

# PREVENTION RESEARCH CENTERS

## Core Research

**Intervention and Non-Intervention Research  
to Reduce Disease Risk**



**Winter 2008**



**U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES**

**CENTERS FOR DISEASE CONTROL AND PREVENTION**

**COORDINATING CENTER FOR HEALTH PROMOTION**

**NATIONAL CENTER FOR CHRONIC DISEASE PREVENTION AND HEALTH PROMOTION**

**DIVISION OF ADULT AND COMMUNITY HEALTH**

**PREVENTION RESEARCH CENTERS PROGRAM**





DEPARTMENT OF HEALTH AND HUMAN SERVICES  
Centers for Disease Control and Prevention

**CDC's Prevention Research Centers Program**

**Core Research**

**Intervention and Non-Intervention Research to Reduce Disease Risk**

Contents

Executive Summary .....	iii
About This Document.....	1
Defining Community-Based Prevention Research.....	3
Core Projects 2004-2009	
Intervention Research .....	5
Non-Intervention Research.....	19
Selected Case Studies .....	23
Funding Summary .....	49
Prevention Research Centers Host Institution and Core Research Focus.....	51



## Executive Summary

The Prevention Research Centers (PRC) Program, located within the National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention (CDC), is one of many CDC activities that fund extramural research. All the PRC Program's research is conducted at academic research centers that compete for selection as members of the PRC network. This structure allows the centers to collaborate on multisite projects, to offer each other technical assistance, and to participate in a limited competition for special projects. The prevention research is characterized as population-based as well as community-based and participatory. The Prevention Research Centers share their unique knowledge and expertise by training public health practitioners, advocates, and students.

In 1984, Congress authorized the Secretary of the Department of Health and Human Services (DHHS) to create a network of academic health centers to conduct applied public health research (Public Law 98-551 [S.771]). CDC was selected to administer the PRC Program and to provide leadership, technical assistance, and oversight. The program formally began when 3 academic health centers were first funded in 1986, and the network now includes 33 centers in 26 states, each of which is selected through competitive peer review.

Since the program's inception, applicants have been required to meet certain eligibility requirements—chiefly, affiliation with a school of public health or a school of medicine or osteopathy with an accredited preventive medicine residency. Additional requirements include

- Multidisciplinary faculty with expertise in public health and working relationships with experts in related fields.
- Graduate training programs relevant to disease prevention.
- Core faculty in epidemiology; biostatistics; social, behavioral, and environmental sciences; and health administration.
- Demonstrated curriculum in disease prevention.
- Capability for residency training in public health or preventive medicine.

The core funding—about \$26 million per year—supports elements of basic infrastructure and at least one core research project, conducted in partnership with a community, at each of the Prevention Research Centers. This document describes 40 core projects now in progress at the 33 centers.

In 1993, additional competitive funds became available to Prevention Research Centers *only* to conduct special interest projects specified and supported by divisions throughout CDC and other DHHS agencies, such as the National Cancer Institute. The expertise the Prevention Research Centers build by conducting the core and special interest projects often makes them highly competitive for additional research funding offered by foundations, institutes, and other nongovernmental organizations. As a result, the Prevention Research Centers' total portfolio includes almost 400 research projects ongoing at any given time.

As the concept of community engagement in population research has gained momentum over recent decades, the Prevention Research Centers have been in the forefront of developing and practicing community-based participatory research. The close and long-

term ties forged between the academic institution and a local population—generally an underserved community—encourage commitment and trust and help communities adopt and sustain change over time. The established relationships allow other researchers to readily introduce new community research as well. The program announcement issued in 2003 for the fiscal year 2004–2009 funding period explicitly requires grantees to conduct a participatory, community-based core research project, planned in collaboration with community partners and guided by a community committee.

Working hand in hand with communities, the prevention researchers strive to follow a series of steps that identify community health issues and proceed toward wide dissemination of effective interventions; that is, the partners aim to translate research into everyday practice to improve the lives of people in the research community and, ultimately, in comparable communities throughout the United States—and sometimes beyond its borders. The basic steps are outlined in the CDC booklet, *A Bridge to Health Action*, available at the program's Web site (<http://www.cdc.gov/prc>).

This document shares information about the core research projects currently in progress at the centers. A set of case studies provides an in-depth look at several interventions. Basic information about the program's approach to funding and the total funds distributed in fiscal years 2006 and 2007 is summarized. A list of the Prevention Research Centers indicates their host institutions and the focus of their core research; however, most centers complement their core work with research on a wide range of health issues, settings, and populations.

Additional information is available from the Prevention Research Centers Program Director, Eduardo Simoes, MD, MSc, MPH ([ejs0@cdc.gov](mailto:ejs0@cdc.gov)).

## **About This Document**

### **Project Summaries**

This document summarizes the core research projects, conducted by CDC's Prevention Research Centers, active during the funding period September 30, 2004, to September 29, 2009.

The CDC cooperative agreement requires that each of the 33 centers conducts at least one core project that uses community-based participatory research methods. Some centers choose to conduct more than one core project or a project having several closely allied components. As a result, 40 projects are summarized here, and they are organized as *intervention research* or *non-intervention research*.

The interventions, or techniques to improve communities' health, may be in very early stages of development (e.g., formative research), may have advanced to show considerable promise, or may have been proven effective and adoptable. The non-intervention research, which includes case studies, observational studies, translation research, or other types of research, is also in different stages of maturity.

Each project summary cites the name of the Prevention Research Center and the academic institution at which it is housed, the name of the project, and a brief abstract. The abstract attempts to capture some background information, methodology, research results, and implications or hoped-for outcomes. The name of the principal investigator and contact information for each project are available at the PRC Program's Web site, <http://www.cdc.gov/prc>. Additional information about the projects, communities, and partners is often available through the Web site of the individual Prevention Research Center, which also may be accessed through the CDC site.

### **Case Studies**

Nine case studies are included in this document to provide an in-depth view of the steps the PRCs tend to follow in conducting participatory research. The case studies illustrate how diverse the research is—across life stages; in different settings (such as schools and senior centers); for racial and ethnic minority groups; and on the risks for chronic diseases, violence, mental health, and other priority health issues.

The reference lists for the case studies cite articles in the peer-reviewed literature in which the associated reports of a scientific and technical nature can be found.

### **Funding Summary**

The funding portion of this document summarizes the total funding levels for the PRCs in fiscal years 2006 and 2007. The award amounts are categorized by purpose: core research and infrastructure, special interest project, and supplemental award.





## **Defining Community-Based Prevention Research**

The scientific literature includes several definitions of community-based prevention research. A longstanding working definition comes from the Kellogg Foundation's Community Health Scholars Program:

*Community-based participatory research (CBPR) is a collaborative approach to research that equitably involves all partners in the research process and recognizes the unique strengths that each brings. CBPR begins with a research topic of importance to the community, [and] has the aim of combining knowledge with action and achieving social change to improve health outcomes and eliminate health disparities.*

The Prevention Research Centers use this as a working definition. The cooperative agreement requires each Prevention Research Center to be guided by at least one community committee, which serves as an active partner in research. The PRC National Community Committee comprises one member from each center's community committee and is responsible for advising the program, facilitating training of community members, and advocating for prevention research.

Some centers and their community partners have developed substantial trust and a strong commitment to working together, while other centers have not *fully* achieved the true academic-community bond they hope for. However, all centers strive to conduct CPBR for their core research and many other projects as well.



## **Core Projects 2004-2009**

### **Intervention Research**

#### **University of Alabama at Birmingham: Center for the Study of Community Health**

##### ***Flying Sparks***

Project collaborators are conducting Flying Sparks to reduce the risks for diabetes, cancer, and heart disease among residents of Alabama's Black Belt—a low-income, medically underserved, rural area of west Alabama. Two-thirds of the area's residents are African American and at high risk for these chronic conditions. The intervention builds on the center's prior research, which showed how effective community health advisors (CHAs) are at implementing risk-reduction programs for residents in rural Alabama. Center staff trained community health coordinators in 20 communities and gave them community health tool boxes developed by center staff and their partners. The tool boxes contain materials, activity descriptions, and step-by-step instructions for recruiting CHAs and teaching them to promote physical activity, healthy eating, smoking cessation, and health screenings. Trained facilitators and CHAs in four communities are working directly with center staff on all aspects of the program. Sixteen coordinators are conducting the intervention without direct support, although they can e-mail or call the staff for guidance. The researchers will determine how much center staff involvement is needed for communities to implement the interventions effectively. They will also determine which community factors are associated with initiating and maintaining successful health promotion programs and which are associated with increasing the communities' capacity to address their own health issues.

#### **University of Arizona: Canyon Ranch Center for Prevention and Health Promotion**

##### ***Comprehensive Diabetes Intervention Research Project***

Project collaborators are implementing and evaluating a set of interventions to prevent and control diabetes among Mexican Americans living along Arizona's U.S.-Mexico border. The researchers are determining whether participation in more than one intervention increases the likelihood that participants will adopt and maintain healthy behaviors. All participants are screened for diabetes and depression and referred for treatment. In the patient intervention, community health workers (CHWs) teach four weekly small-group classes and support patients through follow-up visits and appointment reminders. Half of these patients participate in the family intervention, during which CHWs teach patients and their extended families how to reduce their risk for diabetes and how to help one another increase physical activity and choose healthy foods. These participants are encouraged to join walking groups and a 12-week CHW-led community intervention about preventing diabetes. Community action boards are advocating for policies to help guard against diabetes, such as creating community walking and bicycle paths and removing soda and non-nutritious foods from vending machines at schools. The project team will assess how the CHW model affects patients' self-management practices, examine the role of family in supporting behavioral change, and determine whether participation in several interventions increases the effect on individual health behavior.

## **Boston University: Partners in Health and Housing Prevention Research Center**

### **Resident Health Advocates on the Move**

Residence in public housing is an indicator of financial need and health disparity, and new strategies are needed to increase chronic diseases screening in this population. The geographic cohesion and community identification characteristic of many public housing developments suggest a venue advantageous for addressing residents' health needs. In this project, residents of two Boston-area public housing developments are receiving health screenings through the use of a mobile van called Healthy Connection. By going to public housing and offering low-cost services, the van attempts to remove the transportation and financial barriers to accessing preventive services. The project will determine whether resident health advocates (RHAs) and peer leaders are effective in increasing the participation of public housing residents in screening for hypertension, diabetes, and dental disease through their use of the mobile van. Researchers will also assess whether the RHAs are effective in increasing the clinical follow-up of residents referred for such follow-up. Residents of housing developments chosen as intervention sites are paired against comparable control sites.

## **University of California at Berkeley: Center for Family and Community Health**

### **Internet-Based Smoking Cessation Intervention for Korean-American Men**

Most Korean-American men who try to quit smoking do so on their own and report using the Internet to find health information. The project team sees the Internet as a convenient, low-cost way to study the effectiveness of two self-help smoking programs. About 2,200 Korean-American male smokers in California are being recruited and randomly assigned to one of two self-help quit-smoking Internet-based programs. The program content for both groups will be in English and Korean and will be adapted to the perspectives of Korean-American men. All participants will complete online surveys indicating their smoking status and smoking behaviors at 5-week intervals for 1 year. Researchers will assess the effectiveness of the interventions by comparing the number of participants who quit smoking in each group. They will also explore what processes the men used to quit smoking, if and when they started smoking again, whether participants in the two intervention groups advanced through stages of change at different rates, and which program aspects were most effective for each stage of change.

### **Korean-American Community Health in California**

Researchers are analyzing data from state and local surveys to identify the health issues of California's Korean-American population. The information focuses on respondents' eating patterns, physical activity, tobacco use, medical conditions, medical insurance, use of health-care services, and participation in cancer prevention screenings, among other issues. The center's Korean Community Advisory Board will share the results with local Korean communities and other stakeholders to establish the communities' health priorities. The advisory board, researchers, and local communities will use the data to determine the most common diseases affecting Korean Americans and the risk behaviors that contribute to them; the barriers to preventing these diseases and to promoting health; and the health disparities of Korean Americans compared with those of other people of Asian or Pacific Island ethnicity and those of all Americans. They will then design interventions to address these issues.

## **University of California at Los Angeles: UCLA/RAND Center for Adolescent Health Promotion**

### ***Talking Parents, Healthy Teens: Evaluation Study***

Parents can play a significant role in promoting healthy sexual development and in reducing health risks among adolescents. Adolescents who feel close to their parents and whose parents supervise them and talk with them about sex are more likely to delay their first sexual relationship, to have fewer sex partners, and to use contraceptives. However, many parents are uncertain about how to talk with their children about sexual health, and parents' after-work demands leave them little time to attend evening or weekend parenting classes. To address these issues, researchers conducted an 8-week parenting program for parents at their work sites during the work day. Now the research team is administering surveys regularly over about 3 years to about 570 parents and to more than 700 of their adolescent children. They will compare the survey results over time and with those from counterparts in a control group. Researchers are evaluating the project's effects on the parents and on their relationship and communication with their children. They are also evaluating the program's effects on adolescents' assertiveness, attitudes, and sexual behaviors. If the program is effective, the facilitator manual used in the work site parent education program will be shared with others who want to explore providing the program.

## **University of Colorado: Rocky Mountain Prevention Research Center**

### ***Adoption and Long-Term Outcomes of the Integrated Nutrition and Physical Activity Program***

In 2000, second- and third-grade teachers in a rural Colorado elementary school used the Integrated Nutrition and Physical Activity Program (INPAP), developed by the Prevention Research Center, to teach students the importance of eating fruits and vegetables and being physically active. Now the researchers are determining if teachers are still offering the classes and whether the participants are maintaining the changes they made. The researchers are also comparing these students' knowledge, attitudes, and behaviors related to nutrition and physical activity with those of children who did not receive INPAP. The center is conducting surveys and case studies to find out how many and which lessons are taught and what the teachers like and do not like about the lessons. The researchers are also asking teachers how they integrate the lessons into the standard curriculum and what environmental or other factors affect continued use of the program.

### ***Implementing Environmental Changes in Elementary Schools***

In a school district in Colorado, about 26% of second-grade students are overweight or at risk for obesity as a result of unhealthy eating habits and insufficient physical activity. Researchers are implementing a project to help the schools make changes in their procedures, policies, food environment, and physical layout to promote healthy food choices and increased physical activity. About 10 elementary schools are participating, each of which has a high proportion of low-income and Hispanic children. Schools form a task force comprising school nurses, food service managers, physical education teachers, administrators, classroom teachers, and parents. To make changes to the school environment and policies, half of the schools are using Intervention Mapping (IM) as their planning process and the other half are using CDC's School Health Index (SHI). Center staff members are facilitating the project in IM schools to determine the process of selecting,

implementing, and evaluating environmental and policy changes appropriate for each school. These changes may include requiring daily physical education classes, removing sugar-sweetened sodas from vending machines, and creating a school walking path. Researchers will measure the health of the school environment, the changes made, and how the changes affected individual health behaviors. Researchers will also evaluate the effectiveness of IM for community-academic partnerships and compare it with the effectiveness of SHI.

## **Columbia University: Harlem Health Promotion Center**

### **Creating Digital Partners for Health**

Researchers and their community partners are working to enhance the use of the Internet for health promotion by African-American and Hispanic or Latino consumers. In assessing residents' levels of Internet use for seeking health information, the researchers are attempting to understand the logistical, cultural, and psychosocial factors that may create barriers to use. Center staff are working with community and academic partners to develop and disseminate computer and Internet literacy curricula for community residents, develop a bilingual community health information and resources Web site, and work with community advocates to address issues concerning community access to and home ownership of computers. African-American and Hispanic adolescents and their parents in Harlem will participate in an Internet-based trial to determine if the use of a culturally sensitive community health information and decision-support Web site improves their ability to seek, find, and use health information from the Internet. The researchers will also explore whether the access to information reduces participants' health risk behaviors, increases their access to community health resources, and influences their sharing of health information with family and friends. In later phases of the trial, the center will partner with the Prevention Research Center at the University of South Florida to develop and evaluate a social marketing campaign to increase use of the Internet for seeking health information by a broad base of consumers in Harlem.

## **Emory University: Prevention Research Center**

### **Preventing Cancer through Environmental Changes**

Researchers and the Southwest Georgia Cancer Coalition are interviewing about 60 African-American and white residents in rural southwest Georgia to learn how their families, faith-based organizations, and work sites influence the personal health-risk behaviors associated with several types of cancer. About 400 residents are being asked about their cigarette use; the amounts of fats, fruits, and vegetables they eat; their physical activity levels; and the social and individual factors that contribute to or undermine their health habits. The researchers and their community collaborators will identify key environmental changes, such as developing walking trails or creating policies that restrict smoking in public areas, that can improve residents' health and reduce their risk for cancer. Center staff will help two communities in southwest Georgia implement environmental changes and evaluate the results.

## **Harvard University: Prevention Research Center on Nutrition and Physical Activity**

### **Clinical Intervention to Prevent Childhood Overweight**

Pediatricians and family practice doctors in Maine and Massachusetts are participating in two collaboratives to improve primary care practice to prevent childhood overweight. One is the Maine Youth Overweight Collaborative, a joint initiative of the Maine-Harvard Prevention Research Center, the Maine Chapter of the American Academy of Pediatrics, and the Maine Center for Public Health. The other collaborative, Healthy Care for Healthy Kids Collaborative, is a joint initiative of the National Initiative for Children's Healthcare Quality and Blue Cross Blue Shield of Massachusetts. Twelve sites in Maine and eighteen sites in Massachusetts are participating. The participating practice teams in Maine and Massachusetts (which include doctors, nurse practitioners, nurses, and medical assistants) are being trained to use body mass index (BMI) percentiles to document risk for overweight. They are also receiving training on how to motivate parents to help their children change selected behaviors: reduce television viewing and consumption of sugar-sweetened beverages, and increase physical activity and fruit and vegetable consumption. The center's faculty and staff participate in the leadership of both collaboratives and are helping them develop intervention strategies and materials as well as evaluation methods and tools appropriate to the two populations and different clinical settings, and consistent with the specific behavioral objectives.

### **Boston Collaborative for Youth Physical Activity**

In prior research, the center found that physical activity among Boston's inner-city children and adolescents was substantially lower than that of young people in suburban neighborhoods of Boston and other cities. The center also found differences in opportunities for and participation in physical activity by sex, race, and ethnicity in inner-city neighborhoods. As a result, the city of Boston created the Boston Center for Youth and Families (BCYF), and a private foundation created the Boston Youth Sports Initiative (BYSI). Both programs address individual, neighborhood, environmental, and policy factors that affect participation in physical activity. The BCYF aims to reduce neighborhood disparities by recruiting athletic directors to provide and manage neighborhood recreation and sports programs. The BYSI aims to increase the overall number of young people, and particularly girls, who participate in physical activities. Center researchers will determine the effects of these initiatives on Boston's sports and physical activity programming for children and adolescents through surveys that assess each initiative's strengths and areas for improvement.

## **University of Illinois at Chicago: Illinois Prevention Research Center**

### **Making the Connection: Healthy Living Program**

In Chicago's Greater Lawn community, where 41% of the residents are Hispanic or Latino and 36% are African American, local surveys show that rates of physical inactivity, overweight, obesity, and diabetes are higher for the minority residents than for the non-Hispanic white residents. Researchers and their community partners are using the proven clinic-based Diabetes Prevention Program (DPP), a 12-month intensive lifestyle weight loss program, and are adapting it for the community. Trained lay health advisors will offer the program in English or Spanish to 200 at-risk residents in a variety of community settings, such as churches, schools, work sites, and health-care facilities. An evaluation team will measure participants' satisfaction with the program as well as their subsequent weight loss, physical activity levels, and health-promoting behaviors.

## **University of Iowa: Prevention Research Center**

### **Building Community Capacity to Prevent Underage Drinking**

Adolescents in rural areas are more likely to binge drink than are their peers in urban areas. Project staff are providing training and technical assistance to empower community-based organizations in rural Iowa to prevent adolescents from drinking. This empowerment, which includes encouraging individuals, communities, and organizations to improve residents' quality of life, will be measured by qualitative and quantitative indicators being developed by the center's researchers. One intervention strategy is for organizations to advocate for beer keg registration laws to increase the accountability of adults who provide alcohol to minors. Each keg is engraved with a unique identifier, and if a registered keg is found at an event where young people are drinking, authorities can trace the registration number to the person who purchased the keg and impose penalties. The researchers will analyze the effects of the intervention on preventing underage drinking and on developing the community organizations' capacity over time.

### **Training Community-Based Organizations to Promote Physical Activity and Nutrition**

In a rural county in Iowa, the rates of obesity and overweight are higher than the national rates. To help county residents reduce their overall body fat, researchers are implementing an intervention that develops community resources to support physical activity and healthy eating. The intervention involves residents; restaurant and grocery store owners; leaders from churches, libraries, high schools, and parks and recreation services; and the Iowa Department of Public Health. A wide range of activities includes working with restaurant owners to offer healthy food options and having store owners label foods certified as "heart healthy" by the American Heart Association. Community members are encouraging schools to increase the availability of unsweetened beverages and are working with county officials to upgrade walking trails and to allow after-hours use of high schools for adult walking. The researchers will compare 200 residents from an intervention community with 200 from a control community in a similar county. Measures will include dietary and physical activity habits, attitudes toward health behaviors, and body mass index. An effective intervention may help residents avoid chronic diseases such as diabetes and heart disease.

## **Johns Hopkins University: Center for Adolescent Health Promotion and Disease Prevention**

### **Health and Opportunity Partnership (HOPE)**

The HOPE project is exploring whether job training settings for young people can be used to address the health risks and health-care needs of 16- to 21-year-olds who are not in school. This population is more likely than those who have completed high school to engage in substance use, encounter peer violence, suffer from depression, be exposed to HIV and other sexually transmitted diseases, lack health insurance or access to health care, and become teenaged parents. About 22% of young people in east Baltimore have dropped out of high school and are not employed. An employment program in Baltimore, Youth Opportunity (YO!), offers high school education certificate programs (GED) and job training to prepare young people for college or well-paying jobs. The center and its collaborators, including the Baltimore City Health Department, the Mayor's Office of Employment and Development, and the YO! program, are designing health promotion



interventions focused on mental health and developing strategies to integrate them into job training programs. The intervention is being implemented and evaluated among young people in one of east Baltimore's YO! programs. Strategies include assessing community youth mental health services, training YO! program case managers to identify and address clients' mental health needs, and developing a peer support program. Researchers will survey and interview the participating young people and staff members before and after the intervention. If the results are positive, such as reduced health-risk behaviors among young people and improved job satisfaction and morale among YO! staff members, the researchers will develop a design to compare these outcomes with those of another Baltimore YO! program.

## **University of Kentucky: Prevention Research Center**

### **Prevention and Early Detection of Colorectal Cancer in Appalachian Kentucky**

For residents of rural Appalachian Kentucky, the screening rate for colon cancer is lower, and the death rate higher, than for all residents of Kentucky and of the United States overall. Researchers and their community partners are developing a two-part trial to increase community screening rates for colorectal cancer (CRC). In one trial, a local media campaign is designed to educate community residents about their risk of colon cancer and the importance of early detection through screening. Residents are informed of screening options and empowered to ask their doctors for such screening. The results of this education campaign will be determined by surveying 200 randomly selected residents aged 50 years or older about their colorectal cancer knowledge and screening behavior, and by comparing their responses with those of their counterparts randomly selected from a control community. In a second trial, project staff are educating primary care providers about CRC screening procedures and their effectiveness, and teaching the doctors how to counsel and refer patients for screening. In addition, patients attending these providers' clinics receive reading materials that encourage them to ask their doctors about screening for colon cancer regardless of the reason for their clinic visit. Researchers will evaluate screening rates before and after this trial and use patients' and practitioners' feedback to identify the strengths and limitations of the intervention. If these trials prove successful, researchers will disseminate the findings to other rural communities.

## **University of Michigan: Prevention Research Center of Michigan**

### **Community Capacity-Building to Reduce Health Disparities**

Researchers are testing a model designed to enhance the ability of community-based organizations (CBOs) to be equal and effective partners in local efforts to determine, implement, and monitor a prevention research agenda that will eliminate health disparities. Education and technical assistance will be provided to the CBOs and may consist of training them to understand survey data, conduct focus groups, develop logic models, develop budgets, conduct strategic planning, or design and evaluate programs. A center evaluation team will conduct case studies that document the changes each CBO makes to its structures and strategies, and the extent to which these changes affect the CBO's ability to influence community decisions. If effective, the Prevention Research Center plans to package the project's capacity-building curriculum and make it available to a wide audience through the Michigan Public Health Training Center.

## **University of Minnesota: Healthy Youth Development Research and Training Center**

### ***Partners in Action for Teen Health***

Center researchers, county social service staff, and urban school administrators are collaborating on a 2-year project to prevent substance abuse and violence, promote safe sexual behavior, and improve school attendance and achievement among minority students from Minnesota's low-income, inner-city neighborhoods. The project is testing the effectiveness of health education, community service, and parental involvement on student behavior. Several teachers and peer leaders are being trained to deliver 20 health education lessons developed by the center's staff and community committee. The participants, about 180 predominantly African-American seventh- and eighth-grade students, are assigned to one of three groups: a comparison group that receives the standard public school health curriculum, a core group that receives the center's lessons and participates in parent-student activities, and an enhanced group that receives the core intervention and takes part in community service projects, including adult-led discussions about problem solving, teamwork, and other skills related to their projects. Participants will complete annual surveys; researchers will examine any changes in the teenagers' attitudes, beliefs, and behaviors related to violence, pregnancy, sexually transmitted diseases, substance abuse, and academic performance and will compare differences between the three groups. The researchers hope to increase the schools' and communities' capacity to conduct health education programs for young people.

## **Morehouse School of Medicine: Prevention Research Center**

### ***HIV/AIDS Risk Reduction Among Heterosexually Active African-American Men and Women***

Center collaborators are developing a co-educational HIV/AIDS prevention curriculum. It will be based on HIV/AIDS-related knowledge, attitudes, beliefs, behaviors, and cultural practices of African-American men and women who live in metropolitan Atlanta. About 400 heterosexually active African-American men and women (aged 18 to 44 years) will participate in co-educational learning and discussion groups. The sessions include discussing personal beliefs and behaviors related to HIV/AIDS as well as learning about the causes and impact of the illness specifically among African Americans. Researchers will evaluate the program, compare results from both pre- and post-implementation surveys, and identify key factors that are related to HIV risk behaviors associated with relationships and communication between African-American men and women. Center staff and community partners anticipate producing the curriculum along with a guide for recruiting and retaining participants and sharing these materials with other communities and public health agencies.

## **University of New Mexico: Center for Health Promotion and Disease Prevention**

### ***Teen Health Resiliency Intervention for Violence Exposure (THRIVE)***

Project collaborators developed THRIVE to test the effectiveness of school- and community-based interventions for identifying and reducing psychological distress among young American Indians who witness or experience violence. The in-school intervention is an intensive mental health program for sixth- to twelfth-grade students based on the 10-week CBITS program (Cognitive Behavioral Intervention for Trauma in Schools) created in California for young people in urban Los Angeles—the New Mexico collaborators adapted the program for American Indian youth. About 30 students who reported symptoms of violence-related trauma on the center’s mental health screening questionnaire were referred to an early- or delayed-CBITS group. The students meet in small groups to share experiences, receive group support, and build coping skills. Their parents and teachers are trained to give them support. Students also meet individually with a mental health counselor as needed. Evaluators will determine whether the program increases students’ coping skills and reduces symptoms of violence-related trauma, such as depression and anxiety, and whether positive effects persist 6 months later. A community intervention component focuses on addressing the negative effects of historical trauma experienced by American Indians. Parents, teachers, and community members are being trained to recognize signs of trauma among young people and get them help. About 20 parents and their children are also participating in a 6-month intervention designed to heal historical trauma, improve family relationships, teach positive parenting skills, and reconnect parents and young people with their traditional culture.

## **State University of New York at Albany: Prevention Research Center**

### ***Increasing Physical Activity in Rural Communities***

In a center-conducted survey, researchers found that physical activity levels were particularly low among adults with diabetes who live in rural, medically underserved communities in upstate New York. Multiple barriers to physical activity, such as cold weather, uneven terrain, lack of sidewalks, and inconvenient locations for indoor and outdoor walking were reported. Researchers are collaborating on a project to promote walking for physical activity throughout the year; they will encourage the use of indoor facilities, such as public school buildings during cold months, and the use of recreational trails during warm months. The project team is collaborating with the area’s public schools and with colleagues from Parks & Trails New York, a statewide organization that helps communities develop and promote greenways and multiuse trails. Surveys will be used to assess the program’s effects on residents’ physical activity levels and to identify characteristics of trails and schools associated with increased use.

## **University of North Carolina at Chapel Hill: Center for Health Promotion and Disease Prevention**

### ***HOPE Works: Health, Opportunities, Partnerships, Empowerment***

People who are hopeful are more likely to engage in preventive health behaviors and to set and achieve life goals than are people who have lost hope. For residents in economically depressed rural counties of eastern North Carolina, prolonged stress from unemployment, low income, ongoing recovery from 1999's Hurricane Floyd, and high rates of obesity have increased their risk for chronic diseases, which in turn contributes to these residents' discouragement about making positive changes in their lives. Recent surveys confirm that women in these counties believe they cannot improve diet, manage stress, increase exercise, or lose weight because they are concerned about having jobs and supporting their families. The center's community advisory committee (CAC) asked researchers to develop a project—HOPE Works—to empower local women to improve their economic status as well as their health. The CAC helped plan the intervention and is implementing it in two counties. It consists of community health promotion events and a behavioral change intervention that combines tailored health education materials with support groups (HOPE Circles). Women from the community are trained to be HOPE Circle facilitators for groups of 10 to 12 women, and a total of about 500 women are participating. The groups meet biweekly for 2 hours. During the sessions, the women learn strategies to manage stress, prevent and control obesity, and overcome barriers to change. They are also encouraged to set life improvement and personal health behavior goals. Participants complete before-and-after surveys that document health behaviors and measure self-esteem, sense of hope and empowerment, and economic and educational levels. Researchers will analyze the results to assess the women's emotional, physical, and economic well-being after participating in the HOPE Circles.

## **University of Oklahoma: Prevention Research Center**

### ***The Regular Activity in Life Study (TRAILS)***

Almost half of the students in Anadarko, Oklahoma, public schools are overweight or at risk for overweight. Researchers work with the city's high school administrators and food service staff to improve students' eating habits and involve them in a school physical activity program. Subsequently, healthy food choices are being made available in the school's cafeteria and vending machines, and about 35 students are enrolled in a study to test the effects of a 16-week physical education class that includes 35 to 40 minutes of daily walking or running. Researchers will evaluate the program's effects on students' weight, BMI, blood pressure, cholesterol, and glucose by comparing pre- and post-intervention measures. Students will be asked about their reactions to the class and ideas for improving the program. If the intervention improves students' physical fitness, BMI, and cholesterol levels, the project may serve as a model for affordable and manageable in-school physical education classes that school administrators and state and local policy makers can promote.

## **University of Pittsburgh: Center for Healthy Aging**

### **Community Outreach and Demonstration Project**

Allegheny County in western Pennsylvania has one of the highest concentrations of adults age 65 or older. Older adults are at risk for heart disease and stroke, diabetes, flu, pneumonia, disability, suicide, and other preventable conditions. However, those who engage in physical activity, healthy diets, socially and mentally stimulating activities, cancer screening, and other positive health behaviors can often maintain active and healthy lives. Project staff developed and tested a program, Ten Keys to Healthy Aging, that addresses 10 conditions essential for maintaining health in older adults. Preliminary results showed improvements in several areas. Researchers then collaborated with community partners to refine the program and added behavioral components to increase physical activity, improve eating habits, and enhance social support and mental acuity. Now project staff are implementing and evaluating two interventions for about 1,000 randomly assigned older adults: a healthy lifestyle intervention and a brief education intervention. Participants in both groups meet with a health counselor who explains the results of the participant's assessments and offers recommendations. Participants then identify one or two goals for improving their results and are referred to their doctors as needed. People in the brief education group are referred to appropriate community resources and receive follow-up calls from the health counselor every 3 months. Adults in the healthy lifestyle intervention join in weekly walking groups and attend group sessions to learn about healthy food choices and exercise. Additional social activities are provided in which participants can get support from peers, practice techniques to maintain and enhance memory and other mental abilities, and learn about the risk factors for diseases and conditions associated with aging. All participants will complete the assessments again at 6 and 12 months after the intervention, and every year thereafter for 3–4 years. Post-intervention results of the two intervention groups will be compared with each other and with individuals' initial assessments.

## **University of Rochester: National Center for Deaf Health Research**

### **Determinants of Health Risk in Deaf and Hard-of-Hearing Populations**

Adults deaf since childhood report poorer health, have less access to mental health services, and are less likely to see a doctor than are adults in the general U.S. population. National and local health surveys are not conducted in American Sign Language (ASL), and few health researchers know ASL. Consequently, little is known about health risk behaviors of deaf adults and teenagers, or about which preventable diseases are common among deaf people. Also lacking are effective strategies for preventing disease and improving physical and mental health among people who are deaf or hard of hearing. Researchers and their partners are working with deaf residents of Rochester, New York, to learn what issues they would like addressed in surveys. The project team will then modify questions used in the Youth Risk Behavior Survey (YRBS), the National College Health Assessment (NCHA), and the Behavioral Risk Factor Surveillance System (BRFSS). Once modified, the surveys will be translated and video-recorded in ASL and pilot tested with a diverse group of ASL users. To determine the effectiveness of these instruments, results of the modified YRBS from teenagers at the Rochester School for the Deaf will be compared with those from students attending a nearby public high school. College students at the National Technical Institute for the Deaf will complete the modified NCHA, and their results will be compared with those from students at the Rochester Institute of Technology

and other colleges. Deaf adults will complete the modified BRFSS, and their data will be compared with those from the general public. After analyzing the data and collaborating with the center's community committee, researchers will design or adapt interventions to improve the health and health care of deaf ASL users and their families and will use the ASL Risk Behavior Survey to measure the effectiveness of those interventions.

## **Saint Louis University: Prevention Research Center**

### **Coalition Efforts to Prevent Chronic Diseases**

Residents in the Bootheel and Ozark regions of Missouri live in low-income, medically underserved rural areas where rates of death from heart disease, stroke, and cancer are about 15% higher than the state average. To lower residents' risk for these chronic diseases, the center is collaborating with the Missouri Department of Health and Senior Services, local advisory committees, and 12 previously established community health coalitions to develop a trial to improve residents' health habits. Project goals include helping the coalitions establish local policies that restrict smoking in public places and schools, create and upgrade walking trails to increase physical activity, and make it easier for residents to obtain fruits and vegetables from local grocers. The center is training the coalitions in working effectively with state and local health departments, community partners, and their local advisory committees. Evaluators will analyze the extent to which participants adopt healthy habits and will compare their results with those of residents in similar communities in Arkansas and Tennessee. They will also identify factors that contribute to effective coalitions and coalitions' capacity to promote healthy lifestyles.

## **San Diego State University & University of California at San Diego: San Diego Prevention Research Center**

### **Healthy and Active Families (Familias Sanas y Activas)**

Several strategies are under way to increase physical activity among Latino adults in San Ysidro, a predominantly low-income community on the U.S.-Mexico border of California. Researchers designed cost-free, culturally appropriate physical activity programs to encourage community members' participation. The researchers also selected three organizations and a network of trainers to implement the programs and advocate for an environment conducive to activity. Participants receive tool kits that include exercise equipment and information on physical activity resources in San Ysidro. Trainers and agencies are learning to organize physical activity programs in the community that will be sustainable and replicable. Use of already identified physical activity resources, such as parks and gyms, is being assessed using direct observation and time sampling techniques (SOPARC, System for Observing Play and Recreation in Communities). Self-reported health and demographic information are being collected through in-person interviews with participants and surveys of the networkers. The researchers will evaluate the effectiveness of the interventions and whether the trainers and community organizations build their capacity for delivering such interventions.

## **University of South Carolina: Prevention Research Center**

### ***Changing Policies and Environmental Conditions to Promote Physical Activity***

Researchers are working with the Sumter County Active Lifestyles Coalition and other community partners on strategies to promote physical activity through community education, local policies, and environmental improvements. Guided by objectives that community members and researchers created together, the intervention employs strategies such as community education, policy and media advocacy, community improvement projects, and partnership development. Community residents and partners are involved in changing the environment by increasing the number and quality of walking trails, maintaining and promoting the use of parks, and improving the accessibility, lighting, and safety of outdoor recreation areas. Community groups are being trained about influencing decision-makers to support or modify local policies that promote an active lifestyle. An evaluation team will compare the before-and-after physical activity levels of 1,000 county residents—as well as the community and environmental supports put in place to promote physical activity—with those of a non-intervention community. The center is also developing strategies to enhance the community's ability to maintain physical activity programs after the project ends by mentoring the coalition in obtaining grants and achieving nonprofit status.

## **Tulane University: Prevention Research Center**

### ***Increasing Physical Activity Through Environmental Changes***

Researchers are testing a model to increase physical activity among residents in low-income, inner-city neighborhoods. Center staff will train about 20 lay health advisors (LHAs) to conduct neighborhood assessments, health education programs, and recreational activities. The LHAs will identify features of their neighborhoods that promote physical activity (such as parks, walking and biking trails, indoor activity space, and organized recreational programs) and features that limit residents' physical activity (such as abandoned housing, poorly lit areas, high-traffic crosswalks, and areas known for illegal activity). LHAs will then conduct programs to motivate their neighbors to be physically active and encourage them to form partnerships with the city's planning commission and local police departments to make neighborhood areas safe and available for physical activity—for example, by converting vacant lots into places for outdoor recreation. Researchers will evaluate physical activity levels of residents before and after the project and compare the results with those from nonparticipating neighborhoods. They will also determine the environmental and social factors that promote increases in physical activity among residents of inner-city neighborhoods.

## **University of Washington: Health Promotion Research Center**

### **Physical Activity for Lifetime Success (PALS)**

Physical activity can help reduce symptoms of several chronic illnesses, such as diabetes, heart disease, and minor depression, that affect adults aged 65 years or older. The PALS project focuses on helping older adults become physically active in an area of Seattle's King County where many ethnically diverse and low-income seniors live. The project comprises a physical activity motivation and support component for individuals and a community component focused on changing environments and policies to support physical activity. In the individual component, primary care doctors at two clinics are partnering with a local senior center to increase physical activity among 200 clinic patients who have a diagnosis of diabetes. (Half of the patients are assigned to a comparison group that will receive the intervention 1 year after the first group.) During clinic visits, health-care providers counsel patients about the importance of exercise and develop a written recommendation for physical activity tailored to each patient. Patients receive a list of local resources and are also referred to a physical activity support program offered by a local senior center. The senior center pairs each participant with a peer who provides motivation and support via telephone calls during a 6- to 12-month period. The senior center also refers patients to existing programs (previously developed and tested by the center and its collaborators) to enhance motivation, increase physical activity, and reduce symptoms of minor depression. Researchers will analyze participants' responses to questionnaires to determine the program's effects on physical activity and health.

## **West Virginia University: Prevention Research Center**

### **Quit & Fit: Improving Health Among Rural Teens**

Young people in West Virginia's rural areas are at high risk for smoking and have more difficulty quitting than do young people in nonrural settings. They are also less likely to be physically active and to have access to quit-smoking programs. The West Virginia prevention research center is adding a new self-help intervention, called Quit & Fit, to its successful Not On Tobacco (NOT) Program, which is designed to enhance smoking cessation and smoking reduction among adolescents. NOT contains 50-minute sessions conducted once a week for 10 consecutive weeks and is delivered in same-sex groups comprising no more than 12 students. (Since 1999, more than 100,000 teens in 48 states have participated in the NOT program.) The Quit & Fit project focuses on reducing tobacco use and sedentary lifestyle among young people in rural communities. Project collaborators are developing the physical activity module with input from students, community members, parents, teachers, and trained NOT facilitators. Approximately 45 schools across the state will participate in the project. Researchers hypothesize that the addition of the fitness module will lead to higher rates of smoking cessation and smoking reduction as well as increased physical activity levels. It is expected that Quit & Fit, like the original NOT program, can be offered in school settings at a minimal cost to counties and schools.



## **Yale University: Yale University-Griffin Hospital Prevention Research Center**

### **Collaboration and Teamwork to Reduce the Effects of Diabetes**

Project collaborators are developing strategies to prevent and reduce diabetes and diabetes-related complications among residents in New Haven and Bridgeport, Connecticut, where diabetes is the seventh leading cause of death. The project is tailored to African-American residents with low income who may lack access to medical care, low-cost treatments, and information about preventing and managing the disease. Project strategies include training community health advisors (CHAs) to share information with their church congregation, enhancing patient-doctor communication, creating community walking groups, establishing education and support groups for patients with diabetes, and supporting community health-related events. In the center's diabetes education project, more than 20 CHAs from 13 African-American churches in New Haven have been trained. These CHAs are educating fellow congregants about diabetes prevention and control. Before-and-after surveys will measure individuals' health status and health-risk behaviors, knowledge of diabetes, physical activity levels, dietary patterns, social support, confidence to improve personal health, and quality of life. If the project is successful, the center will apply the intervention model to other communities and other chronic diseases.

## **Non-Intervention Research**

## **Boston University: Partners in Health and Housing Prevention Research Center**

### **Health Status Profile of Boston Public Housing Residents**

Center researchers are collaborating with the Boston Public Health Commission, the Boston Housing Authority, and the center's community committee to create a database of health status indicators for Boston public housing residents. Information for the database is being drawn from an augmented Behavioral Risk Factor Surveillance System (BRFSS) survey of public housing residents in Boston. The data includes information about childhood immunizations, adolescent pregnancy, infant deaths, and deaths from heart disease, suicide, homicide, and cancer.

## **University of Michigan: Prevention Research Center of Michigan**

### **Speak to your Health! Community Survey**

The Speak to Your Health! Community Survey and Qualitative Assessment was designed by community, health department, and university partners to examine social determinants of health and to understand and monitor the behaviors and attitudes of Flint (Michigan) and Genesee County residents. The project aims to use the findings to inform interventions, document change, and help set the research agenda from the community's perspective. This survey is designed to explore how social justice issues are associated with health behaviors and service use. The researchers plan to link survey data with existing data sets (e.g., U.S. census data) and use them to evaluate the center's community projects and to train community residents and public health students. The Genesee County Health Department will also use the findings to monitor progress related to its 5-year strategic plan.

## **University of Oklahoma: Prevention Research Center**

### ***Healthy Kids Project***

In a project ongoing for several years, the center's faculty, staff, and students have screened about 2,000 Anadarko public school students (elementary grades through high school) for height and weight and have calculated their body mass index (BMI). Blood pressure measurements have also been taken twice. The school population is more than 60% American Indian and about 6% Hispanic. Close to 80% of the students are eligible for low- or reduced-cost lunches. In 2002–2003, half of the students were overweight or at risk for overweight. Screening was repeated in 2005–2006, and researchers are tracking trends over time to determine if any changes have occurred and how many children and adolescents remain at risk for obesity-related diseases. The information is being shared with parents and school officials. The findings will serve as the basis for developing new physical activity interventions and promoting changes in nutrition.

## **Oregon Health and Science University: Center for Healthy Native Communities**

### ***Tribal Vision Impairment Prevention Project***

Visual impairment, the second-leading cause of disability among American Indians living in the Pacific Northwest, contributes to diminished quality of life. In addition, these American Indians have a high rate of diabetes, and blindness is a diabetes-related complication. Only 2 of 43 tribes in the region have an eye care provider, and most tribal members must travel 60 miles or more to have an eye examination. In collaboration with the Tribal Community Advisory Council, the Northwest Portland Area Indian Health Board, and the Devers Eye Institute, this project was designed to increase residents' access to eye examinations, improve the quality of life for residents who need eyeglasses, reduce the risk of blindness for residents who have diabetes, and determine the possible causes of this population's visual impairments. About 450 residents from 3 tribes are participating. The intervention for participants with diabetes includes an examination in which photographs are taken of the eyes and then sent by computer to an ophthalmologist at a remote location for diagnosis and recommended treatment. Researchers will determine whether this method of telemedicine is accurate and feasible for detecting cataracts, glaucoma, diabetic retinopathy, and macular degeneration. Other participants receive a brief onsite eye examination and are given prescription eyeglasses as needed. Participants with abnormal results on the eye examination are referred to an ophthalmologist for a full eye examination and treatment. Researchers will determine whether brief initial eye exams are accurate and improve the population's accessibility to eye care.

## **University of South Florida: Florida Prevention Research Center**

### **Evaluating Community-Based Prevention Marketing**

Researchers are conducting case studies of four center projects that were developed and implemented using community-based prevention marketing (CBPM)—a process that integrates behavior change, marketing concepts, and community involvement into one effort to improve community health. The four projects are Believing in All Your Possibilities (alcohol and smoking prevention for middle school students), Partnerships for Citrus Worker Health (eye safety), Sarasota County Youth Fitness Program, and Kentucky Tweens Nutrition and Fitness Project. The researchers will analyze the case studies to determine if CBPM can be used effectively in diverse projects, communities, and environments, and whether it improves program outcomes, increases community capacity, enhances stakeholder collaboration, and improves program dissemination. Evaluators are gathering data from observations and surveys and are interviewing selected stakeholders to determine how they perceive the benefits and barriers of using CBPM and whether their perceptions are associated with a specific project or with one or more steps of the CBPM process.

## **Texas A&M University System Health Science Center: Center for Community Health Development**

### **Using Clinical and Community Guidelines to Improve the Health of Rural and Underserved Populations**

The use of published guidelines to prevent, screen for, and diagnose diabetes as well as to treat people with diabetes and prevent diabetes-related complications has been understudied in rural communities, particularly those that are home to minority and underserved residents. In three rural areas of central Texas, where about 35% of residents are African American or Hispanic and at high risk for diabetes, project collaborators are examining the barriers to the use of established diabetes guidelines. They are also designing strategies to increase the use of these guidelines in the area's clinical and community settings. Project teams in each county select at least one clinical or community guideline to be implemented, such as assisting rural health providers in offering patient-education classes, tailoring diabetes management materials for rural minority patients, increasing residents' physical activity or promoting healthy eating, referring patients to community agencies, or educating the community about the risk factors and symptoms of diabetes. The teams will then apply strategies to help county clinics or communities adopt, implement, and adhere to the guideline. Researchers will identify the successes and barriers at each phase of the process, determine which strategies were most helpful, and examine how the guidelines affected individual health behavior as well as clinic practices or community activities. After evaluating the results and modifying the strategies, the center will explore the possibility of replicating the project in a south Texas border county in which more than 88% of residents are Hispanic. Researchers hope to expand the program to other counties as well. They also hope to follow the same model to prevent and control other long-term health conditions.

## **University of Texas Health Science Center at Houston: University of Texas Prevention Research Center**

### ***Healthy Passages: A Community-Based Longitudinal Study of Adolescent Health***

Chronic diseases such as heart disease and cancer may result from unhealthy behaviors established during late childhood and adolescence. This 10-year study is exploring which individual, family, peer, and community factors influence risk behaviors among teens and preteens over time. The center's researchers, community advisory group, and two collaborating centers (the University of California at Los Angeles and the University of Alabama) identified three focus areas to research: factors associated with substance use, mental health, sexual behaviors, and school achievement; factors contributing to eating habits and physical activity levels; and whether race, ethnicity, gender, and household income affect young people's behavior, health status, and school outcomes. Parental influences are also being examined so that interventions, such as programs to foster effective parent-child communication, can be developed. Teachers and school principals will complete surveys about their school's environment. Data are being collected every other year from about 5,250 students (and their primary caregivers) beginning when the students are 10 years of age. The participants are from about 75 schools in Houston, Los Angeles, and Birmingham, so that an equal number of African-American, Hispanic, and non-Hispanic white students are represented. Researchers are designing a second project to follow the participants every 3 to 5 years starting when they reach age 23. The initial and follow-up data will allow researchers to analyze changes in student behavior, factors that influence the participants' behavior over time, and how behaviors affect participants' health outcomes.

## Selected Case Studies

Interventions from the Prevention Research Centers that show promise in bringing about beneficial change are selected by CDC for case study; nine are included in this section.

The case studies document a research process and illustrate stages of development in a project so that the work can be discussed with people who are not prevention researchers. They are also used in training researchers new to the field or expanding their skills in public health.

The nine case studies are as follows:

- Intervention to Lessen the Effects of Violence Among Urban School Children
- Asthma Intervention for Children in Central Harlem Shows Great Promise
- Planet Health for Obesity Reduction in School Children—Readily Accepted and Cost-Effective
- Boys' Health Risks May Be Reduced by Strengthening Father-Son Bonds
- CATCH for Improved Physical Activity and Diet in Elementary School Children—Effective and Successfully Disseminated
- Senior Center Exercise Program for Older Adults: Improves Health and Is Catching on Around the Country
- Not On Tobacco (NOT)—Smoking Cessation Program for 14- to 19-Year-Olds Selected as a Model Program
- Program to Encourage Active, Rewarding Lives for Seniors (PEARLS)—A Depression Management Program for Elderly Adults
- Clinicians in Maine Learn to Address Overweight in Young Patients

## **Intervention to Lessen the Effects of Violence Among Urban School Children**

---

### **Cognitive-Behavioral Therapy Intervention for Trauma in Schools (CBITS)**

Delivered by school-based mental health professionals.

Decreases symptoms of post-traumatic stress disorder, depression, and psychosocial dysfunction.

Designated a Promising Program by the Substance Abuse and Mental Health Services Agency.

Dissemination and replication studies in progress.

---

### **Background**

Children who witness or experience violence may subsequently suffer symptoms of post-traumatic stress disorder (PTSD) or depression that lead to problems in educational attainment and psychological development. The burden of violence falls disproportionately on people living in low-income urban areas. Therefore, the children at highest risk for violence-related emotional distress are least likely to have access to mental health services through health insurance. In 2000, the U.S. Surgeon General issued a report on children's mental health that included a call for schools to increase their capacity to provide mental health services.

### **Context**

A team of researchers and practitioners from the Los Angeles Unified School District (LAUSD) and UCLA/RAND partner organizations\* have been collaborating to document the magnitude of students' exposure to violence and develop a cognitive-behavioral therapy intervention for trauma in schools (CBITS) that can be delivered by school-based mental health professionals for students experiencing post-exposure symptoms. Pilot-testing of the intervention in the LAUSD using a quasi-experimental study design showed CBITS to be promising, and a more rigorous study was undertaken.

### **Methods and Results**

A randomized, controlled trial of CBITS was conducted in the LAUSD in collaboration with UCLA and RAND in two large urban middle schools serving primarily Latino students in East Los Angeles. Sixth-grade students were screened for exposure to violence and subsequent symptoms of PTSD and depression. Those students who had substantial

exposure to violence and had clinical levels of PTSD symptoms were eligible to participate in the program; 159 (20%) of 769 students met the eligibility criteria. For the intervention group, 61 students were assigned to small groups of 6 to 8 students who received 10 sessions of CBITS. The sessions were led by LAUSD psychiatric social workers from the mental health unit. The sessions introduced students to several techniques for dealing with fear and traumatic memories (e.g., methods to combat negative thoughts, cope with memories, solve social problems, and prevent relapse). The students practiced the techniques during the sessions and, with the social workers, developed assignments specific to their personal situations as homework to do between sessions. The comparison group (65 students) also received the intervention after a delay of 3 months.

At 3 months, when the early intervention group had completed the intervention and the other group had not yet begun it, participants in the early intervention group showed significantly fewer symptoms of PTSD (adjusted mean difference of 7 on a 51-point Child PTSD Symptom Scale) and significantly fewer symptoms of depression (adjusted mean difference of 3.4 on a 52-point Child Depression Inventory). Parent-reported indicators of psychosocial dysfunction were also significantly lower (adjusted mean difference of 6.4 on a 70-point Pediatric Symptom Checklist that included behavioral problems and problems at school). When compared at 6 months, the improvements seen in the early intervention group had persisted for 3 months after completion of the intervention, and the students in the delayed intervention group showed comparable significant improvements.

### **Consequences and Potential Impact**

This study is the first randomized, controlled trial of an intervention for school children experiencing symptoms after exposure to violence. The significant improvements in symptoms of PTSD and depression that were obtained in a school setting are especially promising for populations, such as urban minority groups living in poverty, that have limited access to mental health care. The close collaboration of researchers and school personnel made it possible to administer the intervention in schools while minimizing disruption of the school curriculum. This model of collaboration should be kept in mind in future efforts to replicate the intervention in other communities.

Long-term follow-up of the impact of the intervention and its replication in other populations are important next steps to confirm its effectiveness and assess its generalizability and portability. The LAUSD is now screening approximately 28,000 students to identify schools with the greatest need for the intervention. The National Child Traumatic Stress Network (NCTSN), a coalition of treatment centers funded by the Department of Health and Human Services through a Congressional initiative, disseminates effective, evidence-based trauma treatment programs and is supporting CBITS dissemination. Several partner centers are conducting replication studies of CBITS (under the auspices of different institutions), and others are using the CBITS program for other populations (such as American Indians). A new effort funded by the National Institute of Mental Health is under way to adapt the program so that nonclinical school personnel can administer it.

Based on the available evidence of effectiveness, the Substance Abuse and Mental Health Services Agency has designated CBITS a Promising Program, the Center for Substance Abuse Treatment has designated it a Pre-Approved Program, and the NCTSN is disseminating information about CBITS as an Empirically Supported Treatment and Promising Practice. CBITS originators have trained more than 200 people to administer

the program at 15 sites around the country and internationally. Some of these people have implemented the program and have co-trained other potential implementers. As the network of trainers grows, the program will likely expand to reach many more children exposed to violence.

*\*For this project, the partners of the LAUSD include RAND Health, the UCLA/RAND National Institute for Mental Health (NIMH) Center for Research on Quality in Managed Care, and the UCLA/RAND Center for Adolescent Health Promotion (one of CDC's Prevention Research Centers).*

## References

- Stein BD, Jaycox LH, Kataoka SH, Wong M, Tu W, Elliott MN, Fink A. A mental health intervention for schoolchildren exposed to violence: a randomized controlled trial. *Journal of the American Medical Association* 2003;290(5):603–11.
- Jaycox LH, Stein BD, Kataoka SH, Wong M, Fink A, Escudero P, Zaragoza C. Violence exposure, posttraumatic stress disorder, and depressive symptoms among recent immigrant schoolchildren. *Journal of the American Academy of Child and Adolescent Psychiatry* 2002;41(9):1104–10.
- Kataoka SH, Stein BD, Jaycox LH, Wong M, Escudero P, Tu W, Zaragoza C, Fink A. A school-based mental health program for traumatized Latino immigrant children. *Journal of the American Academy of Child and Adolescent Psychiatry* 2003;42(3):311–8.
- Jaycox L. *Cognitive-Behavioral Intervention for Trauma in Schools: Training Manual*. Longmont, CO: Sopris West Educational Services, 2004.
- National Traumatic Stress Network. [http://www.nctsn.org/nctsn\\_assets/pdfs/promising\\_practices/NCTSN\\_E-STable\\_21705.pdf](http://www.nctsn.org/nctsn_assets/pdfs/promising_practices/NCTSN_E-STable_21705.pdf)
- Substance Abuse and Mental Health Services Administration. [http://www.samhsa.gov/modelprograms.samhsa.gov/textonly\\_cf.cfm?page=promising&pkProgramID=524](http://www.samhsa.gov/modelprograms.samhsa.gov/textonly_cf.cfm?page=promising&pkProgramID=524)
- Promising Practices Network. <http://www.promisingpractices.net/program.asp?programid=145&benchmarkid=55>
- Center for Substance Abuse Treatment, Treatment Improvement Protocol Series. <http://www.treatment.org/Externals/tips.html>



***Columbia University:  
Harlem Health Promotion Center***

---

**Asthma Intervention for Children in Central Harlem Shows Great Promise**

---

**Harlem Children's Zone Asthma Initiative**

Comprehensive approach includes medical care, home visits, and monitoring of the home environment.

Multidisciplinary team delivers educational, environmental, social, legal, and medical services.

Preliminary data show significant reductions in participants' school absenteeism, emergency department visits, and hospitalization as well as significantly increased use of effective asthma management strategies.

---

**Background**

Asthma prevalence and mortality have been increasing in the United States, but the causes are incompletely understood. Some asthma risk factors are known or suspected to be more prevalent in poor, urban communities, where low-quality housing, roach infestation, tobacco smoke exposure, and other conditions contribute to a high asthma burden.

**Context**

The Harlem Children's Zone, Inc. (HCZ), is a nonprofit, community-based organization founded in 1970 in collaboration with several public and private organizations; it has been widely acclaimed for its intensity and scope. Since 1977, the organization has run the Harlem Children's Zone Project (HCZP) to improve children's intellectual, emotional, and physical health. The HCZP now operates in a 60-block area in Central Harlem. In 2001, the Department of Pediatrics at Harlem Hospital Center joined forces with HCZ to reduce the burden of asthma on children and their families in Harlem. The Harlem Health Promotion Center (a CDC Prevention Research Center) collaborates with these lead partners in conducting a multifaceted and rigorous evaluation of the project's impact, consisting of surveillance of asthma and environmental indicators, qualitative assessment through focus groups and one-on-one interviews, and spatial analysis through development of a geographic information system.

## **Methods and Results**

Every child under 13 years of age living or attending school in the HCZP area or participating in any of the HCZ programs was eligible for asthma screening (a symptom questionnaire completed by parents, sometimes followed by a physical examination of the child by a health professional). Rates of participation in the screening ranged from 66% to 100% across sites. Of the 3,132 children screened so far, 982 (31%) show signs or symptoms of asthma. Children having the greatest number of recent symptoms were given highest priority for enrollment in an intensive asthma management intervention based out of Harlem Hospital Center. Children enrolled in the program receive medical care at the hospital or other health-care sites in Harlem and surrounding neighborhoods. A multidisciplinary team (community worker, social worker, and nurse) delivers educational, environmental, social, legal, and medical services. During home visits, scheduled at 3-month intervals, the team monitors progress and reinforces the families' knowledge and skills in asthma management and self-care. The program staff works with the medical providers of enrolled children to ensure that optimal asthma management strategies are used. In addition, information about the child's indoor environment is given to his or her primary care provider after each home visit.

During 18 months of follow-up, substantial and statistically significant improvements were documented for the children enrolled in the program. Significant improvements included more than halving school absenteeism for any reason (from 34% to 16%) and for asthma in particular (from 23% to 8%). Emergency department and unscheduled physician visits significantly declined to less than one-quarter (from 35% to 8%), as did hospitalization (from 8.6% to 0%). Significantly increased use of effective asthma management strategies was also noted: use of a spacer device\* more than doubled (from 41% to 96%), adherence to a regimen of taking preventive medication daily increased by nearly two-thirds (from 32% to 52%), development of an asthma management plan tripled (from 20% to 60%), and possession of a peak flow meter quadrupled (from 22% to 92%).

## **Consequences and Potential Impact**

These preliminary data strongly suggest that the program is effective in improving asthma management among enrolled children. Because the program is based on a comprehensive approach, simultaneously implementing multiple interventions known to reduce asthma morbidity, its substantial success over such a short interval is credible. Expansion of the Harlem Children's Zone Asthma Initiative to include all 982 children identified with asthma is planned, as is an expansion of the scope of services to be offered by engaging additional agencies in the collaboration, including the New York City Department of Health and Mental Hygiene, the New York City Department of Education, and the New York City Health and Hospitals Corporation.

Further investigation is warranted into whether the approach described here is effective in other urban, low-income settings that do not have the benefit of community-based organizations as ambitious and energetic as the HCZ. If effective in other settings as well, such an intervention could meaningfully reduce costly use of inner-city hospitals, improve school attendance, and improve the quality of life of thousands of this nation's most vulnerable children and families affected by asthma.

\*A spacer device helps deliver inhaled medications deep into the lungs for effective relief of asthma symptoms.

## References

Centers for Disease Control and Prevention. Reducing childhood asthma through community-based service delivery—New York City, 2001-2004. *Morbidity and Mortality Weekly Report* 2005;54(1):11-4.

Harlem Children's Zone, Inc. Harlem Children's Zone Project. <http://www.hcz.org/project/new.html>

Morgan WJ, Crain EF, Gruchalla RS, O'Connor GT, Kattan M, Evans R 3<sup>rd</sup>, Stout J, Malindzak G, Smartt E, Plaut M, Walter M, Vaughn B, Mitchell H, Inner-City Asthma Study Group. Results of a home-based environmental intervention among urban children with asthma. *New England Journal of Medicine* 2004;351:1068-80.

Nicholas SW, Jean-Louis B, Ortiz B, Northridge M, Shoemaker K, Vaughan R, Rome M, Canada G, Hutchinson V. Addressing the childhood asthma crisis in Harlem: the Harlem Children's Zone Asthma Initiative. *American Journal of Public Health* 2005;95:245-9.

Northridge ME, Jean-Louis B, Shoemaker K, Nicholas S. Advancing population health in the Harlem Children's Zone Project. *Sozial-und Praventivmedizin* 2002;47:201-4.

**Planet Health for Obesity Reduction in School Children—  
Readily Accepted and Cost-Effective**

---

**Planet Health**

Physical activity and nutrition lessons woven into existing middle school curriculum.

Effective in reducing TV viewing time in both boys and girls and decreasing obesity in girls.

Readily adopted by teachers; Boston Public Schools expand its use.

Cost-effective and projected to save money in later life.

---

**Background**

Between 1980 and 1999 the prevalence of overweight in the United States nearly tripled (from 5% to 14%) among adolescents and nearly doubled (from 7% to 13%) among children 6 to 11 years of age. This trend forecasts an increase in chronic diseases as the younger generation ages. Little is known about effective ways to reverse this alarming trend, although its root cause—insufficient physical activity combined with the consumption of excess calories—is well known. Because most children spend a substantial portion of their day in school, the school environment is a promising venue for educational and experiential lifestyle interventions.

**Context**

Focusing on how to increase physical activity and improve dietary habits, researchers at Harvard University's PRC developed\* an interdisciplinary curriculum (called Planet Health) for public middle schools, in explicit collaboration with teachers and school principals. The curriculum was designed to fit easily into existing language, math, science, social studies, and physical education classes; to foster basic educational competencies required by the state of Massachusetts; and to provide materials easy for teachers to use. The content emphasizes increasing consumption of fruits and vegetables, decreasing consumption of high-fat foods, decreasing television viewing, and increasing physical activity.

**Methods and Results: Phase I**

A 2-year randomized, controlled trial\* of the curriculum in 10 public middle schools in Boston yielded a significant reduction in television watching for both girls and boys and a significant decrease in the prevalence of obesity among girls.

## **Methods and Results: Phase II**

After the Boston Public Schools (BPS) expressed interest in disseminating Planet Health, a partnership was formed to pilot test how feasible and sustainable the curriculum could be in public school settings where resources are constrained. Using the model of community-based participatory research, a project advisory board representing the key stakeholders within the BPS and the Harvard PRC guided the partnership from its inception. The BPS selected a sample of six inner-city middle schools to participate, while the PRC provided the Planet Health curriculum, training workshops for more than 100 teachers, small stipends for teacher coordinators within each of the participating schools, and research expertise to assess diffusion of the program.

The diffusion study demonstrated that 76% to 100% of teachers found the curriculum highly acceptable and that 78% to 100% planned to continue using it. More than 90% found the curriculum effective and believed that it made a positive contribution to their classes.

## **Consequences**

Satisfied that its criteria for success were met, BPS endeavored to sustain and expand use of the Planet Health curriculum through independent funding. It first secured funding from the U.S. Department of Education's Physical Education for Progress program for pilot expansion to 12 schools in 2002–2003. Subsequently BPS received financial support for further expansion from the Boston Public Health Commission under the auspices of the new STEPS to a Healthier U.S. project, sponsored by the U.S. Department of Health and Human Services.

## **Impact and Potential Impact**

Planet Health is being implemented in more than 120 schools in Massachusetts, and in the past 2 years, more than 1,000 teachers have been trained to use it. In addition, 2,000 copies of the curriculum have been purchased by interested parties in 48 states and 20 countries, potentially benefiting many thousands of children.

An independent economic analysis of Planet Health was conducted based on an estimated program cost of \$14 per student per year and an obesity reduction of 1.9% persisting into adulthood among girls. Based on these assumptions, the program was found to be highly cost-effective—in fact, more cost-effective than commonly accepted preventive interventions such as screening and treatment for hypertension. Furthermore, the program was expected to save money via avoided medical costs and productivity losses among participants later in their lives: for every dollar spent on the program in middle school, \$1.20 in medical costs and lost wages would be saved when the children reach middle age.

Planet Health has demonstrated effectiveness, feasibility, acceptability, and sustainability in a public school environment. The curriculum has been found to be cost-effective and, dollar for dollar, to save society money in the long run.

\*The original efficacy study was conducted under the auspices of the National Institutes of Health.

## References

- Gortmaker SL, Peterson K, Wiecha J, Sobol AM, Dixit S, Fox MK, Laird N. Reducing obesity via a school-based interdisciplinary intervention among youth: Planet Health. *Archives of Pediatrics and Adolescent Medicine* 1999;153:409-18.
- Wang LY, Yang Q, Lowry R, Wechsler H. Economic analysis of a school-based obesity prevention program. *Obesity Research* 2003;11:1313-24.
- Wiecha JL, El Ayadi AM, Fuemmeler BF, Carter JE, Handler S, Johnson S, Strunk N, Korzec-Ramirez D, Gortmaker SL. Diffusion of an integrated health education program in an urban school system: Planet Health. *Journal of Pediatric Psychology* 2004;29:467-74.

## **Boys' Health Risks May Be Reduced by Strengthening Father-Son Bonds**

---

### **Fathers and Sons Project**

Preliminary findings suggest improved communication between fathers and sons and increased healthy behaviors among the adolescents.

Formal evaluation in progress.

Large-scale replication study in development.

---

### **Background**

Many African-American boys grow up in single-parent households, a situation that limits their chance of building a meaningful relationship with their biological fathers. The lack of a positive father-son relationship is believed to contribute to a predisposition in adolescence for violent behavior, early sexual encounters, substance abuse, and poor academic achievement—all of which may compromise individual and family health and well-being in the short and long term.

### **Context**

Flint, Michigan, an economically disadvantaged community in which the prevalence of adolescent risk behaviors is high, was chosen by the University of Michigan's Prevention Research Center (PRC) as an intervention site. The PRC offered academic strength as well as concern and commitment to collaborate with the Genesee County Health Department, community-based organizations (CBOs), and other community representatives in addressing the health risks of young people. The community expressed concern about the problem of adolescent violence and was interested in finding ways to reduce substance abuse and early sexual behavior as well as increasing healthy behaviors among its adolescent residents.

### **Methods and Results**

Using a community-based participatory process, a steering committee composed of PRC researchers and community representatives systematically explored potential ways to positively affect preadolescent African-American boys living apart from their biological fathers. Eight focus groups (77 participants) were conducted to gather information to guide intervention development, and relevant findings from the scientific literature were reviewed. Based on these sources of information, the steering committee chose to focus on 8- to 12-year-old boys and their nonresident fathers through a program centered on effective communication, cultural awareness, and skill building. The program combined

several behavioral theories: Theory of Reasoned Action, Social Cognitive Theory, Social Networks and Social Support, and Models of Racial Identity and Race Socialization.

The intervention consisted of 15 sessions, each 2 to 3 hours long, held twice per week for 2 months. The sessions provided information, discussion time, and opportunities for role-reversal exercises and for practicing skills, such as refusing drugs from peers (for sons) and specific parenting behaviors (for fathers). In addition, boys and their fathers worked on homework assignments together and attended community events as a pair (approximately 13 hours). One booster session was offered to graduates 4 months after they had completed the program.

The intervention was designed to provide the researchers both qualitative and quantitative outcome and process data for evaluation. A pretest and a posttest had been administered, and the results were compared with those from a similar group of nonresident fathers and sons who did not have the opportunity to participate in the program.

Participants included 186 father-son pairs, 87% (162) of which completed the program. The fathers had an average age of 36 years; 55% reported having barely enough money to get by, and 40% were unemployed. The boys had an average age of 10 years. Data collection from the nonparticipant group is nearing completion. Quantitative comparative analyses are expected to get under way once data collection and processing are complete.

Qualitative analyses are under way on measures such as attitudes and intentions toward violent behavior, substance use, and sexual initiation for sons; communication about risk behaviors, and family values and social norms regarding these behaviors; father-son closeness and frequency of contact; and racial socialization issues. In addition, aggressive behavior in sons and substance use in fathers will be assessed.

### **Consequences and Potential Impact**

Participants, CBOs, and the project's steering committee believe in the program's value, and they have encouraged its limited dissemination during the formal evaluation period. The PRC is testing a dissemination plan for the program in four communities in Michigan. The goal is to determine how effectively aspects of the program can be implemented by CBOs not affiliated with the project. Furthermore, one dedicated program participant is leading a continuing father support group that is seeking nonprofit status and funding for long-term involvement of fathers and sons who have graduated from the program. Such an effort has the potential of supporting evaluation of the program's effects on the participants over several years.

With funding from the Ford Foundation (fall 2007), the PRC is now collaborating with Columbia University's School of Social Welfare to plan a large-scale replication of the project. The researchers are selecting multiple sites throughout the country for replicating the program. They are revising the curriculum, based on findings from the original study, and designing an extensive evaluation to determine the types of subgroups for which the program may be most effective. Preliminary findings suggested that outcomes may differ by age and education of the father, number of siblings in the son's household, and other factors related to whether the fathers and sons ever lived together. In addition, unlike the original study, the replication project will consider a limited set of maternal factors.



## References

- Caldwell CH, Brooks CL, De Loney EH, Roberts E. Stories from the field: preliminary results from the Flint Fathers and Sons evaluation project. Paper presented at the American Public Health Association Meeting, Washington, D.C., November 2004.
- Caldwell CH, Wright JC, Zimmerman MA, Walsemann KM, Williams D, Isichei PA. Enhancing adolescent health behaviors through strengthening non-resident father-son relationships: a model for intervention with African-American families. *Health Education Research: Theory and Practice* 2004;19:644-56.
- Caldwell CH, Zimmerman MA, Isichei PA. Forging collaborative partnerships to enhance family health: an assessment of strengths and challenges in doing community-based research. *Journal of Public Health Management Practice* 2001;7:1-9.
- Wallace JM, Forman TA, Caldwell CH, Willis DS. Religion and American youth: recent patterns, historical trends, and sociodemographic correlates. *Youth and Society* 2003;35(1):98-125.

*University of Texas Health Science Center at Houston:  
University of Texas Prevention Research Center*

---

**CATCH for Improved Physical Activity and Diet in Elementary School Children—  
Effective and Successfully Disseminated**

---

**Coordinated Approach To Child Health (CATCH)**

Elementary school program in four components: school curriculum, physical education, school lunch, and family involvement.

Effective in producing diet and physical activity changes that persist into early adolescence.

Shown to prevent increases in overweight from grade 3 to 5.

Adopted by more than 1,500 schools in Texas alone.

Sparked Texas state legislation requiring coordinated school health programs.

---

**Background**

During the past two decades, childhood overweight has steadily increased in the United States, and the increase in childhood diabetes is alarming. These changes have highlighted the importance of developing and disseminating effective programs to increase physical activity and improve diet among children and to coordinate health messages in schools and communities.

**Context**

Researchers at the University of Texas Health Science Center, in conjunction with experts from Tulane University, the University of California at San Diego, and the University of Minnesota, developed an interdisciplinary program (originally named the Child and Adolescent Trial for Cardiovascular Health [CATCH]) for elementary schools, under the auspices of the National Institutes of Health (NIH). The program is unique in that it includes not only educational classroom curriculum components but also school physical education, school food service, and family components. The intent is to improve a whole set of environmental influences to support behavior change. The program emphasizes decreasing consumption of high-fat foods and increasing physical activity, both inside and outside of school.

## **Methods and Results**

A 3-year randomized, controlled trial\* of the CATCH Program in 56 intervention and 40 control elementary schools in four states (Texas, Minnesota, California, and Louisiana) resulted in children significantly increasing (from 40% to 50%) time spent in moderate to vigorous physical activity within physical education classes, as well as significantly decreasing (from 39% to 32%) consumption of fat in school meals. According to follow-up surveys, the significantly increased physical activity and reduced fat intake persisted over 3 consecutive years without additional intervention.

A subsequent study of the program in El Paso, Texas, an economically disadvantaged community on the U.S.-Mexico border, showed that the program eliminated the significant increase in overweight between grades 3 and 5 among both girls and boys. Without intervention, overweight increased among children in these grades from 26% to 40% for girls and from 39% to 49% for boys.

## **Consequences**

With support from CDC, the University of Texas (Houston) Prevention Research Center (PRC) endeavored to disseminate, implement, and institutionalize the CATCH Program in schools. Staff members were hired to dedicate their time to foster and sustain partnerships and to develop and conduct training for school personnel (more than 3,000 school employees have been trained in the past 2 years alone). The name of the program was changed to the Coordinated Approach To Child Health to reflect the shift in focus from efficacy research to program dissemination. Partnerships to disseminate CATCH have included the Texas Department of Health; Texas Education Agency; Paso del Norte Health Foundation; National Heart, Lung, and Blood Institute; American Heart Association; Texas Medical Association; Bexar County Community Health Collaborative; and many other organizations. The dedicated dissemination staff has proven invaluable in coordinating partnerships, maintaining momentum, and ensuring quality control as the program grows.

The CATCH staff became motivated to educate policy makers in Texas, which resulted in the development and passage of Senate Bill 19 in 2001, which mandated that all elementary schools have a coordinated school health program by 2007.

## **Impact and Potential Impact**

In Texas alone, more than 1,500 elementary schools (approximately one-third of all schools) have adopted CATCH, thereby potentially reaching more than 750,000 school children. Schools in several other states (Illinois, Maine, Florida, Georgia, North Dakota, North Carolina, and New Mexico) have begun to use the program as well, and the U.S. Department of Defense uses it in 320 of its overseas elementary schools. Furthermore, the program has been adapted for low-income Hispanic communities in the United States.

CATCH is proving to be sustainable and feasible in a wide variety of settings. The program provides hands-on training and is designed to minimize the burden on teachers. Dissemination is well under way, and interest continues to grow.

\*The original efficacy study was conducted with funding from the National Heart, Lung, and Blood Institute of the National Institutes of Health.

## References

- Coleman KJ, Tiller CL, Sanchez J, Heath EM, Sy O, Milliken G, Dziewaltowski DA. Prevention of the epidemic increase in child risk of overweight in low-income schools: the El Paso Coordinated Approach to Child Health. *Archives of Pediatrics and Adolescent Medicine* 2005;159:217-24.
- Luepker RV, Perry CL, McKinlay SM, Nader PR, Parcel GS, Stone EJ, Webber LS, Elder JP, Feldman HA, Johnson CC, Kelder SH, Wu M. Outcomes of a field trial to improve children's dietary patterns and physical activity: the Child and Adolescent Trial for Cardiovascular Health (CATCH). *Journal of the American Medical Association* 1996;275:768-76.
- Nader PR, Stone EJ, Lytle LA, Perry CL, Osganian SK, Kelder S, Webber LS, Elder JP, Montgomery D, Feldman HA, Wu M, Johnson C, Parcel GS, Luepker RV. Three-year maintenance of improved diet and physical activity: the CATCH cohort. *Archives of Pediatrics and Adolescent Medicine* 1999;153:695-704.

*University of Washington:  
Health Promotion Research Center*

---

**Senior Center Exercise Program for Older Adults—  
Improves Health and Is Catching on Around the Country**

---

**EnhanceFitness Program**

Physical activity sessions developed for seniors.

Implemented in community settings, such as senior centers.

Shown to enhance physical and psychosocial function.

Adapted and disseminated successfully by community organization.

Proven sustainable and portable.

---

**Background**

The decline in strength, endurance, flexibility, and balance that occurs with aging contributes to diminished independence, diminished vitality, and increased likelihood of disabling injury.

**Context**

After years of research showing that exercise leads to improved physical function and reduced disability in older adults, researchers at the University of Washington's Health Promotion Research Center, a CDC Prevention Research Center, addressed the feasibility and effectiveness of offering an exercise program in the setting of a community senior center.

**Methods and Results**

An exercise program for community-dwelling older adults was announced at the Northshore Senior Center affiliated with Senior Services of Seattle/King County (SSSKC). Volunteers were randomly assigned to a control group (no special program) or an intervention group that was enrolled in an exercise program consisting of 1-hour classes that met 3 times per week for 6 months. The sessions were conducted by a trained instructor and included balance, strength, aerobic, and flexibility exercises. The control group volunteers did not receive any special services but were eligible to attend the exercise classes after completing the pilot study. Over the 6 months, the intervention group improved in physical, emotional, and social health scores while the control group deteriorated in these measures; the data showed a significantly better (by 10% to 30%) health status for the exercise group.

## **Consequences**

Group Health Cooperative (GHC), a large Seattle-based health maintenance organization (HMO), began offering participation in this program as a free benefit to all of its Medicare enrollees in 1998. In the first 2 years alone, more than 1,000 of its enrollees participated in the program.

Recognizing the wisdom of making the program sustainable by adapting it for community-based administration and dissemination, the PRC continued its partnership with GHC and SSSKC. SSSKC obtained funding from the local Area Agency on Aging to make the program available to community-dwelling seniors via senior centers. Working with its partners, SSSKC adapted the program for local dissemination and portability by developing standards; manuals for instructors, administrators, and participants; and procedures for monitoring outcomes. The exercise program, formerly called the Lifetime Fitness Program, is now packaged as EnhanceFitness, one-half of SSSKC's Project Enhance, which also includes a health and wellness program for older adults.

In addition to receiving Area Agency on Aging funding, SSSKC now receives funding from the Washington State Department of Health for development of a "train-the-trainer" program and for pilot programs in Hispanic and American Indian communities. It also receives funding from local foundations to help defray the cost of the program for low-income older adults of color.

## **Impact and Potential Impact**

In 8 years, EnhanceFitness progressed from implementation at 1 site to 93 sites, and the program currently has 3,000 seniors enrolled in 9 states. The number of participants continues to increase—by 76% in the most recent calendar year. Attendance is tracked per class, and physical and functional capacities are measured three times per year to monitor the program's continued effectiveness.

A recent PRC analysis of GHC Medicare enrollees showed that people who participate in EnhanceFitness at least once per week had significantly fewer hospitalizations (by 7.9%) and lower health-care costs (by \$1,057) than nonparticipants.

Consistent with the research findings, EnhanceFitness is proving to be feasible and well-attended when offered in senior centers and other community-based settings. Moreover, it is showing itself to be sustainable and portable when owned and managed by a community-based organization and HMO in continued partnership with a PRC. The availability of such a successful program will become more and more pertinent as the U.S. population ages and disability prevention among the elderly becomes a higher national priority.

## **References**

Ackermann RT, Cheadle A, Sandhu N, Madsen L, Wagner EH, LoGerfo JP. Community exercise program use and changes in healthcare costs for older adults. *American Journal of Preventive Medicine* 2003;25:232-7.

Wallace JI, Buchner DM, Grothaus L, Leveille S, Tyll L, LaCroix AZ, Wagner EH. Implementation and effectiveness of a community-based health promotion program for older adults. *Journal of Gerontology: Medical Sciences* 1998;53A:M301-6.

*West Virginia University:  
Prevention Research Center*

---

**Not On Tobacco (NOT)—Smoking Cessation Program for  
14- to 19-Year-Olds Selected as a Model Program**

---

**Not On Tobacco (NOT)**

Significantly decreased smoking and increased smoking cessation among teenagers.

Packaged and successfully disseminated to schools and community organizations.

Proven sustainable and useful in a variety of settings.

Recognized by the National Registry of Effective Programs.

---

**Background**

Most of the 45 million adult smokers in the United States began smoking during adolescence, and without intervention, most current teenage smokers can be expected to continue smoking into adulthood. Despite public health efforts to prevent tobacco use among young people, nearly one-fourth (23%) of teens report smoking cigarettes, and more than two-thirds of them say they would like to quit. For some time, however, little attention was given to developing programs to help teenagers quit smoking.

**Context**

Since 1995, one key focus of the PRC at the West Virginia University Centers for Public Health Research and Training has been conducting research on teens who smoke. The PRC formed a partnership with West Virginia's health and education departments, the Coalition for a Tobacco-Free West Virginia, and the American Lung Association (ALA) to develop a plan to reduce teen smoking. Together the group developed an initial version of Not On Tobacco (NOT), an innovative quit-smoking program specifically for teenagers.

**Methods and Results**

NOT consists of ten 50-minute, sex-specific group sessions usually held in schools during school hours and led by trained facilitators (although NOT has also been used in community settings). The sessions are developmentally appropriate, expressed in teen-friendly language, and conducted in small groups (no more than 10–12 teenagers). Topics include motivation, stress management, the effects of smoking, preparing to quit, relapse prevention, dealing with peer pressure, media awareness, support networks, and healthy lifestyles. Four optional booster sessions are offered after the program's conclusion.

NOT was rigorously evaluated in six studies conducted in West Virginia, Florida, and North Carolina between 1997 and 2002. A recent review of these studies compared data from the 44 schools that had enrolled regular smokers into the NOT program with data from 44 matched schools that had offered a standard brief intervention instead (i.e., 15 minutes of advice to quit). Among the 1,131 students who participated, findings showed the NOT program to be more effective than the brief intervention; the quit rate was 15% for NOT enrollees and 8% for those who received the brief intervention ( $p < .01$ ). Multivariate analysis showed a nearly twofold greater quit rate among NOT participants (OR=1.89,  $p = .003$ ).

Furthermore, even among participating teens who continued to smoke, NOT participants smoked significantly fewer cigarettes per day than their peers. In studies that included measurement of addiction, NOT appeared to be effective among highly addicted smokers as well as among teenagers in a broad range of stages of change. Less rigorous evaluations of field-based NOT programs that included 4,568 young people similarly showed substantial success; the overall reported quit rate was 26%. Follow-up surveys have shown that participants enjoy the sessions (96%) and find them relevant and helpful for quitting smoking (>80%) and for other reasons (75%). Facilitators reported that the training is helpful, that the program is compatible with their schools' policies, and that it is highly worthwhile.

### **Consequences**

Given the NOT program's proven effectiveness and feasibility, the ALA has adopted it as a national best practice model and is disseminating it widely. Train-the-trainer protocols, training manuals, materials for students, and guides for initiating programs in high schools have been developed. In a mutually beneficial relationship, the ALA produces, packages, trains, disseminates, and tracks participation in NOT, while the PRC provides scientific oversight, technical assistance, data management, and evaluation, and takes the lead on reports and publications.

### **Impact and Potential Impact**

Since 1999, more than 100,000 teens in 48 states have participated in the NOT program. Given the effectiveness demonstrated from 1999 through 2003, we can assume that about one of every six participants quit smoking as a result. Translation of materials into Spanish is increasing the program's reach, as will a culturally appropriate version that is being developed for American Indian teens.

After rigorous review by an independent panel of scientists, NOT has been recognized as an effective program by the National Registry of Effective Programs (NREP). The program is included in the NREP's repository of science-based programs, is listed on the Substance Abuse and Mental Health Services Administration's Model Programs Web site (<http://www.modelprograms.samhsa.gov>), and is now a Model Program, which could increase support for its dissemination nationwide. This recognition should help make NOT even more widely available to help teenagers in need.



## References

- Dino G, Horn K, Goldcamp J, Fernandes A, Kalsekar I, Massey C. A 2-year efficacy study of Not On Tobacco in Florida: an overview of program successes in changing teen smoking behavior. *Preventive Medicine* 2001;33:600-5.
- Dino GA, Horn KA, Goldcamp J, Kemp-Rye L, Westrate S, Monaco K. Teen smoking cessation: making it work through school and community partnerships. *Journal of Public Health Management and Practice* 2001;7:71-80.
- Horn K, Dino G, Gao X, Momani A. Feasibility evaluation of Not On Tobacco: the American Lung Association's new stop smoking programme for adolescents. *Health Education* 1999;5:192-206.
- Horn KA, Dino GA, Kalsekar ID, Fernandes AW. Appalachian teen smokers: not on tobacco 15 months later. *American Journal of Public Health* 2004;94:181-4.
- Horn K, Dino G, Kalsekar I, Mody R. The impact of Not On Tobacco on teen smoking cessation: End-of-program evaluation results, 1998 to 2003. *Journal of Adolescent Research* 2005;20:640-61.
- Horn K, Fernandes A, Dino G, Massey CJ, Kalsekar I. Adolescent nicotine dependence and smoking cessation outcomes. *Addictive Behaviors* 2003;28:769-76.

*University of Washington:  
Health Promotion Research Center*

---

**Program to Encourage Active, Rewarding Lives for Seniors (PEARLS)—  
A Depression Management Program for Elderly Adults**

---

**PEARLS**

Significantly decreased depression.

Improved functional and emotional well-being.

Shows potential for widespread impact.

Listed in the National Registry of Evidence-based Programs and Practices.

---

**Background**

Minor depression affects 15%–20% of older adults and is known to profoundly compromise health and quality of life. People who are socially isolated and in frail health are especially at risk for depression. Doctors and their older patients often incorrectly assume that depression is an unavoidable consequence of aging, and many depressed elders do not receive treatment.

**Context**

The University of Washington’s Health Promotion Research Center (HPRC) has collaborated with local agencies to improve the health and quality of life of the elderly for more than a decade. Most recently the HPRC worked with the City of Seattle’s Aging and Disability Services agency and Senior Services of Seattle/King County to develop and test a program to reduce depressive symptoms among homebound, chronically ill, and frail low-income elderly adults.

**Methods and Results**

Researchers conducted a randomized, controlled trial among community-dwelling people over the age of 60 (mean age 73) who had minor depression or dysthymia and were receiving home-based social services from the collaborating agencies. The PEARLS intervention provided eight 50-minute sessions with a trained social service worker in a client’s home during a 19-week period. Counselors used three depression management techniques: problem solving treatment, in which clients were taught to recognize depressive symptoms, define problems that may contribute to depression, and devise steps to solve these problems; social and physical activity planning; and pleasant event

planning. Counselors encouraged participants to use existing community services and attend local events. The comparison group received usual care. Depressive symptoms (such as sadness and lack of energy) and other outcomes were followed for 1 year. Comparisons of the 72 adults who received the skill-building sessions and the 66 who received usual care showed measurable benefits to seniors who participated in PEARLS. After 1 year, 43% of seniors in the intervention group reported at least a 50% decline in depressive symptoms. Only 15% of seniors in the control group reported the same decline. Depression resolved completely for 36% of PEARLS participants, compared with 12% of non-participants. In addition, PEARLS participants experienced significant improvements in functional and emotional well-being.

## **Consequences**

Given the impressive success of this program, the HPRC is currently working with Washington State Department of Social and Health Services to assess the need to implement the PEARLS program statewide among older adults who receive social case management. HPRC is also working with local agencies to train social services personnel to provide the counseling. The City of Seattle's Aging and Disability Services agency and Seattle's Northshore Senior Center are already implementing this program. Two other Seattle agencies—Senior Services of Seattle/King County and the Asian Counseling and Referral Service—are training their social work staff to provide PEARLS counseling, in preparation for implementing the program more widely and assess its effectiveness.

In addition, PEARLS is listed in the National Registry of Evidence-based Programs and Practices, a service of the Substance Abuse and Mental Health Services Administration. This Internet-based listing makes information about PEARLS available to communities everywhere. The HPRC is also working with the Washington State Unit on Aging to develop a PEARLS implementation toolkit.

## **Impact and Potential Impact**

Local participants have spoken movingly about the many ways they have benefited from this program. If shown to be similarly effective in other elderly populations, this program has the potential to substantially improve health and quality of life for large numbers of dually eligible Medicaid-Medicare clients who suffer from minor depression or dysthymia and are receiving social case-management services. Because dissemination can occur within existing community social services programs, eligible older adults could be readily identified and enrolled in the program. Moreover, because most social services agencies have access to mental health experts who could supervise training of existing social services staff members and their subsequent implementation of PEARLS, the program need not require large increases in local funding. Thus PEARLS has the potential to benefit large numbers of ill, disabled, and frail elderly adults.

## **References**

- Ciechanowski P, Wagner E, Schmaling K, et al. Community-integrated home-based depression treatment in older adults. *Journal of the American Medical Association* 2004;291:1569-77.

**Harvard University:**  
**Prevention Research Center on Nutrition and Physical Activity**

---

**Clinicians in Maine Learn to Address Overweight in Young Patients**

---

**Maine Youth Overweight Collaborative**

Medical providers are trained to monitor overweight and to counsel children and families.

Data suggest training has improved clinical practice.

Providers appear to increase knowledge, change attitudes, and gain confidence in addressing overweight in children.

---

**Background**

The prevalence of overweight among children in the United States has tripled since 1980, and it continues to increase, resulting in increasing pediatric problems of childhood diabetes and hypertension. Because nearly all children are served in health care settings (e.g., for school vaccinations), this venue could be useful to help prevent overweight among children at risk, and to intervene with overweight children from all demographic groups. First, however, physicians need to be informed about the health consequences of childhood overweight, the criteria for diagnosis, and ways to address the problem with children and their families. The American Academy of Pediatrics and the American Medical Association have recently recommended active assessment, prevention, and treatment options for obese or overweight children and adolescents.<sup>1</sup>

**Context**

The Maine Bureau of Health and the Maine Center for Public Health joined with Harvard University's CDC-sponsored Prevention Research Center to form a new entity named the Maine-Harvard PRC (MHPRC). The partners focused attention on the statewide problem of obesity, and in 2004, the MHPRC established the Maine Youth Overweight Collaborative (MYOC) in partnership with the Maine Chapter of the American Academy of Pediatrics. Together they developed an approach to addressing overweight in children via physicians' offices. They obtained funding from the Maine Health Access Foundation to launch an intervention to improve care of overweight children and their families by improving providers' knowledge, attitudes, and practices.

**Methods and Results**

Twelve practice teams volunteered to take part in the intervention. An expert panel selected 4 main messages for children and parents: eat 5 servings of fruits and vegetables per day, limit screen time (television and computer use) to 2 hours per day, get 1 hour of

physical activity every day, and avoid sugar-sweetened beverages. The slogan “5-2-1-0” was adopted to help promote these messages.

Practice teams took part in baseline surveys and subsequent training in how to monitor children’s weight and counsel children and their families about the importance of 5-2-1-0, by using a technique called *brief, focused negotiation*. Afterward, progress was assessed via chart review and surveys of practice teams, parents, or caretakers. Data compared from before and after the intervention showed large and statistically significant improvements in physicians’ documentation of body mass index (BMI) and BMI percentile, and monitoring of blood pressure of overweight children. Improvements were seen in physicians’ knowledge about ideal weight, ability to identify children at risk of becoming overweight, and to evaluate children for medical complications of overweight (e.g., glucose intolerance, hyperlipidemia, and hypertension).

Providers’ beliefs about the importance of addressing nutrition, physical activity, screen time, and sweetened beverages changed, and their comfort with addressing these topics increased. Most providers became comfortable helping patients and their families set behavioral goals. Furthermore, nearly all parents or caretakers of overweight children recalled that behavioral topics had been discussed with them at a recent visit, corroborating the practice teams’ reports. A scientific article reporting these findings is being prepared for submission to a peer-reviewed journal.

## **Consequences**

The project has been expanded by using 9 of the original teams to train 10 new teams. More-specific behavioral outcomes are being measured (such as turning off the television at mealtimes), and expanded surveys are being conducted among practice teams and parents or caretakers. A more comprehensive chart review is also being included, as is frequent feedback to the practice teams about their performance.

## **Impact and Potential Impact**

One innovation of the MYOC is a set of simple, low-cost tools developed to help clinicians address overweight with their patients. One of these tools—a handy laminated flip chart for office use—is offered for sale by the Maine Chapter of the American Academy of Pediatrics.<sup>2</sup> The tool includes reference charts, appropriate medical tests for overweight children, and suggested intervention techniques. The tools will be updated as recommendations change.

MYOC has been recognized by the National Initiative for Children’s Healthcare Quality for outstanding achievements in preventing and treating childhood obesity. The intention of the program is to train all physicians in Maine so that addressing children’s weight may become a routine part of clinical practice.

<sup>1</sup> [www.ama-assn.org/ama1/pub/upload/mm/433/ped\\_obesity\\_recs.pdf](http://www.ama-assn.org/ama1/pub/upload/mm/433/ped_obesity_recs.pdf)

<sup>2</sup> [www.maineaap.org/project\\_youthoverweight.htm](http://www.maineaap.org/project_youthoverweight.htm)

## **References**

- American Academy of Pediatrics. Prevention of pediatric overweight and obesity: policy statement. *Pediatrics* 2003;112(2):424-30.



## Funding Summary

CDC processes three types of funding for the Prevention Research Centers: core awards, special interest project (SIP) support, and supplemental funds. The sources of this funding include the annual appropriation made directly to the PRC Program and funds distributed by divisions of CDC and other HHS agencies for agency-defined projects and other research needs. The total award amounts for each of these categories and for the fiscal year are given below for 2006 and 2007. Information about previous years, changes in funding over time, the ratio of core funds to SIP funds, and related data are available from the PRC Program office.

<b>Award Type</b>	<b>Fiscal Year 2006</b>	<b>Fiscal Year 2007</b>
<b>Core</b>	\$24,317,187	\$24,183,691
<b>Special Interest Project</b>	22,301,708	18,155,600
<b>Supplemental</b>	2,210,071	3,583,526
<b>TOTAL</b>	<b>\$48,828,966</b>	<b>\$45,922,817</b>

These totals do not include funds that the PRCs receive from other funders.

Many PRCs use a portion of the CDC core funding to build infrastructure and expertise, then leverage their positions to attract resources from other funders. For example, from its founding in 1998 through 2005, the PRC at Yale University was awarded about \$5.5 million from CDC for its core activities. Over this same period, the center positioned itself to attract another \$7 million from 19 funding agencies, conducted more than 52 studies, and published an equivalent number of research articles in the scientific literature.

At several long-established centers, CDC's support is only a small percentage of the funding for prevention research—for example, less than 10 percent at the University of North Carolina's PRC. Other centers have also demonstrated how the PRC model can offer a significant return on investment.





## **Prevention Research Centers Host Institution and Core Research Focus**

### **University of Alabama at Birmingham**

*Reducing health risks and disparities in Alabama's underserved, rural communities*

### **University of Arizona**

*Preventing and controlling diabetes in communities on the Arizona-Mexico border*

### **Boston University**

*Improving the health and well-being of Boston's public housing residents*

### **University of California at Berkeley**

*Improving health in California's Korean American communities*

### **University of California at Los Angeles**

*Involving parents in promoting health and preventing disease among adolescents*

### **University of Colorado**

*Reducing the risk of overweight and diabetes in the Rocky Mountain region of Colorado*

### **Columbia University**

*Developing Web-site communications to promote health in minority communities*

### **Emory University**

*Reducing health disparities and preventing cancer in rural southwest Georgia*

### **Harvard University**

*Improving nutrition and physical activity among children and adolescents*

### **University of Illinois at Chicago**

*Preventing diabetes in Chicago's low-income, underserved minority communities*

### **University of Iowa**

*Empowering community organizations in rural Iowa to improve the health and quality of life of community residents*

### **Johns Hopkins University**

*Preparing young people in Baltimore to be healthy and productive adults*

### **University of Kentucky**

*Preventing and controlling cancer among residents in rural Appalachian Kentucky*

### **University of Michigan**

*Increasing the ability of communities to reduce health disparities and improve residents' health*

### **University of Minnesota**

*Preventing and reducing risk behaviors among teenagers and promoting healthy adolescent development*

**Morehouse School of Medicine**

*Building the capacity of low-income, African-American communities to promote health*

**University of New Mexico**

*Promoting the mental health and well-being of American Indian youth and their families*

**State University of New York at Albany**

*Preventing and controlling diabetes among underserved residents in the capital region of New York State*

**University of North Carolina at Chapel Hill**

*Reducing the risk for obesity among minority women in rural North Carolina*

**University of Oklahoma**

*Promoting healthy lifestyles among students in Oklahoma's public schools*

**Oregon Health and Science University**

*Improving the health of American Indian, Alaska Native, and Native Hawaiian communities*

**University of Pittsburgh**

*Preventing disease and promoting healthy, active lives for older adults in Pennsylvania*

**University of Rochester**

*Promoting health and preventing disease among people who are deaf or hard-of-hearing*

**Saint Louis University**

*Reducing risks for heart disease, stroke, and cancer among residents of rural Missouri*

**San Diego State University and University of California at San Diego**

*Increasing physical activity and improving health among Latinos in San Diego*

**University of South Carolina**

*Promoting and supporting physical activity in underserved communities*

**University of South Florida**

*Using community-based prevention marketing to improve community health*

**Texas A&M University System Health Science Center**

*Preventing diabetes and other chronic diseases in underserved rural communities*

**University of Texas Health Science Center at Houston**

*Studying influences on children's behavior as they age to early adulthood*

**Tulane University**

*Improving health behaviors of New Orleans residents through neighborhood reconstruction and environmental change*

**University of Washington**

*Sustaining physical activity among older adults*

**West Virginia University**

*Improving health and quality of life among rural adolescents*

**Yale University**

*Preventing or reducing chronic disease in Connecticut's economically disadvantaged cities*





