities. A wide array of organizations can assume the role of integrator, depending upon the requirements of the initiative, the context of the community, and the capabilities and resources of various stakeholders.
Cases studies outlining population-based approaches to prevention and wellness, all of which involve these seven common features, are cited below.

**Nemours**
Nemours works with partners in child care, schools, primary care and the community to halt and ultimately reverse the growing prevalence of childhood obesity among children in Delaware. To ensure sustainability, Nemours pursued both systems/policy and practice changes in these sectors where children spend most of their time. Preliminary results show a flattening of the overweight and obesity curve for Delaware children ages 2 to 17 between 2006 and 2008.

**Children’s Hospital Boston Community Asthma Initiative**
Children’s Hospital Boston created a comprehensive program that increases the capacity of health care providers, schools, and community groups to offer asthma education. They coupled this program with a Medicaid waiver to pay for bundled pediatric asthma services for high-risk patients, including coverage of non-traditional home visits and interventions by community health workers. For 800 children treated through September, 2011, significant reductions were achieved in emergency department visits and hospital admissions, and quality of life was improved for children and their parents, with dramatic results in just 6 months.

**REACH Charleston and Georgetown Diabetes Coalition, South Carolina**
The School of Nursing at the Medical University of South Carolina, in partnership with the multi-sector Racial and Ethnic Approaches to Community Health (REACH) Coalition, focuses on eliminating racial and ethnic disparities in diabetes in the African-American community, as measured by reductions in the lower-extremity amputation rate. In Charleston and Georgetown counties, rates of amputations per 1,000 diabetes hospitalizations decreased among African Americans. Clinical quality, evaluated based on annual chart audits from 1999 on, improved on a range of process and intermediate outcome measures, including annual foot exams, HbA1c control, and adherence to American Diabetes Association guidelines for self-management.

**Steps to Health King County, Seattle**
Public Health—Seattle & King County (PHSKC) convened the Steps KC collaborative, which involved more than 75 organizations working together to promote a comprehensive approach that coordinates programs and policy and systems changes at the individual, family, clinical, school and community levels. The goal of reducing the impact of chronic diseases through preventing and controlling asthma, diabetes and obesity is beginning to be realized, as evidenced by healthier behaviors, improved diabetic control, decreased days with asthma symptoms, and utilization reductions in asthma-related emergency room visits and hospitalizations.
Transforming Population Health: Case Studies of Place-based Approaches

Case Study – Steps to Health King County, Seattle

Overview

Initiative Goals/Interventions
Seattle-King County has a long history of using multi-sector population-based approaches to improve health status across its geographic region and in specific “place-based” communities. This case study focuses specifically on the Steps to a HealthierUS Program, Steps to Health King County (Steps KC), because it has been thoroughly evaluated since its conclusion in 2008, providing evidence of impacts on clinical process and outcome measures for individuals and the population. The case draws extensively from the Summary Evaluation Report and subsequent article (Sources #3 and #5).

The goals of Seattle-King County’s Steps program were to:

- Reduce the impact of chronic diseases through preventing and controlling asthma, diabetes and obesity.
- Promote a comprehensive approach that coordinates actions at the individual, family, clinical, school and community levels and integrates interventions addressing multiple chronic conditions.
- Reduce health disparities due to chronic illness by reaching social and ethnic groups that are disproportionately affected.

The intent of Steps KC was to link improved service delivery with integrated community-based organizations, system changes, and policy changes to create a more seamless system of chronic disease prevention and treatment. Interventions were organized broadly at two levels: the Steps collaborative as a whole, including policy and systems change initiatives and efforts to better integrate the Steps-funded programs; and the individual program level, with programs ranging from group health promotion to intensive case management.

Lead Organization, Integrator and Key Partners
Public Health—Seattle & King County (PHSKC) served as the lead organization for the initiative, convening the Steps KC collaborative which involved more than 75 organizations including community-based organizations, hospitals, health plans, clinics, universities, faith-based organizations, school districts, and government agencies. Attachments, Table 1 lists the 32 active Step partners and the Leadership Team members. Active partners included organizations funded through Steps as well as others that regularly attended meetings.

Target Population/Geographic Area
The targeted geographic area was the southern part of Seattle and adjacent communities in south King County (see Attachment 2 for map of the target area). The area has a population of 352,836, with 14.4% African Americans, 8.9% Hispanic/Latino, and 3.9% Vietnamese. Over 30% of the population lives below 200% of the Federal Poverty Line (FPL). This area was selected because of its concentration of low-income and minority residents and higher rates of Steps-related conditions relative to the rest of King County.
County. The priority population for the intervention was people with household incomes less than 200% of FPL who are English, Spanish and/or Vietnamese-speaking.

**Outcome Measures/Evidence to Date**

- **Policy and systems changes**
  - Steps KC supported the founding of the Healthy and Active Rainier Valley Coalition (HARVC) in Southeast Seattle, resulting in “place-based” initiatives focused on the needs of a specific community.
  - Twenty-five organizational changes were achieved, in whole or part, through Steps KC. Particularly significant policy changes were made in the Seattle public schools and in Seattle Parks and Recreation. The remaining changes occurred in health care and community-based organizations.

- **Example population health indicators**
  - Youth Nutrition: Steps target areas appeared to do better than the rest of King County in all key indicators tracked, including consuming 5 or more servings of fruits or vegetables daily, not buying sodas at school, and not buying snacks at school.
  - Childhood Asthma: hospitalizations in the Steps area declined 9.5% per year compared with 2.1% in the rest of King County.

- **Individual Programs**
  - The 14 direct service programs funded by Steps KC reached a total of 8,180 community residents with medium and high intensity level interventions and 63,780 residents with low-intensity interventions.\(^1\)
  - 45% of case-managed (CM) patients established care with a primary care provider.
  - 40% fewer emergency department (ED) visits – ED utilization was about half a visit lower among CM patients after they were connected to a primary care provider, compared to the average for comparison groups (0.79 vs. 1.31 visits/year, p<.5).
  - 38% improvement in diabetic control, with the percent of patients under case management with poor HbA1c control reduced from 78% before case management to 48% after.
  - 41% increase in days with no asthma symptoms, from 8.6 to 12.1.
  - 59% decrease in percentage with an ED for asthma visit in the past month, from 46% to 19%.

**Years Initiated and Operated**
2003 – 2008 with Steps funding

---

\(^1\) Intensity level. High = 1-on-1 case management program, Steps KC cost $900/person. Medium = multi-session programs or intensive 1-time training programs, Steps KC cost $115-175/person. Low = single session or group education programs, systems/policy change, Steps KC cost $7/person.
Full Description

Problems Addressed
- Limited opportunities for health promotion and poor chronic disease prevention and treatment for the target population, in particular for asthma and diabetes.
- Significant health disparities in the target population.
- Lack of coordination across multiple organizations and programs currently serving this population.

Goals, Interventions and Target Populations
Interventions took place at two levels, the collaborative and the individual program.

Collaborative Level:
The goals at the collaborative level included implementing policy initiatives, encouraging systems change, and integrating community-based chronic disease prevention efforts by increasing coordination among the funded-program organizations. Steps KC engaged in policy efforts at 3 levels: leading signature initiatives, actively supporting initiatives led by others, and endorsing initiatives that promoted Steps goals.

Systems change focused on supporting partner organizations in making internal changes to further Steps KC’s chronic disease prevention goals and work more effectively with underserved communities. Steps funded school districts, for example, to hire health promotion champions to implement internal policy and systems change, and the collaborative provided technical assistance and support to help parks department staff design health promotion policies and systems changes.

Two approaches were used to achieve more integration across Steps KC participants:
- Efforts to increase coordination among funded programs. Steps KC staff met with each program and identified opportunities, such as cross-referral of clients, joint program development, and working together to pursue grant funding. Steps KC convened semi-annual meetings of all funded programs to encourage sharing of ideas and support coordination. Steps also sought to engage funded programs in the integration and policy work at the collaborative level and paid for 4 hours of program staff time per month to do so.
- Selection of two “focus” communities to implement place-based health promotion initiatives. These initiatives brought together organizations that were already active in their community to develop common goals and joint activities, including identifying service/program gaps and creating programs to fill them. For example, the Healthy and Active Rainier Valley Coalition (HARVC) was founded in Southeast Seattle, engaging more than 70 agencies, community-based organizations, clinics, businesses and residents to promote physical activity and nutrition.

Program Level
Slightly less than half of the annual budget was dedicated to funding individual direct service programs to improve health promotion and chronic disease prevention and to support innovation in chronic disease prevention activities. Criteria for program selection included: being evidence based, based on best practices or innovative; addressing health disparities; and having the potential to be sustained beyond the Steps KC funding period. A total of 14 new and/or expanded programs were funded, ranging from health education programs reaching large numbers with relatively low-intensity interventions to intensive case management for individuals without connections to primary care. A total of 63,780 people were reached, including more than 8,180 through medium- and high-intensity interventions intended to produce measurable lifestyle changes among participants, for example:
  - High intensity (n=1,660 participants)
Care coordination/case management
Community health workers
- Medium intensity (n=6,520)
  - Girls on the Run of Puget Sound, an after-school physical activity program for girls
  - Healthy Sundays, diabetes and cardiovascular health education in churches
  - Training/education sessions, for example, Fuel and Play the Healthy Way, an educational program for child care providers
- Low intensity - primarily school-based with limited contact hours, such as bicycle promotion/safety programs (n = 55,600)

See Attachments, Table 2 for details.

Steps KC also expanded the role of community health workers to serve multiple program initiatives. Community health workers improved asthma outcomes years before the Steps grant, providing home visits to support children and adults with asthma in reducing exposure to environmental triggers and improving their asthma self management. Steps played a critical role in sustaining the services of 3 community health workers by providing grant funding for their salaries and expanded the home visit program to provide self-management support to people with diabetes and to coordinate services and supports with additional health care organizations. Community health workers also trained other health professionals, thus expanding community capacity to provide asthma and diabetes prevention and management. Efforts are currently underway to find a more stable source of funding, including discussions with Medicaid managed care plans to provide fee-for-service reimbursement and to incorporate these important community-based services into a bundled payment provided to a medical home. (Source #1)

The Steps KC Collaborative as the Integrator
While many organizations were already engaged in addressing the Steps conditions in diverse communities, the Steps KC collaborative provided an important opportunity for them to collectively plan their work and secure funding to scale up existing activities and engage in new ones. Public Health-Seattle King County (PHSKC) served the role of convener, fiscal agent, source of dedicated staff, and coordinator for Steps KC, bringing together the organizations who applied together for funding from the CDC’s Steps to a HealthierUS Program. In addition, PHSKC provided the data and analytic capabilities required to identify community needs, develop performance measures, and partner with participating organizations to collect data on an ongoing basis required for monitoring performance.

The governing Leadership Team (LT) was the decision-making body for the Steps KC collaborative. It filled key integrator roles, including selecting the key staff to be hired by PHSKC for the collaborative, identifying policy and advocacy priorities, making decisions about program selection and funding levels, and coordinating the work of funded programs. Steps KC also served other key integrator functions including the following:
- Developing educational materials and toolkits for a wide variety of audiences from elementary school students to seniors in community centers and making these resources available through multiple sources.
- Providing training and creating learning collaboratives in multiple settings, from primary care clinics introducing quality improvements to focus on pediatric overweight prevention, to training child care providers to increase healthy eating and physical activity in their centers.
- Providing technical assistance on “best practices” and closely monitoring performance in the various programs.
• Forging linkages beyond the health care system to other systems that impact the health of the population and the community.

**Evaluation/Measurement Strategy**

The Steps evaluation team included the Center for Community Health and Evaluation, Steps staff from PHSKC, and the University of Washington. The evaluation team used a participatory approach, working with key partners to involve them in evaluation design, indicator selection, data collection and interpretation and dissemination. The approach was a case study design guided by a logic model, with different logic models, data collection approaches and outcome measures used at the program and collaborative levels of the initiative. Table 3 in the Attachments provides an example of a project-level logic model and the intermediate and long-term outcomes measures that result from it.

The evaluation had two overarching goals:

- To assess the impact of the initiative on process measures and intermediate- and long-term outcomes for the direct service programs.
- To provide formative feedback for program and collaborative improvement.

Program-level evaluations generally included process information from progress reports (e.g., number of participants) and uncontrolled pre-post surveys measuring behavioral and health outcomes prior to participation and near the end of the project period. Outcome data was not able to be collected for 6 of the 14 funded programs, due to hard-to-measure outcomes (e.g., increased youth leadership skills), lack of adequate data systems, or because data collection would have caused excessive burden on staff and participants. In some cases, the evaluation team focused on building the capacity of the funded organization to collect outcome data, even though it would not occur until after the Steps KC funding period.

Population-level indicators were used to track the long-term impacts of interventions at the population level and were derived from:

- Population-based data collection systems—surveys of adults and students, vital records and hospital discharges;
- Datasets that cover subpopulations of size and importance (e.g., asthma and diabetes registry data from participating clinics); and
- A new emergency department surveillance system for asthma and diabetes.

Steps Collaborative functioning (organizational-level systems change and policy change) was assessed through semi-structured key informant interviews with funded-program staff, progress reports and other program documents. Outcomes, such as policy improvements and integration, were captured using multiple data sources and methods, including both qualitative and quantitative indicators. For example, the degree of integration within Steps was captured using social network analysis and also through progress reports and structured interviews asking about inter-organizational relationships.

**Results**

**Individual Programs**

As highlighted in Attachments, Table 4, the 8 programs funded by Steps that could be evaluated achieved a variety of significant results, among them:

- 45% of case managed (CM) patients established care with a primary care provider.
- 40% fewer ED visits – ED utilization was about half a visit lower among CM patients after they were connected to a primary care provided, compared to the average for comparison groups (0.79 vs. 1.31 visits/year, p<.05).
• 38% improvement in diabetic control, with the percent of patients under case management with poor HbA1c control reduced from 78% before case management to 48% after.
• 41% increase in days with no asthma symptoms, from 8.6 to 12.1.
• 59% decrease in percentage with an ED visit for asthma in the past month, from 46% to 19%.
• 83% of participants met nutritional and physical activity action goals at 6 months.
• 11% increase in families with less than 3 hours of computer or TV time per day.
• 35% increase in the number of days per week with vigorous exercise.
• 7% increase in bicycle-safety related knowledge at most schools, from 8.8 to 9.4 items correct out of 10.
• 82% made at least one change in the food they served and 76% in the physical activities they offered among child care providers who participated in “Fuel and Play the Healthy Way”.
• 60% increase in those reporting moderate exercise 4+ days per week, from 38% to 61% among staff in 3 school districts. (Source #5, p. 226)

Population Health Indicators
• Youth Nutrition: despite demographic factors (e.g., higher poverty rates) usually associated with poorer nutrition, improvements were demonstrated in Steps target areas, for example:
  o Youth consuming 5 or more servings of fruits or vegetables daily: 20% better (30% Steps area vs. 25% rest of King County)
  o Youth who did not buy sodas at school: 17% better (81% Steps area vs. 69% rest of King County)
  o Youth who did not buy snack food at school: 13% better (88% Steps area vs. 78% rest of King County) (Source #3, p. 17)
• Childhood asthma: since 2001 the hospitalization rate for asthma has declined at 9.5% per year in the Steps area vs. 2.1% in the rest of King County
  o Among the more than 300 families that had home visits by the community health workers, the hospitalization rate was reduced from 46% to 21% in a year. (Source #3, p.18)

Organizational Results/Systems Changes: Policy and Integration
Twenty-five organizational changes were achieved in whole or in part through Steps KC. Steps staff and partner organizations were particularly successful at changing policy at the organizational level in two key organizations, Seattle public schools and Seattle Parks and Recreation:
• Seattle Public Schools: Steps funded two School Health Coordinators who facilitated organizational policy changes in the areas of coordinated school health, staff wellness, health education, nutrition and physical education; piloted promising interventions within schools; served as community liaisons to schools; promoted the link between health and learning; and mobilized health champions, community support and funding for these efforts within schools.
  o Specifically, Seattle public schools developed and adopted a comprehensive physical education curriculum and improved access to healthier foods in vending machines and via other sources of competitive foods (foods sold a la carte, in vending machines or school stores that “compete” with school lunch offerings).
  o Highline school district adopted wellness policies supporting physical activity and physical education, as well as policies addressing nutritional standards for competitive foods.
• Seattle Parks and Recreation Department (SPR): through Steps involvement, the Sound Steps Walking Program initially targeted to middle and upper-income seniors was broadened to reach out to more people in the community and transformed to a model based where people live, rather than expecting them to come to community centers. More broadly, SPR transformed its whole organizational culture to one that promotes health, not simply recreation. SPR established the Healthy Parks Healthy You Initiative to promote physical activity and wellness programs that
serve the diverse community and include improved nutrition policies, such as providing healthier choices in all vending machines and food offered to youth in programs.

- Other organizational changes included the following:
  - King County Asthma Forum improved emergency department communication, including 24-hr notification to clinics and referrals for asthma patients. (Source #5)
  - Roxbury Clinic/Highline Medical Group and Harborview Medical Center implemented systems changes to further implement the Chronic Care Model—an approach to promoting comprehensive management of chronic illness. Examples from Highline: a patient self-management assessment tool, a new arrangement to refer patients to Rainier Beach Community Center for exercise programs and monthly case-based learning sessions for RNs; examples from Roxbury: medical assistants initiating foot exams and self-management goal setting, as well as all Chronic Disease Electronic Management System registries now reside on Highline Medical Group’s shared drive.

Regarding the goal of achieving better integration, the definition of integration originally adopted by the Steps Leadership Team was: "Creating linkages between organizations and individuals to: (1) improve the quality and efficiency of program delivery in order to achieve a seamless system of chronic disease prevention and care; and (2) implement and sustain community-wide and institutional policies to prevent and control chronic disease." The degree of integration and collaborative functioning within Steps was captured using social network analysis. The density of relationships among the 32 Steps organizations doubled from 23% when Steps began in 2003 to 46% in 2005. By 2006, density had declined to 26% as emphasis shifted to a more “place-based” focus on collaboration among organizations serving specific communities, rather than across the whole Steps collaborative.

**Program Funding**
The annual budget for Steps KC was $1.9 million and the total budget over 5 years was approximately $9.5 million. The lead organization, PHSKC, is one of the CDC Racial and Ethnic Approaches to Community Health (REACH) communities.

The State legislature funded a pilot with PHSKC for 300 children from low-income families who receive home visits from community health workers to improve their asthma management. Funding from CDC is providing continuing support for this program and discussions are currently in progress with a number of managed care plans to serve their populations.

**Current Status/Future Plans**
CDC replaced the Steps Program with the broader-based Healthy Communities Program. The coalitions developed and the lessons learned through Steps KC helped prepare Seattle-King County to be one of 50 successful applicants for a $25.5 million CDC Communities Putting Prevention to Work (CPPW) grant funded through the American Recovery and Reinvestment Act for April 2010 – March 2012. Many participants from the Steps KC Leadership Team have been actively involved with CPPW. In 2011, Seattle-King County was selected to participate in the Connecting Public Health and Community Development Project funded by a partnership between the Robert Wood Johnson Foundation, the Federal Reserve Bank of San Francisco, and GPS Capital Partners, LLC intended to demonstrate how community development, finance, and the public health sectors can collaborate to improve the health of all Americans.

**Citation and Sources**

Nemours developed these case studies to provide examples of population health innovation in the field. This case study was prepared by Julianne R. Howell, PhD, Anne De Biasi, MHA, Daniella Gratale, MA
and Debbie I. Chang, MPH, using the following sources, and was issued in March, 2012:


2. Telephone conversation with Dennis Worsham, Regional Health Officer, and Janna Wilson, Senior External Relations Officer, Seattle & King County Department of Public Health, December 14, 2011.


# ATTACHMENTS

## Table 1: Active Steps Partners

<table>
<thead>
<tr>
<th>Action for Media Education</th>
<th>King County Asthma Forum</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Lung Association*</td>
<td>King County Coalition for Promoting Physical Activity</td>
</tr>
<tr>
<td>Asthma &amp; Allergy Foundation of America-WA State Chapter</td>
<td>Odessa Brown Clinic</td>
</tr>
<tr>
<td>Austin Foundation*</td>
<td>Public Health-Seattle &amp; King County</td>
</tr>
<tr>
<td>Bike Works*</td>
<td>REACH Diabetes Coalition</td>
</tr>
<tr>
<td>Cascade Bicycle Club*</td>
<td>Seattle Children's Hospital*</td>
</tr>
<tr>
<td>Center for Multicultural Health*</td>
<td>Seattle Department of Parks and Recreation*</td>
</tr>
<tr>
<td>Community Health Plan of Washington</td>
<td>Seattle Nutrition Action Consortium</td>
</tr>
<tr>
<td>Feet First*</td>
<td>Seattle Public Schools*</td>
</tr>
<tr>
<td>Girls on the Run*</td>
<td>Tukwila Community School Consortium*</td>
</tr>
<tr>
<td>Harborview Medical Center-Ambulatory and Allied Care Services*</td>
<td>Tukwila School District*</td>
</tr>
<tr>
<td>Harris &amp; Smith Public Affairs*</td>
<td>University of Washington Nutrition Department*</td>
</tr>
<tr>
<td>Healthy Aging Partnership</td>
<td>WA Coalition for Promoting Physical Activity</td>
</tr>
<tr>
<td>Healthy Mothers Healthy Babies</td>
<td>Washington State University Extension*</td>
</tr>
<tr>
<td>Highline Medical Group-Roxbury Clinic*</td>
<td>YMCA of Greater Seattle*</td>
</tr>
<tr>
<td>Highline School District*</td>
<td>*Leadership Team member</td>
</tr>
</tbody>
</table>

**Source:** The Center for Community Health and Evaluation, “Steps to Health King County: Summary Evaluation Report”, March 2009, Table 2, p.4.
Table 2: Direct Services by Intensity Level and Number of People Reached*

<table>
<thead>
<tr>
<th>Intensity</th>
<th>Type of Service</th>
<th>Community</th>
<th>Medical</th>
<th>School</th>
<th>Total</th>
</tr>
</thead>
</table>
| High ($900/person) | Care coordination/Case management  
• Harborview Medical Center, Highline Medical Group case management  
• Community Health Specialists | 660       | 1,000   | 0      | 1,660 |
| Medium ($115/person) | Multi-session programs  
• Youth physical activity:  
  – Girls on the Run of Puget Sound: after-school physical activity program for girls  
  – Youth and Fitness  
  – Strong Kids Strong Teens  
• Senior physical activity:  
  – Sound Steps senior walking program  
• Community-based health education:  
  – Community Pathways to Health: engaging teens in asset-building  
  – Healthy Sundays: diabetes and cardiovascular health education in churches | 4,750     | 0       | 110    | 4,860 |
| Medium $175/person | Training/education sessions  
• Fuel and Play the Healthy Way: training for child care providers  
• Food for Thought: multimedia presentations to increase parental media literacy  
• Promoting Healthy Built Environments: community education sessions and capacity building in Health Impact Assessments | 1,660     | 0       | 0      | 1,660 |
| Low $7/person | Lower intensity programs  
• Bicycle safety/promotion:  
  – Bicycling for Lifelong Health: youth bicycling programs  
• Youth health education:  
  – Great Body Shop: A curriculum for elementary students implemented in Seattle and Highline districts  
• School systems and policy change:  
  – School Champions grants: funding for advocates to pursue system change projects in schools | 0         | 0       | 55,600 | 55,600 |
Notes:
1 - Intensity levels:
   High - One-on-one case management programs
   Medium - Multi-session programs or intensive one-time training programs
   Low - Single-session or group education programs, systems/policy change
2 - Reach data are from quarterly progress reports completed by the Steps KC-funded organizations
3 - Costs included only funding provided to the organizations by Steps KC, and did not include in-kind or other resources to support the programs provided by the organization.

Source: Cheadle, A., et. al., Table 1, p. 224.
Table 3
Example of Project-Level Logic Model: Youth and Fitness Program, Austin Foundation

<table>
<thead>
<tr>
<th>Inputs</th>
<th>Activities</th>
<th>Outputs</th>
<th>Intermediate Outcomes</th>
<th>Long-Term Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resources needed to accomplish our activities:</td>
<td>Activities, services, events, and products, including program integration efforts</td>
<td>Direct results of our programs: participation, policy advocacy</td>
<td>Changes in behavior, organizations, communities, policies, or systems:</td>
<td>Changes in STEPS priority health outcomes:</td>
</tr>
<tr>
<td>Trainers</td>
<td>Expand the Youth and Fitness program from 3 to 4 times per year, which teaches exercises and provides motivational activities to youth</td>
<td>Youth get hands-on experience with different exercises and healthy snacks, and they learn about topics related to obesity, diabetes, and asthma.</td>
<td>Past participants return as mentors/volunteers.</td>
<td>▲ physical activity and nutrition</td>
</tr>
<tr>
<td>Part-time coordinator</td>
<td>▪ Description of curriculum, activities, and motivational speakers</td>
<td>▪ # of participants</td>
<td>▪ Reduction in pre-diabetes indicators</td>
<td></td>
</tr>
<tr>
<td>Facilities from Garfield Community Center</td>
<td></td>
<td>▪ # of sessions</td>
<td></td>
<td>▪ Sustained weight loss</td>
</tr>
<tr>
<td>Volunteers from City Year, Seattle Police Department</td>
<td></td>
<td></td>
<td>Increased sense of belonging and respect, knowledge of fitness</td>
<td>Improved obesity, diabetes, and asthma outcomes.</td>
</tr>
<tr>
<td>Certified fitness instructors, Nutritionists and Motivational Speakers</td>
<td></td>
<td></td>
<td>▪ Pre/post survey</td>
<td></td>
</tr>
<tr>
<td>Equipment - age appropriate weights and exercise tubing</td>
<td></td>
<td></td>
<td>Increased fitness levels</td>
<td></td>
</tr>
</tbody>
</table>

Source: Cheadle, A., et. al., Table 2, p. 225.
### Table 4: Evaluation Findings from Steps KC Direct Service Projects

<table>
<thead>
<tr>
<th>Program</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>One-on-one individual programs</strong></td>
<td></td>
</tr>
<tr>
<td>Chronic Disease Coordinators at Harborview and Highline Medical Group</td>
<td>• 45% of case managed (CM) patients established care with a primary care provider.</td>
</tr>
<tr>
<td>- Case management of patients coming to the emergency department (ED)</td>
<td>• 40% fewer ED visits - ED utilization was about half a visit lower among CM patients after they were connected to a PCP, compared to the average for three comparison groups (0.79 vs. 1.31 visits/year, p&lt;.05).</td>
</tr>
<tr>
<td>- Case management of patients coming to the emergency department (ED)</td>
<td>• 38% improvement in diabetic control - The proportion of CM patients with poor control (HbA1c&gt;9) decreased from 78% before entering CM to 48% after (p&lt;.05).</td>
</tr>
<tr>
<td>- Case management of patients coming to the emergency department (ED)</td>
<td></td>
</tr>
<tr>
<td>- Chronic Disease Coordinators at Harborview and Highline Medical Group</td>
<td>• 45% of case managed (CM) patients established care with a primary care provider.</td>
</tr>
<tr>
<td>- Chronic Disease Coordinators at Harborview and Highline Medical Group</td>
<td>• 40% fewer ED visits - ED utilization was about half a visit lower among CM patients after they were connected to a PCP, compared to the average for three comparison groups (0.79 vs. 1.31 visits/year, p&lt;.05).</td>
</tr>
<tr>
<td>- Chronic Disease Coordinators at Harborview and Highline Medical Group</td>
<td>• 38% improvement in diabetic control - The proportion of CM patients with poor control (HbA1c&gt;9) decreased from 78% before entering CM to 48% after (p&lt;.05).</td>
</tr>
<tr>
<td><strong>Community Health Workers</strong> - Support, education, and linkages to community resources.</td>
<td>• 41% increase in days with no asthma symptoms – from 8.6 to 12.1.</td>
</tr>
<tr>
<td>- Support, education, and linkages to community resources.</td>
<td>• 59% decrease in percent with an ED for asthma visit in the last month – from 46% to 19%.</td>
</tr>
<tr>
<td><strong>Healthy Sundays</strong> - Diabetes and cardiovascular education in churches.</td>
<td>• 83% of participants met their nutritional and physical activity action plan goals at 6 months.</td>
</tr>
<tr>
<td><strong>Group-Level Programs</strong></td>
<td></td>
</tr>
<tr>
<td>Strong Kids Strong Teens (Children’s Hospital) - Physical activity and nutrition program for overweight and at risk of overweight youth.</td>
<td>• 11% increase in families with &lt; 3 hours computer/TV time per day.</td>
</tr>
<tr>
<td>- Physical activity and nutrition program for overweight and at risk of overweight youth.</td>
<td>• 35% increase in the number of days/week with vigorous exercise.</td>
</tr>
<tr>
<td>Bicycling for Lifelong Health - In-school bicycle safety program and Earn-a-Bike programs.</td>
<td>• 7% increase in bicycle safety-related knowledge at most schools- 8.8 to 9.4 items correct out of 10.</td>
</tr>
<tr>
<td>Fuel and Play the Healthy Way - Training for child care providers to increase healthy eating and physical activity in child care settings.</td>
<td>• 82% had made at least one change in the food they serve (4-months after the training).</td>
</tr>
<tr>
<td>- Training for child care providers to increase healthy eating and physical activity in child care settings.</td>
<td>• 76% had made at least one change in their physical activities (4-months after the training).</td>
</tr>
<tr>
<td>Great Body Shop - An evidence-based health curriculum for elementary students implemented in Seattle and Highline districts.</td>
<td>• 25% increase in total written test score from pre to post (Seattle).</td>
</tr>
<tr>
<td>- An evidence-based health curriculum for elementary students implemented in Seattle and Highline districts.</td>
<td>• 17% increase in total written test score from pre to post (Highline).</td>
</tr>
<tr>
<td>Seattle, Tukwila, and Highline School Districts - Staff Walking Challenge - Staff members form teams and compete to log the most physical activity.</td>
<td>• 60% increase in those reporting moderate exercise 4+ days per week - increased from 38% to 61% among participants during the program.</td>
</tr>
</tbody>
</table>

Source: Cheadle, A., et. al., Table 3, p. 226.

---

