

# COMMUNITY-BASED DISEASE PREVENTION PROGRAMS: SUCCESS STORY HIGHLIGHTS

**C**ommunity-based disease prevention programs are efforts to help improve the health of Americans outside of the doctor's office and focus on helping lots of people in communities at the same time.

Examples of these types of programs include:

- Keeping schools open after hours where children can play with adult supervision;
- Providing access to fresh produce through farmers markets;
- Making nutritious foods more affordable and accessible in low-income areas;
- Requiring clear calorie and nutrition labeling of foods;
- Providing young mothers with information about how to make good choices about nutrition;
- Offering information and support for people trying to quit smoking and other tobacco use; and
- Raising cigarette and other tobacco tax rates.

## SHAPE UP SOMERVILLE: EAT SMART. PLAY HARD.<sup>1</sup>

In 2002, the U.S. Centers for Disease Control and Prevention (CDC) funded an environmental change intervention to prevent obesity in high-risk, early elementary-aged children in Somerville, Massachusetts. The Shape Up Somerville team put together a program for the first to third graders that focused on increasing physical activity options and improving dietary choices. Prior to the intervention, Tufts researchers found that 46 percent of Somerville's first to third graders were obese or overweight based on the BMI for age percentile. After one year of Shape Up Somerville, on average the program reduced one pound of weight gain over 8 months for an 8-year-old child. Based on conversations with the Somerville project leaders, project researchers estimate that citywide the per capita cost was between \$3 and \$4.<sup>2</sup>

The intervention included:

- **Improved School Food** — Fruit/vegetable of the month, taste tests for students, educational posters, food staff training, new vegetarian recipes, daily fresh fruit.
- **Healthy Eating and Active Time Club (HEAT) In-School Curriculum** — New curriculum that focused on increasing healthy food consumption, decreasing unhealthy food consumption, increasing physical activity and decreasing sedentary time. The Club implemented Cool Moves — creative ways to include physical activity into classroom hours.
- **HEAT Club After-School Program** — Curriculum with lesson plans using crafts, cooking demonstrations, and physically active games for education. The program also had a field trip to an organic farm where students were able to participate in the harvesting process.
- **Parent and Community Outreach** — Including a monthly newsletter to parents as well as to the community containing updates on the project, health tips and healthy food coupons.
- **"Shape Up Approved" Restaurants** — In 2005, 21 restaurants were considered "Shape Up Approved."
  - ▲ In order to be "Shape Up Approved" the restaurant must meet the following criteria:
    - Offer low fat dairy products
    - Offer some dishes in a smaller portion size
    - Offer fruits and vegetables as side dishes
    - Have visible signs that highlight the healthier options
- **School Nurse Education** — School nurses were formally trained to annually measure height and weight, as well as how to counsel families of overweight or obese children.
- **Safe Routes to School** — Formed a community walking committee and received funding from the Robert Wood Johnson Foundation through the Active Living by Design Initiative. They then hired a Pedestrian/Bike Coordinator for the City and created Safe Routes to School maps and distributed them to all the parents of first to third graders. The Mayor authorized all crosswalks to be repainted and to have bike racks installed at all elementary schools.
- **Policy Initiatives** — The Somerville School Department put together a comprehensive Wellness Policy in 2006.



## THE IMPACT OF PROPOSITION 99: CALIFORNIA'S ANTI-SMOKING LEGISLATION<sup>3</sup>

In 1988, the state of California voted to enact Proposition 99, the California Tobacco Tax and Health Promotion Act. Proposition 99 increased the tax on cigarettes and other tobacco products from \$0.10 to \$0.35. The revenue from the tax was allocated to a variety of health promotion projects including:

- 20 percent allocated to a health education account to create school-based programs discouraging children from smoking;
- 45 percent to hospitals and physicians to provide for patients who cannot afford to pay;
- 5 percent to research;
- 5 percent to parks and recreation; and
- 25 percent to an unallocated account to go to any of the other programs or for fire prevention measures.

Three years after implementation of Proposition 99 researchers found a 9 percent reduction rate in cigarette sales in California and a decrease in the prevalence of cigarette smoking among adults from 26.7 percent in 1988 to 22.2 percent in 1992. This means that the act reduced cigarette consumption by close to 705 million packs between January 1989 and December 1991. A 2001 analysis found that there are “approximately one million fewer smokers in California than would have been expected [and] per capita cigarette consumption has fallen by more than 50 [percent].”<sup>4</sup>

The results of Proposition 99 suggest that placing a tax on certain products and using the revenue from the tax for educational and health programs can have a substantial effect on public health.

## HEALTHY EATING, ACTIVE COMMUNITIES (HEAC)<sup>5</sup>

Healthy Eating, Active Communities (HEAC), a program funded by The California Endowment, brings together community residents and public institutions, and works with local government and with private businesses, in an effort to prevent childhood obesity by improving the environment children inhabit. The program, at a cost of \$7 annually per capita in the target communities with minimal additional expenses for technical assistance, has already accomplished significant changes in the food and physical activity environments and policies in these communities, including new parks, input into city general plans, healthier food marketing in local stores, healthier foods in hospital, public health department, and public park vending machines, and increased physical activity opportunities in schools and after school programs.

Within six California communities HEAC focuses on forming a partnership between a community-based organization, school districts and a public health department to implement strategies to improve nutrition and physical activity environments. In each community the partnership works in five sectors including:

- **In Schools** -- by improving the quality of foods sold and available on campus, and advocating for increased compul-

sory PE for grades K-12, as well as more opportunities for non-competitive physical activity.

- **After School** -- such as improving cooperation with parks and recreation departments.
- **In Neighborhoods** -- improving access to affordable fresh produce, providing safer walkways and parks, and limiting the promotion of unhealthy foods.
- **In the Healthcare Sector** -- HEAC, with the help of Kaiser Permanente, training health care providers to incorporate more prevention and health promotion into clinical practice, and engaging physician champions to advocate for improving access to healthy foods and physical activity.
- **In Marketing and Advertising** -- such as eliminating the marketing of unhealthy products to children in and around schools, and via television, internet and other media.

HEAC aims to effect policy change that will improve environments for healthy eating and active living. Also, in January 2007, HEAC participated in the first California Convergence meeting, which aims to promote statewide improvements in food and physical activity environments.

## GO BOULDER<sup>6</sup>

Greater Options in Transportation, better known as GO Boulder, is a program in Boulder, Colorado, aimed at providing residents with more transportation options than cars. Through the multi-sectoral program that works with residents, intergovernmental agencies and businesses in the community, Boulder has been able to develop a sustainable transportation system. GO Boulder uses incentives, such as Walk and Bike Week and commuter awards, to encourage people to walk, bike, or take the bus.

From 1990 to 1994, Boulder showed a 3.5 percent increase in the number of pedestrian trips and a 2.2 percent rise in bike trips. Also, unlike the nearby city of Denver where population as well as single occupancy vehicle use increased, the population in Boulder continued to grow without a rise in single occupancy vehicle use.

## YMCA'S PIONEERING HEALTHIER COMMUNITIES<sup>7</sup>

The YMCA has a Pioneering Healthier Communities Program in more than 64 communities across the country, which focus on:

1) raising the visibility of lifestyle health issues in the national

policy debate, and 2) encouraging and supporting local communities to develop more effective strategies to promote healthy lifestyles.

### Sample Results from YMCA Pioneering Healthier Communities Sites Programs Impacting Children's Health and Well-Being<sup>8</sup>

*Attleboro, Massachusetts -- Physical Activity Club (A 10-week physical activity and healthy eating program for children and their caregivers)*

*100 kids in a pilot with statewide expansion with state funding*

- 17 percent increase in daily physical activity
- Decrease in BMI from 30.3 to 28.5
- Increase in fruit consumption by 6 percent; reduction in fast food and vending machine use.

*Dallas -- CATCH (Coordinated Approach to Child Health -- an evidenced-based healthy eating and physical activity curriculum)*

*3,100 kids in 100 after school child care sites*

- Increased fruit consumption
- Decreased dessert/candy consumption
- Increase in physical activity from 4 to 7 times a week
- Decreased TV time

*Des Moines -- Trim Kids (A proven, multidisciplinary 12-week plan that gives parents and children a healthy approach to lifetime weight management)*

*750 individuals (kids, siblings and parents / for overweight/ obese kids). Expanded across Iowa, trained 12 other sites*

- Average weight loss is 5 lbs for elementary, 10 lbs for secondary

*Pittsburgh -- ASAP (Afterschool with Activate Pittsburgh -- evidence-based curriculum and program to develop lifelong healthy habits)*

*6,500 low-income diverse kids*

- 76 percent of kids increased muscular strength
- 56 percent increased muscular endurance
- 69 percent increased flexibility

*Grand Rapids, Michigan -- Healthy U (A proven health and wellness program for children)*

*3,400 low-income, diverse kids in dozens of sites*

- Dramatic decrease in blood pressure and increase in strength and flexibility
- More than 90 percent improved school attendance, completed homework, chose not to smoke, drink or use drugs

### CASE STUDY: Activate West Michigan and Healthy U<sup>9</sup>

In 2003, the YMCA of Greater Grand Rapids, Michigan created the Activate West Michigan coalition in partnership with local government, community organizations, schools, and healthcare, corporate, and non-profit leaders. They initiated a "Healthy U" health and wellness program, which included physical fitness and nutrition education for elementary and middle-school students after school hours, both at schools and community centers. In addition, students exercised at the YMCA gym at least once a week. After a year, the children made improvements on strength and flexibility tests.

In addition, the community helped support the program. For example, school children started gardens at various sites in the community. Two inner city farmers' market programs provided access to healthy foods, samples of vegetables, and education about cooking vegetables. According to a survey, 90 percent of people who attended the markets wanted additional markets and had learned from this experience.

### CASE STUDY: Attleboro, Massachusetts and Rapid City, South Dakota<sup>10</sup>

Attleboro, Massachusetts and Rapid City, South Dakota looked at ways to promote increased physical activity through Pioneering Healthier Communities projects. The YMCA's partnered with local leaders, schools, hospitals, public health officials, health care providers, business leaders, and the media.

sponsored healthy eating through improving the nutrition of foods in schools and recruiting a local supermarket to provide a "Healthy Snack of the Week" to school and hospital cafeterias. Zoning laws were also changed to allow for more sidewalks and streetscapes.

In Attleboro, the coalition focused on a walking school bus program, a pedometer steps challenge among fourth and fifth graders, a healthy kids day, and building a bike trail and non-motorized connections to commuter rail stations. It also

In Rapid City, civic leaders required that new building include sidewalks and smarter development practices, such as building bike lanes, wider sidewalks, and adding trees, benches, and walk signals in downtown areas.

## TOGETHER, LET'S PREVENT CHILDHOOD OBESITY-COMMUNITY BASED PREVENTION IN FRANCE (EPODE)<sup>11</sup>

In 2005, the French government launched the EPODE campaign with the goal of lowering childhood obesity rates in 5-12 year olds through a five-year plan of intervention in 10 towns situated across the country.

The plan takes a multi-sectoral approach by involving parents and families, general practitioners, school nurses, teachers, towns, businesses, and the medical community. The three fundamental steps are:

- **Informing All Sectors of the Community about the Problem** -- All those involved are informed through public meetings, brochures, posters, and media coverage.
- **Training Participants** -- General practitioners and school nurses are trained on how to diagnose and treat obese children.

- **Taking Action in Schools and Towns** -- Schools integrate nutritional education and physical education into the school day. Also, school menu planning is targeted and children are taught how cook with fresh fruits and vegetables and be given access to food tasting workshops.

In order to track progress, the BMI of each child is calculated, recorded, and sent to his or her parents. Parents of those who are overweight or obese will be encouraged to consult their family physician.

Anecdotal evidence suggests that obesity has (at least) remained constant in the intervention towns while it doubled in control areas. Mothers of children participating in the intervention have reported weight loss as well. The complete results will be available in 2009 upon completion of the five-year plan.

## NORWAY COMMUNITY INTERVENTION<sup>12</sup>

In Oslo, Norway, a group of researchers sought to test the effects of a community-based intervention to increase physical activity among low-income individuals, according to a 2006 study. A comprehensive intervention program was implemented, at a reported cost of 0.59 Euros per capita (approximately \$0.93 US dollars), in an effort to change the behaviors of individuals. The intervention efforts included:

- **Information Distribution** -- Leaflets were designed and distributed that included health reminders such as the benefit of using stairs instead of elevators, and stands with health information were set up, as well as mass media activities.
- **Individual Counseling** -- Health counseling was provided during the biannual fitness test.

- **Walking Groups** -- Various walking groups were organized, as well as indoor activity sessions, at no cost during the intervention.

- **Environmental Change** -- In order to increase accessibility to areas for physical activity, walking trails were labeled within the district, lighting on streets improved and trails were maintained during the winter to keep them safe.

The follow up after 3 years showed that compared to the control community, the intervention group reported an 8-9 percent increase in physical activity, 14 percent fewer individuals gained weight, 3 percent more quit smoking, and there were significant decreases in blood pressure.

Additional details about community-based disease prevention programs can be found in the *Prevention for a Healthier America: Investments in Disease Prevention Yield Significant Savings, Stronger Communities* report available on Trust for America's Health's Web site: <http://healthyamericans.org/reports/prevention08/>.

1 C.D. Economos, et. al., "A Community Intervention Reduces BMI z-score in Children: Shape Up Somerville First Year Results," *Obesity* 15, no. 5 (May 2007): 1325-1336.

2 Based on an interview with Shape Up Somerville project researchers.

3 T. Hu, J. Bai, T.E. Keeler, P.G. Barnett and H. Sung. "The Impact of California Proposition 99, a Major Anti-Smoking Law, on Cigarette Consumption." *Journal of Public Health Policy* 15, No. 1 (Spring 1994) 26-36.

4 D.M. Bal, J.C. Lloyd, et. al. "California as a Model." *Journal of Clinical Oncology* 19, no 18S (September 15, 2001 Supplement):69s-73s.

5 Based on information from program staff and Healthy Eating, Active Communities. "Background on the Program." 2008. <<http://www.healthyeatingactivecommunities.org/background.php>> (accessed June 24, 2008).

6 Active Living by Design. "Increasing Physical Activity Through Community Design." <<http://www.activelivingbydesign.org/index.php?id=295>> (accessed June 24, 2008).

7 YMCA of the USA. "Activate America Fact Sheet." <[http://www.ymca.net/activateamerica/activate\\_america\\_leadership.html](http://www.ymca.net/activateamerica/activate_america_leadership.html)> 26 July 2008.

8 YMCA of the USA provided information to Trust for America's Health. Data is not yet published.

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11 EPODE European Network. *Together, Let's Prevent Childhood Obesity. A Concrete Solution to This Public Health Issue*. Brussels, Belgium: The European Parliament, 2006. [http://www.europarl.europa.eu/comparl/envi/pdf/expert\\_panels/food\\_safety\\_panel/healthy-diets-and-physical-activities-guittard.pdf](http://www.europarl.europa.eu/comparl/envi/pdf/expert_panels/food_safety_panel/healthy-diets-and-physical-activities-guittard.pdf) (accessed July 1, 2008).

12 A.K. Jennum, S.A. Anderssen, K.I. Birkeland, I. Holme, S. Graff-Iversen, C. Lorentzen, et. al. "Promoting Physical Activity in a Low-Income Multiethnic District: Effects of a Community Intervention Study to Reduce Risk Factors for Type 2 Diabetes and Cardiovascular Disease." *Diabetes Care* 29 no. 7 (July 2006):1605-1612