

# Community Health

## Short- and Long-Term Findings and Benefits

### Background

Almost half of adults in the United States have a chronic disease such as heart disease or diabetes,<sup>1</sup> and most adults older than 65 years of age have more than one chronic disease.<sup>2</sup> The treatment of chronic disease accounts for approximately 86% of annual health care expenditures.<sup>3</sup> Reducing the incidence of the leading preventable risk factors for chronic disease—obesity and tobacco use—could save lives and substantially reduce health care expenditures.<sup>4</sup> In 2010, the Centers for Disease Control and Prevention (CDC) launched the Communities Putting Prevention to Work (CPPW) program, a 3-year initiative to reduce morbidity, mortality, and the economic burden of chronic diseases through effective prevention.<sup>5</sup> Through CPPW, CDC invested \$485 million in 50 communities across the United States. Of this, \$403 million funded communities directly and the remainder supported technical assistance, training, and evaluation. Following a competitive application process, the CDC funded 28 communities to prevent obesity, 11 to reduce tobacco use or reduce exposure to secondhand smoke, and 11 to address both obesity and tobacco use. Awardees included 14 large cities, 12 urban areas, 21 small cities and rural counties, and 3 tribal nations in 32 states and the District of Columbia. Population size in the funded communities ranged from 5,000 to more than 10 million people with approximately 55 million people being served by the program.<sup>5</sup>

In the past, public health interventions for chronic disease often focused on providing education to promote the adoption of healthy behaviors. Current approaches recognize that many social, economic, and physical factors in the community environment can work against a person's intent to pursue a healthier lifestyle. The CPPW initiative sought to increase physical activity, improve nutrition, decrease overweight and obesity prevalence, decrease smoking prevalence, and decrease exposure to secondhand smoke by supporting the implementation of far-reaching and long-lasting policy, system and environment (PSE) strategies aimed at making healthy living easier.

## **Benefits**

As of June 2013, CPPW communities had completed 73% of the 790 objectives in their action plans. Using US Census and target population data for each objective in their action plans, awardees estimated the potential population reach of these interventions. Population reach was defined as the estimated number of unique individuals who had the opportunity to benefit from a given intervention. These reach estimates were verified by CDC evaluators also using US Census and local data sources. Findings from reach estimates indicate that the CPPW initiative increased access to healthy environments for millions of people across the country. By the end of the CPPW program, an estimated 45.2 million Americans experienced increased access to physical activity opportunities and an estimated 40.9 million Americans had increased access to environments with healthy food or beverage options in schools, after-school programs, early child care settings, workplaces, and other community settings. An estimated 27.4 million Americans had increased protection from deadly secondhand smoke exposure in workplaces, restaurants, bars, schools, multi-unit housing complexes, campuses, parks, and beaches.

## **Short-Term Benefits**

Although national reach numbers are important, the real impact—the success stories—are at the local level. Findings from local evaluation efforts indicate that the CPPW initiative was also linked to many short-term benefits (up to 3 years) for awarded communities. Examples include the following:

- The Seattle, Washington, CPPW program was directly associated with a decline in obesity prevalence in low-income school districts; non-CPPW school districts showed no such decline.<sup>6</sup>
- In New York City (NYC), New York, children whose teachers had been trained to implement the Move to Improve program showed a four-fold increase in physical activity compared with students whose teachers had not been trained.<sup>7</sup>
- In Los Angeles County (LAC), California, community members' use of school facilities for physical activity was 16 times higher in schools involved in the program than in other schools. About two-thirds of all community members using school facilities participated in moderate or vigorous physical activity.<sup>8</sup>

- In LAC, the Sugar Pack public health education initiative was implemented. Lessons learned from the educational campaign suggest that employing health marketing to engage the public can lead to increased knowledge, favorable recognition of health messages, and self-reported intention to potentially complement other obesity prevention strategies in the field.<sup>9</sup>
- In Philadelphia, Pennsylvania, the Philly Food Bucks initiative, which included a bonus incentive tied to the federal Supplemental Nutrition Assistance Program (SNAP), was associated with self-reported increases in fruit and vegetable consumption and increased SNAP sales at participating farmers markets in low-income communities.<sup>10</sup>
- In Multnomah County, Oregon, a public health education initiative was implemented to educate residents about the amount of added sugars in soda and other sugary drinks. In addition, the initiative educated residents about the health effects of consuming such drinks. Nearly 70% of respondents were aware of at least one element of the initiative. As a result of the ads, nearly 80% of people who were aware of the educational media campaign intended to reduce the amount of soda or sugary drinks they offered to a child. Those who were aware of the initiative were more likely to agree that too much sugar causes health problems.<sup>11</sup>
- In Las Vegas, Nevada, a public health education initiative was implemented to increase walking trail use. The effort featured print, online, radio ads, billboards, and signage on gas pumps. The mean trail usage increased from 3.91 to 5.95 users per hour after the initiative.<sup>12-13</sup>
- In Nebraska, Movin' Afterschool, a program targeting students, was implemented and evaluated in nine schools. Results indicated observed increases in moderate to vigorous physical activity among students when staff were 1) engaged in directing physical activity, 2) verbally promoted moderate to vigorous physical activity, or when physical activity was organized and equipment was present.<sup>14</sup>
- In San Diego, the farmers' market incentive program Fresh Fund was enhanced to increase and improve services, especially to immigrant communities. A total of 7,298 eligible participants enrolled in Fresh Fund, exceeding the program goal of 3,000. More than 80% of participants had never been to a farmers' market. The percentage of respondents who reported eating 5 or more daily servings of fruits and vegetables increased from 19.4% to 24.2%. The percentage of respondents who reported "healthy or very healthy diets" increased from 4.0% to 63.1% (12-month data).<sup>15</sup>

- The NYC Department of Health and Mental Hygiene enhanced the Primary Care Information Project with the Health eQuits program. Before this enhancement a mean of 23% of documented smokers received at least one smoking intervention. At the end of the intervention a mean of 54% of documented smokers received at least one smoking intervention.<sup>16</sup>

### **Enhanced Evaluation**

In addition to the results presented above, a subset of communities received funds to enhance their evaluation efforts to observe behavioral change and collect height and weight data. This information was used to more rigorously assess the effectiveness of the CPPW investment on obesity outcomes. Findings from the enhanced evaluation efforts include

- A large urban school district in LAC and four school districts in suburban Cook County (SCC), Illinois implemented school meal nutrition interventions. Menu changes resulted in a net reduction of calories, sugar, and sodium content offered in the meals. Net fewer calories offered as a result of the nutrition interventions were estimated to be 64,075 kcal per student per year for LAC and 22,887 kcal per student per school year for SCC. Collectively, the number of children and adolescents reached by the school-based nutrition interventions in both counties was estimated to be 688,197.<sup>17</sup>
- The Philadelphia Department of Public Health partnered with The Food Trust, a city nonprofit, to implement the Healthy Corner Store Initiative on a citywide scale. As a result, there were modest improvements in the food environments (e.g., significant increase in the availability of fat-free or low-fat baked goods, apples, oranges, and broccoli), and in stores with more intensive intervention, there were even greater improvements in the availability of low-fat milk, fresh fruits, and some vegetables over time.<sup>18</sup>

## **Long-Term Benefits**

Completed CPPW interventions were assessed using the Prevention Impacts Simulation Model (PRISM), a system dynamics model of cardiovascular disease prevention.<sup>19-20</sup> The model was used to estimate medical costs associated with all risk factor–related cardiovascular events and averted deaths and disability from 2010 through 2020. PRISM is a decision support tool that measures and compares the likely health and cost consequences of interventions to prevent and control cardiovascular disease.<sup>21</sup> If these community health improvements can be sustained beyond the initial program, PRISM simulations suggest that between 2010 and 2020, there would be 14,000 fewer chronic disease related-deaths from all risk factors than expected given current trends, and a present value of \$2.4 billion in health care costs averted. For every federal dollar that was invested in CPPW (\$403 million), the model projected that sustained implementation of these community health improvements would generate an estimated cumulative savings of \$5.44 in public and private health care costs by 2020.

## **Conclusion**

CPPW demonstrates the potential economic benefit of implementing large-scale interventions designed to improve long-term health. If the effect sizes are realized, these investments can substantially benefit society in just 10 years. In addition, the initiative also increased local capacity to implement and evaluate public health interventions, developed numerous products that continue to support the work of public health departments nationwide, and provided valuable lessons to CDC regarding ways to improve the support it provides to communities.

The CPPW initiative produced numerous resources, including websites, databases, and technical assistance guides that continue to support public health efforts nationwide. Many of these products can be accessed and downloaded from the CPPW [website](#). In particular, the initiative allowed for the development of the CPPW Online Resource Center and the Community Health Media Center, which contain numerous resources. Additional CPPW-related products and resources that are supporting the work of community programs include videos posted on the CDC’s Streaming Health YouTube channel, under the “Community Health Playlist,” and more than 100 CPPW-related manuscripts published in peer-reviewed journals.

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