PREVENTION RESEARCH CENTERS

# Building a Healthy World

## Personal Stories of Prevention Research in Practice

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## Personal Stories of Prevention Research in Practice

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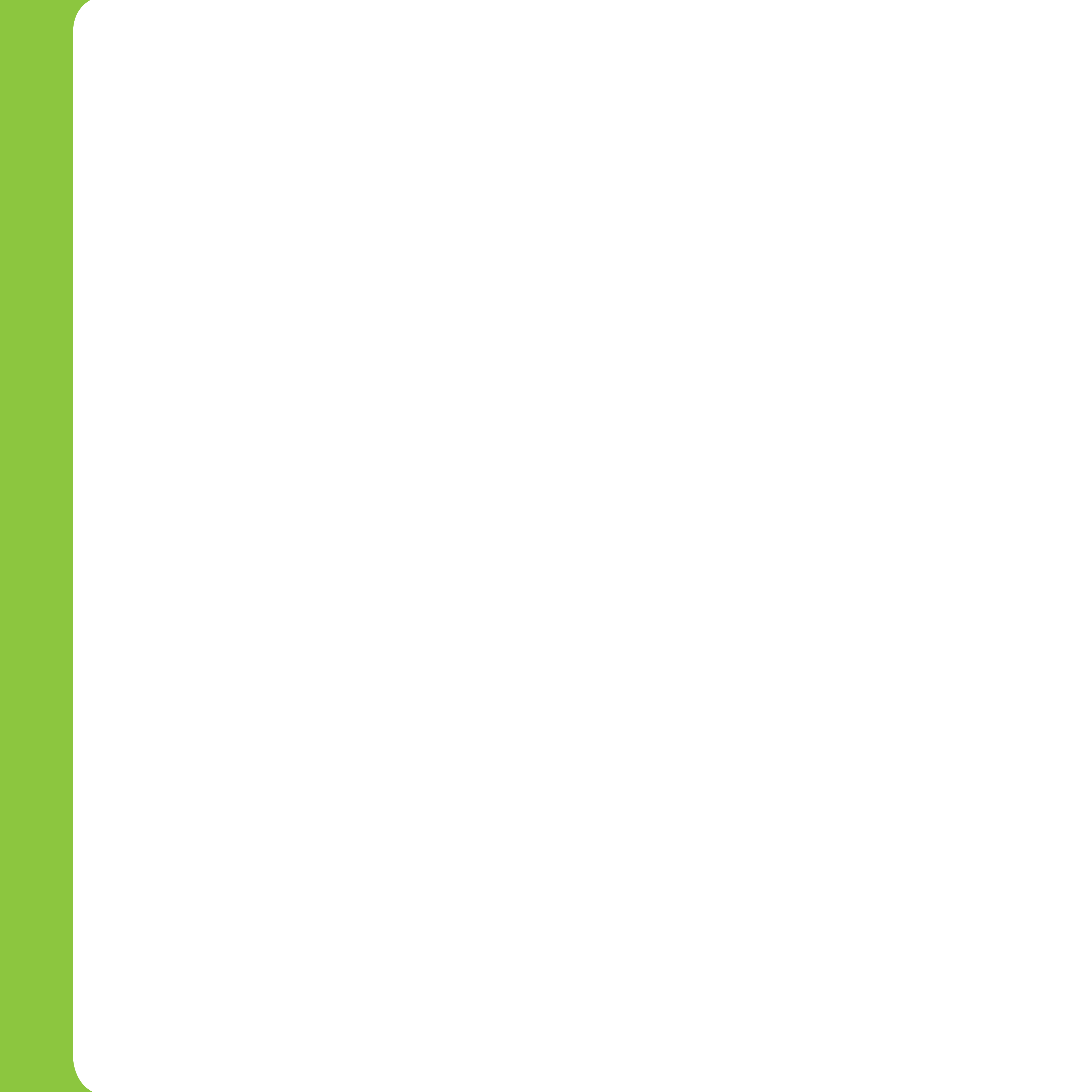
For more information about the Prevention Research Centers and to read the stories online, visit http://www.cdc.gov/prc.



# Preface

To prevent disease is to save lives and money, and the 33 Prevention Research Centers (PRCs) funded by CDC are working to find the most effective ways to do that. By preventing cancer, diabetes, and heart disease, PRC interventions can reduce the huge costs of health care that Americans share.

PRCs create interventions sensitive to the communities most at risk—often poor or isolated groups. The researchers do this by involving the people in those communities in the research process. For example, who knows better how to reach rural teenagers than rural teenagers themselves?

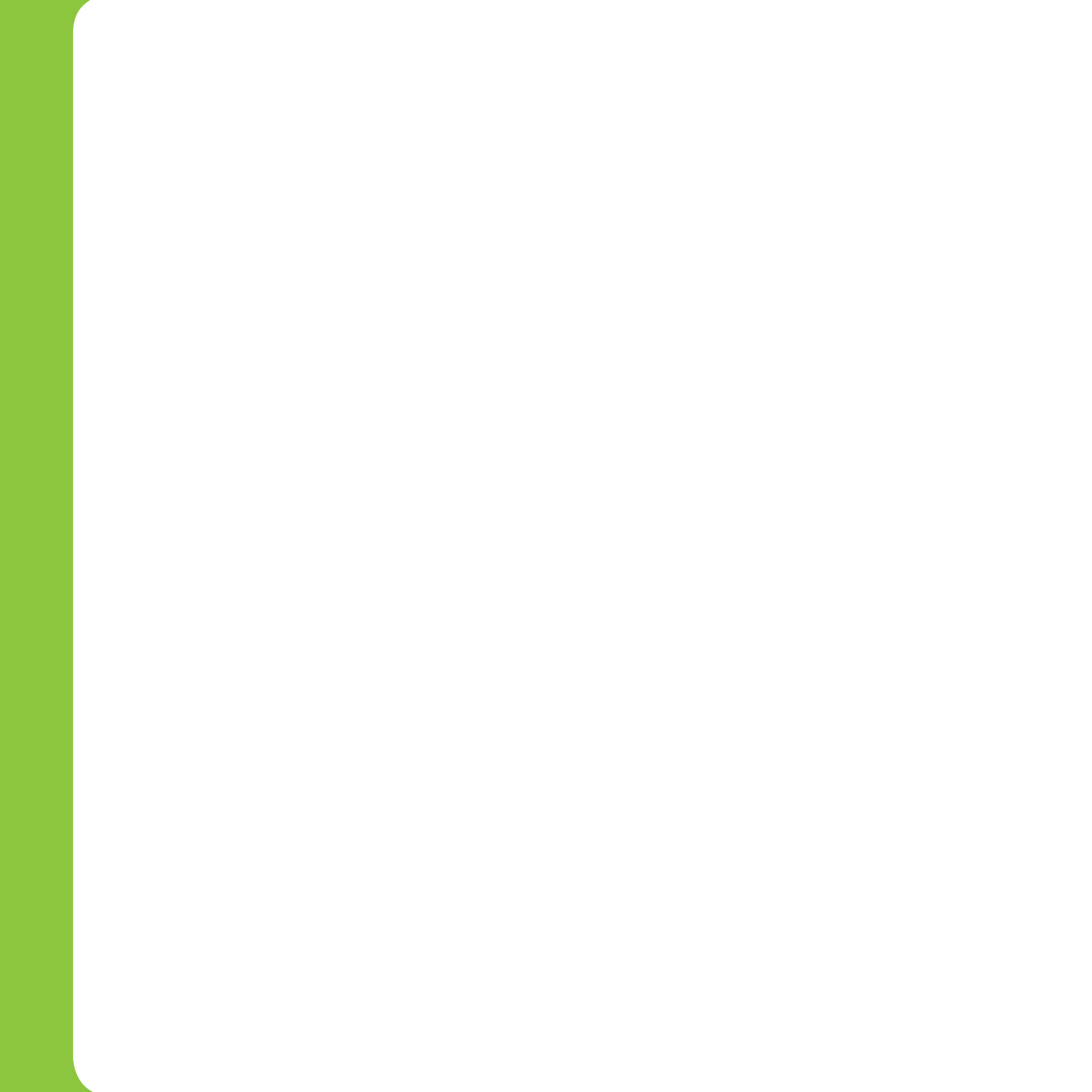
By using the combined knowledge of universities and communities, PRCs ensure that research money is spent wisely. And the results bear that out. For example, one intervention for older adults in Washington State showed that people who participated in fitness sessions at least once each week had significantly fewer hospitalizations (by nearly 8%) and lower health care costs (by $1,057) than nonparticipants.

Beyond numbers, the PRCs show their effectiveness in the faces of the people they have touched. People like Irma Camacho, who can walk down the block again after being in a wheelchair for 5 years, thanks to an intervention from the PRC in Arizona. People like Mary Spearen, who started smoking when she was 7 but quit, along with her sister, after being empowered by the PRC in West Virginia. And people like Barbara Myerson, who had given up hope until a depression intervention from the Washington PRC inspired her to live again.

Read their stories in this book. Read how prevention research is making a difference in individual lives and having an impact on society's approach to health care.

Many of the interventions are being tested for distribution statewide and nationwide. The PRC network is determined to find the best possible ways to get programs up and running for the long term, advancing the field of dissemination research.

Remember these faces, with the hope and knowledge that their healthy smiles can be reflected on the faces of neighbors, friends, and relatives everywhere.



# From the Program Director

This booklet tells the stories of some extraordinary people. They are extraordinary for sharing their personal insights and struggles as they tried to improve their health and well-being. What's more, these people are among many generous Americans who have given their time and energy to research that we can all benefit from.

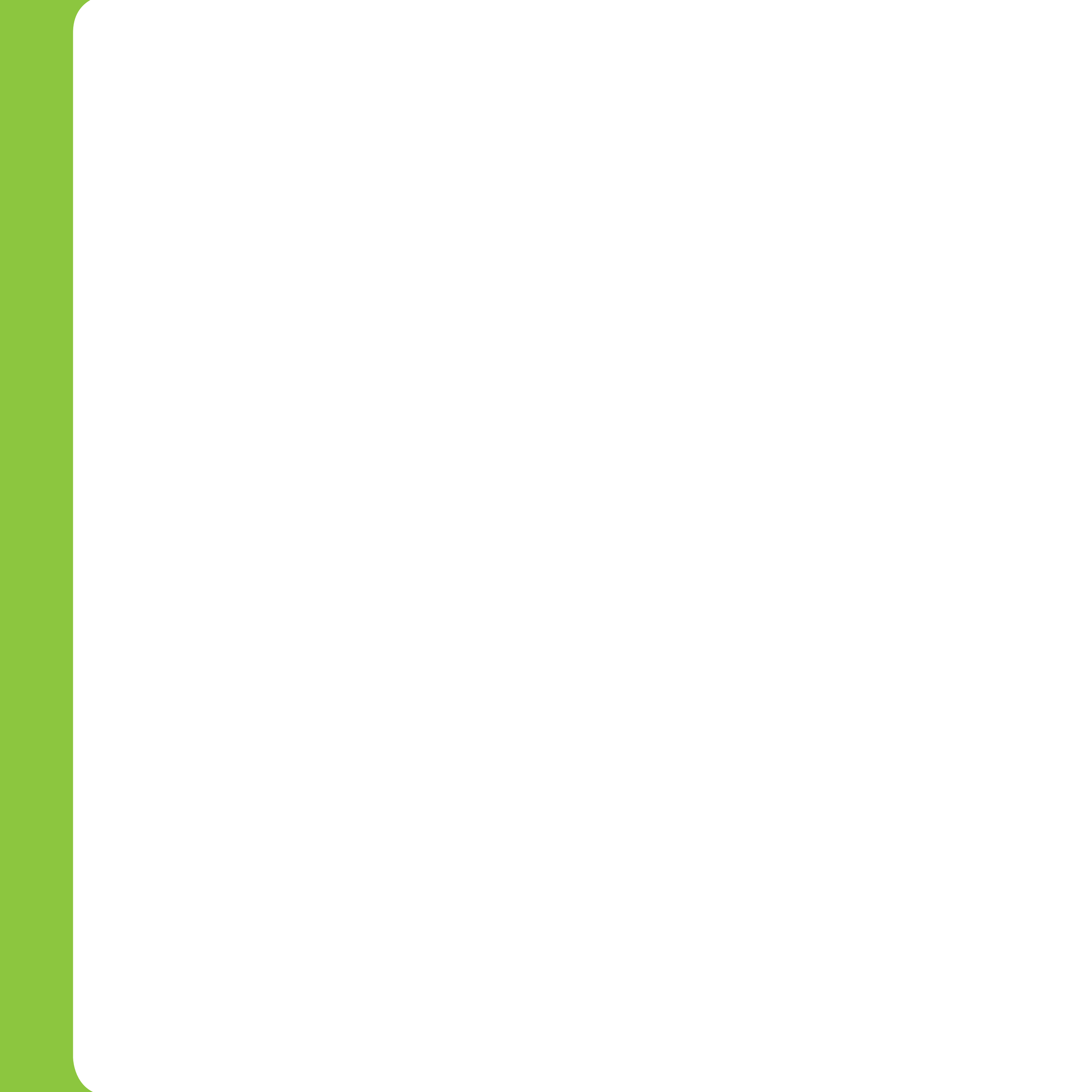
The people featured in these stories live in communities throughout the country where a select set of academic centers are conducting prevention research. Program planners at these Prevention Research Centers partner with underserved communities to create strategies that will help change people and policies in health-promoting ways.

I would like to express my appreciation to the participants in all PRC partner communities who contribute their knowledge and lend their trust to crucial research that can lead to better lives for people everywhere. Their commitment makes this research possible.

I give my special thanks to the people featured in these stories who let the spotlight shine on them so that the communities, the research, the health conditions, and the challenges of this work can be understood by everyone. These people have opened up their lives to us, and for that I cannot find words that express my gratitude.

Let me simply say, thank you.

Eduardo J. Simoes, MD, MSc, MPH
Program Director
Prevention Research Centers
Division of Adult and Community Health
National Center for Chronic Disease Prevention and Health Promotion



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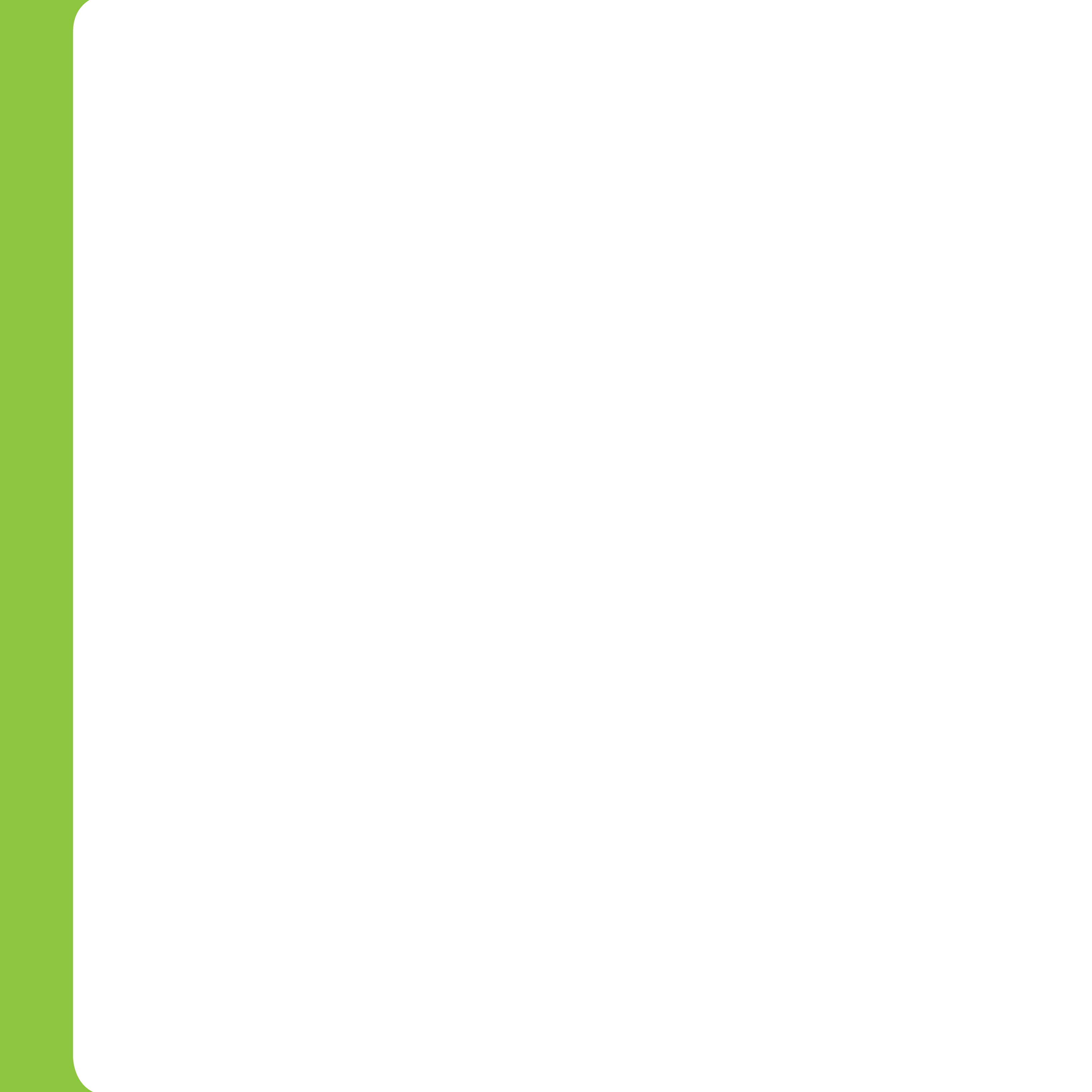
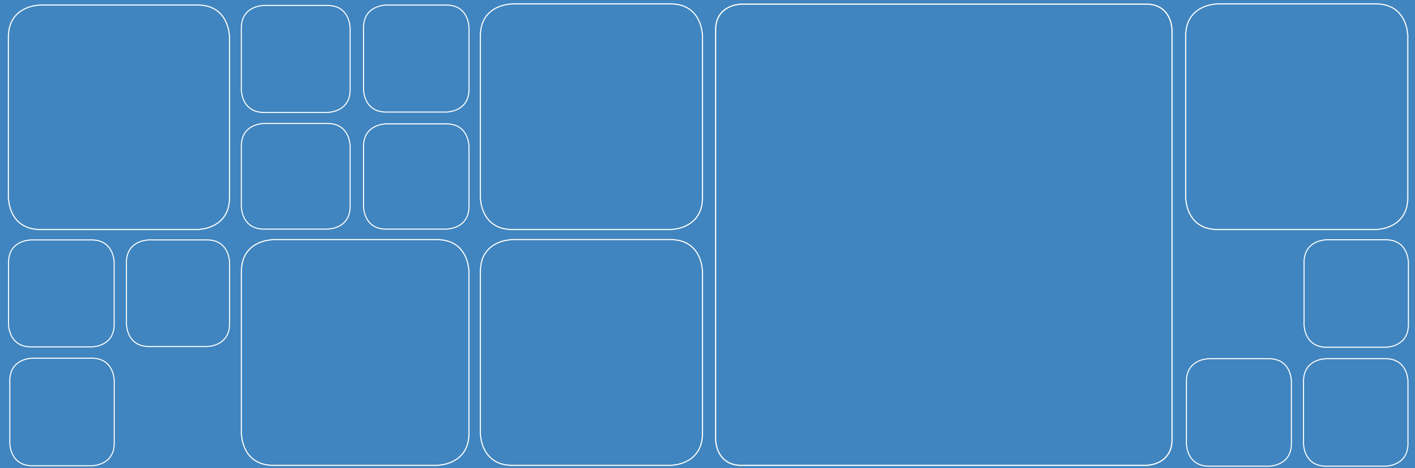
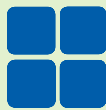




# Personal Stories of Prevention Research in Practice

*"The Prevention Research Centers epitomize what CDC is all about when it comes to working with partners at the grassroots level to protect our nation's health. Their efforts are resulting in the very information Americans need to choose safe and healthy lifestyles for themselves and their families."*

Julie L. Gerberding, MD, MPH
Director, Centers for Disease Control and Prevention



## Not On Tobacco

**West Virginia University Prevention Research Center**
http://prc.hsc.wvu.edu

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 of teens report smoking cigarettes, and more than two-thirds say they would like to quit.

Program achievements:

- 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.

# New Skills and Self-Esteem Help Teens Quit Smoking

Mary Spearen was 8 and her sister Morgan was 6 when they smoked their first cigarettes. They were living with their mother at a women's shelter in Fayetteville, West Virginia, when the resident bully approached them.

"I smoke," the older girl said. "And if you want to hang out with me and the cool group, you're going to smoke too." And if they didn't, she said, she would beat them up.

Soon afterward, Mary Spearen was picking cigarette butts off the ground and smoking them. Her younger sister followed behind. By the time they were teenagers, the sisters were each smoking a pack of cigarettes every two days.

"In high school, it was really just considered the norm to be smoking," said Morgan Spearen, now a 20-year-old sophomore at West Virginia University. "If you weren't smoking, it was more abnormal than if you were."

In the late 1990s, the teen smoking rate rose across the country, and West Virginia led the pack: 42% of teenagers said they smoked. Then, researchers at the West Virginia Prevention Research Center stepped in. Working with the American Lung Association (ALA) and the state Department of Education and Bureau of Public Health—and with money from the Centers for Disease Control and Prevention—the PRC researchers developed a smoking cessation program that both worked and appealed to teenagers. That program, Not On Tobacco (N-O-T), helped Mary and Morgan Spearen quit smoking and is now helping teenagers quit in

Mary, left, and Morgan Spearen discuss their N-O-T experiences.

"I hate the smell of it. I don't want to be around it, ever."

Mary Spearen
N-O-T participant

all 50 states. An ALA-adopted national best-practice model, N-O-T has been translated into Spanish and adapted for use with American Indian teens.

"If we got more funding today, one of the things we'd do is put it into the N-O-T program to expand it, because we know it would work," said Bruce Adkins, director of the Division of Tobacco Prevention at the state Bureau of Public Health. According to the ALA, 30% of 1,623 students who completed N-O-T in West Virginia since 1999 have quit smoking, and 53% have reduced their smoking.

In a five-state study of field-based N-O-T programs, 80% of participants found the program relevant and helpful for quitting smoking. And in West Virginia, the smoking rate for teenagers declined from 42% in 1999 to 28% in 2003—in part because of N-O-T, according to public health officials. Results from the 2005 West Virginia Youth Risk Behavior Survey show that the downturn is continuing.

Part of the reason N-O-T is so effective is because it reaches kids when they are ready to stop, supporters say.

According to Dean Lee, head of anti-tobacco programming for the state Department of Education, surveys show that 50% of teen smokers in West Virginia have thought about quitting. "They just need a vehicle," he said. Making the decision to quit smoking can be difficult for teenagers in rural West Virginia, where smoking is seen as a rite of passage. Back at Mary and Morgan's high school in Fayetteville, three senior girls who went through N-O-T this fall said their parents bought them or gave them their first cigarettes around age 11. Many homes and restaurants are full of smoke, the students said. And parents aren't always supportive of a child's decision to quit.

"My dad at first told me I wouldn't be able to do it," said Jessica Hunt, 18, who signed up for N-O-T because she was having trouble breathing. At her house, everyone smokes. At the restaurant where she works, everyone smokes, and the smokers get extra privileges like breaks outside. But she has seen first-hand the damage smoking can do.

"All of my grandparents now are sick or have died of lung cancer," Ms. Hunt said. Through N-O-T, she has reduced her habit from a pack and a half a day to a pack every two or three days, and she can breathe again, she said.

For Kim Smith, 18, who started smoking when she was 11 because her friends smoked, the impetus to quit smoking came when her doctor told her the smoke was affecting her 1-year-old son, Dalton.

"He started getting sick all the time, coughing, asthma," she said.

Her peers in N-O-T helped her quit, and she is trying to get two friends—who were expelled from school and are pregnant and smoking—to quit by teaching them skills she learned in N-O-T.

"Everybody supports everyone else," Ms. Smith said.

N-O-T consists of 10 weekly sessions for groups of students, who are divided by sex. The sessions are held at a high school and led by a facilitator who is usually a teacher or school nurse. Students learn quitting techniques and keep journals about their smoking behavior. N-O-T offers positive peer pressure, skill-building, and self-esteem boosting.

Mary and Morgan Spearen remember specific aspects of N-O-T that reached them.

According to Mary Spearen, learning the actual ingredients of cigarette smoke, such as carbon monoxide and cyanide, made a big impression on her. So did the answers she learned for every excuse to keep smoking. For example, if she skipped a few cigarettes, the cough she'd get was actually because of the smoke and pollutants coming loose in her lungs and exiting her system.

Morgan Spearen appreciated the method of setting small goals, keeping a journal, and finding a way to modify her thought processes. "The thing I learned the most from N-O-T was the self-talk," said Ms. Spearen, who now studies psychology. "If you tell yourself, 'I can do this, I can stop smoking,' then you can. If we'd say, we smoke because we're stressed out, we'd think of ways to not be stressed out."

Program supporters say that a personal relationship between students and the facilitator sets N-O-T apart from other stop-smoking efforts. Many of the facilitators are ex-smokers and share their own quitting stories and struggles with

the facilitators are ex-smokers and share their own quitting stories and struggles with the students.

Bev Hall, a life skills teacher at Fayetteville High School, was the facilitator who recruited both girls.

"Every time I'd come in, she'd say, 'Morgan, you smell like cigarettes, you smell like cigarettes.'"

"There were flyers," Mary Spearen said. "Mrs. Hall said, 'Are you going to sign up for this thing?' I was like, 'Yeah, whatever.' I thought, you know, I don't want to smoke forever. I don't really like it. This could be fun. Plus, I'll get out of class."

Bev Hall, a teacher at Fayetteville High School, leads N-O-T sessions and is a resource for students trying to quit smoking.

She said that among her peers, smoking often went hand-in-hand with drinking and other risky behavior, and it was permitted by young and uneducated parents.

"Girls were not allowed to do as much as boys," Ms. Spearen said. "We felt so, 'We gotta get out, we gotta experience.' Even though we didn't know exactly what it was we wanted to experience. If you smoked, you could talk to another girl. You could ask for another cigarette. You felt in control."

Growing up poor with a difficult family situation also made cigarettes attractive. "It was a sign to the world, 'I'm a deep person and I have issues. I need a cigarette,'" Morgan Spearen said.

Mary Spearen, now a senior theater major at West Virginia University, said N-O-T helped her realize she could take control of her life not only with smoking, but also with other situations.

"We started to see we weren't doing it for our teachers or our parents, we were doing it for our health. It was empowering. We learned not only could we quit smoking, we didn't have to have sex with a guy."

"Once you get past that addiction, what is it in your head that makes you need that toxic smoke in your lungs?" she wondered. "It does not help you relax, you're still uncool, you're not sexy."

Ms. Spearen lapsed back into smoking her freshman year of college, but she quickly drew on her N-O-T experiences to quit again. "I realized it wasn't me anymore," she said.

Geri Dino, a founder of the program and a scientist at West Virginia University's PRC, said the fact that students return to their N-O-T experience years later shows the staying power of the program.

"To me, that speaks volumes of the program—that they're able to retain those skills and knowledge," she said.

The West Virginia University PRC is now pilot testing a new version of the N-O-T program that incorporates physical activity into the quitting process.

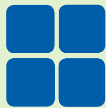
Morgan Spearen has largely stayed away from cigarettes since going through N-O-T. She said getting out of Fayetteville and into a dormitory in Morgantown helped too.

"I was like, 'You have to go outside to smoke a cigarette?' I couldn't believe it. For the first time, I met people who didn't smoke." ■

Mary and Morgan Spearen, sisters and students at West Virginia University, quit smoking while they were in high school with the help of the N-O-T program.

*"It will take all of us to switch from a treatment-oriented society to a prevention-oriented society, but the effort will be worth it for individuals, families, and the overall health of our nation."*

Vice Admiral Richard H. Carmona, MD, MPH, FACS
Former Surgeon General
U.S. Department of Health and Human Services



## Comprehensive Diabetes Intervention Research Project

**University of Arizona Canyon Ranch Center for Prevention and Health Promotion**
**http://crcphp.publichealth.arizona.edu**

About 9.5%, or 2.5 million, Hispanic and Latino adults in the United States may have diabetes, a much higher rate than among non-Hispanic white adults. Healthy diets and regular exercise have been shown to improve the health of people who already have the disease. When untreated, diabetes can lead to complications in the eyes, heart, kidneys, nerves, and feet. People who have diabetes are also more likely to suffer from depression.

Program achievements:

- Involves patients, family members, friends, and neighbors in long-term change.
- Community action boards advocate for policies to help guard against diabetes.
- *Promotoras* lead classes and walking groups.
- Participants report improved health behaviors.

# Families on the Border Join the Fight Against Diabetes

Felix Lopez, 74, learned 6 months ago he has diabetes. It didn't come as a shock to him. He had been feeling tired, and in his town of Douglas, Arizona, on the U.S.–Mexico border, almost 22% of people over 40 have diabetes—a higher rate than in most Latino communities, and much higher than the U.S. average.

But what he did afterward was something new.

He invited his wife and daughter to a class on how to control and prevent Type II diabetes and its complications. In the class, held at a local church, the Lopez family talked with two other families and a *promotora,* or a lay health adviser, about the importance of eating a healthy breakfast every day and ordering low-fat dishes in restaurants. They danced the salsa in a conga line around the building, with the grandson of one participant leading the way. Then, they all worked together to make a dinner of chicken tostadas, vegetables, and fruit salad, which they shared around a table.

Mr. Lopez says he is feeling better. He did a handstand in the church's kitchen to prove it.

The class is part of a program run by the Canyon Ranch Center for Prevention and Health Promotion, 1 of 33 Prevention Research Centers funded by the Centers for Disease Control and Prevention. The center, formerly known as the Southwest Center for Community Health Promotion, is housed

Felix Lopez, left, cooks a healthy meal with family members during a Diabetes and the Family class.

at the University of Arizona's Mel and Enid Zuckerman College of Public Health. Researchers hope to show that involving families, communities, and promotoras in the comprehensive care of a person with diabetes leads to better health outcomes than a traditional approach to care in which a patient only discusses the disease with his or her physician.

Diabetes is a disease that keeps the body from properly regulating sugar, and the Type II form, which continues to grow in prevalence in the United States, is associated with overweight. Healthy diets and regular exercise have been shown to improve the health of people who already have the disease. When untreated, diabetes can lead to complications in the eyes, heart, kidneys, nerves, and feet, and people with diabetes also are more likely to suffer from depression.

Researchers say this intervention will not only help patients, but could also inspire family members, friends, neighbors, and concerned community members to live healthily and keep from developing diabetes themselves. "For diabetes, we know that lifestyle changes can prevent or delay the onset," said Lisa Staten, PhD, director of the Canyon Ranch Center for Prevention and Health Promotion. "We've got to figure out how to work with communities so that they know and believe that."

The center employs four promotoras in Douglas who teach nutrition, physical activity, and disease prevention in a 5-week class for families, *Diabetes y la Unión Familiar* (Diabetes and the Family), and a

Promotora Lourdes Fernandez, right, assists a participant during a Diabetes and the Family class.

“It’s not enough for the patient with diabetes to eat healthy. We also want the family members to eat healthy in order to prevent diabetes.”

Kerstin Reinschmidt
University of Arizona Canyon Ranch Center for Prevention and Health Promotion

12-week class for community members, *Pasos Adelante* (Steps Forward). Both are held at local churches. A fifth promotora, paid by the local Chiricahua Community Health Center, a partner of the university, helps a registered nurse teach a 4-session program to health center patients with diabetes. All the classes are free. Researchers are tracking outcomes such as weight, body mass index, blood sugar and cholesterol levels, diet, exercise, and other health behaviors to see how much each of the three interventions helps and what the effects are of combining more than one intervention. They are also working with the community to enact lasting policy changes that will keep people in the region healthy.

Mr. Lopez, who moved to the United States from Mexico 40 years ago, calls promotora Lourdes Fernandez, “my guardian angel.” She put him in touch with a dentist and an eye doctor and helped him find appropriate shoes to protect his feet. He began to walk for an hour every day starting at 6 a.m. He also began to drink more water, essential for helping his body regulate sugar. But he said that while he feels much better, change hasn’t been easy.

“It’s very difficult to change your habits, the way you have lived all your life,” Mr. Lopez said.

That sentiment is common among patients and health care providers both—changing health behavior is much more difficult than taking a pill.

“Trying to get someone to change their diet is huge,” said Ginger Ryan, CEO of the community health center. She said while some traditional Hispanic foods can make up a healthy diet, other foods such as high-carbohydrate tortillas, beans, cheese, and eggs can be troublesome for people with diabetes because the body quickly converts them to sugar.

But while some cultural factors, such as diet, may contribute to the high rates of diabetes in Hispanic communities, other cultural factors, such as close extended families, might help stop the epidemic. Researchers are counting on close-knit networks of neighbors to pass on tips and help each other stay healthy.

On a recent morning, five women who have participated in the *Pasos Adelante* program over the past year gathered with Ms. Fernandez, the promotora, to talk about how the class changed their lives.

Maria Lamadrid, 39, didn’t think the class was for her, even though her father died of diabetes complications. Then a doctor told her that her

Promotora Blanca Robles measures the height and weight of *Pasos Adelante* participant Maria Arballo.

cholesterol level was high, and she enrolled. The class explains how cholesterol, blood pressure, diabetes, and heart disease are related. Ms. Lamadrid started paying attention to the types of fats she was eating. She cut out soft drinks and now drinks only skim milk. She brought her 6-year-old son Francisco to the classes, and he exercises with her. She also brought 10 co-workers from the restaurant where she works. After her session was over, she referred 8 more people to the next one.

Having so many people around her who are also taking the class creates a huge support group, she said. "When sometimes I don't feel like walking, my husband will say, come on, let's walk," she said. "I feel very well and want everyone to feel well too."

Irma Camacho, 53, lost 20 pounds during the class, and so did her husband. "In the past I had a lot of problems getting him to eat a salad on the side," she said of her husband. "Now we're both eating more salad. We stopped eating flour tortillas, we use corn tortillas and whole wheat bread. There are a lot of changes in the house now."

But it was more than that for her—the class helped her mental state too. Ms. Camacho has lupus and also had a long and difficult recovery from an infection after knee surgery. She was in a wheelchair for 5 years, and she became depressed and obese. "I didn't want to go anywhere," she said. "Always, I was crying and crying and crying."

Since she started the class, she's been walking a few steps at a time and can now walk almost half a block. She does exercises at home, and her cholesterol and blood pressure levels have improved. She and her husband decided to repeat the class after their session ended.

"We're going to be here until Lourdes says, 'We're going to kick you out,'" she said.

It's not that the women didn't know what was or was not healthy to eat, or that exercise is important, they said. "We knew what's good and what's bad,"

“I’m still doing what I learned. Eating habits, number one, and exercising.”

Mary Grijalva
*Pasos Adelante* participant

explained Mary Grijalva, 64. “But being in a group really helped.”

And in at least one case, the group learning may have saved a life. Carla Chavez, 60, is the caretaker for her sister Rosa, who has diabetes. In the class, Ms. Chavez learned how to test blood sugar using a finger-prick test. She knew what to look for one day when her sister appeared sick and couldn’t swallow. Ms. Chavez measured her sister’s sugar and found it was dangerously low. Ms. Chavez immediately called a promotora, who told her to call an ambulance. “Right away, my reaction is really fast because I learned in the class,” she said.

Ms. Fernandez was a nurse in Mexico before she moved to the United States 25 years ago. She said the kinship she feels with the patients and participants helps them to trust her. Everyone agrees the promotoras are the heart of the program.

“We are talking the same,” Ms. Fernandez said. “That is the main thing, the trust they place in you because you are there to help. As long as you gain that trust in the community, you are a resource.”

Promotoras Blanca Robles and Martha Barrerra not only teach the community classes on Tuesday nights, but on three mornings a week at 6:30 a.m. they walk with all the class participants. The oldest is 82. On one Tuesday morning, 20 people gathered at dawn to walk a circular path around a park as the sun rose above the mountains.

“I did two turns without even thinking about it,” said one participant who visited with her sister-in-law while walking.

Researchers say that people in the border region, a swath of land about 60 miles north and south of the U.S.–Mexico border and 2,000 miles long—from California to Texas—face challenges when it comes

The *Pasos Adelante* walking group heads out at 6:30 a.m. in Douglas, Arizona.

Jill Guernsey de Zapien, a longtime border health activist, stands near the divide between Douglas, Arizona, and Agua Prieta, Sonora, Mexico. She is a professor with the University of Arizona's Canyon Ranch Center for Prevention and Health Promotion.

to health because of having few resources. If the U.S.–Mexico border region were a state, it would be the one with the highest poverty level, said Jill Guernsey de Zapien, associate dean of the school of public health at the university and a longtime border health researcher. The physical line cuts metropolitan areas in half, and each side is under a different country's control, with different laws, infrastructure, and health care systems. Many area residents have family on both sides and go back and forth, which makes consistent health care problematic.

The Canyon Ranch Center for Prevention and Health Promotion, based in Tucson, began doing research in Douglas in 1996. The center hired promotoras to conduct a survey that found an extremely high level of diabetes in the area. The researchers got to know the community, which started the Douglas Diabetes Work Group, and together the collaborators sought and received grant money for rural health outreach. In 2000, the center used federal grants to expand to two border counties, Santa Cruz and Yuma, and began the family and community interventions. In 2005, they brought the program back to Douglas, added the patient intervention, and began rigorously measuring results. Scientific outcomes are expected to be known within a year.

In each county, the researchers have collaborated extensively with community organizations and residents to develop capable "Special Action Groups" or "SAGs." These teams consist of local decision makers, teachers, health care workers, concerned community members, and academics who want to see lasting changes and capitalize on the strengths of communities. The SAGs work on projects that

augment the intervention classes by making healthy community changes. In Yuma County, for example, SAG members noticed there were not enough parks, so they organized and applied for a block grant to create a brand new park. In Santa Cruz County, the SAG went to the developer of a new superstore and convinced the leaders to build a walking path around it. That group has become a consultant about public space to a state-mandated development panel in the county. And in Douglas, the SAG that evolved from the Douglas Diabetes Work Group has been instrumental in creating a nutrition policy for the public schools that requires higher nutritional content and less sugar and fat in school lunches.

"Our experience has been in working with coalitions that transform themselves into action-oriented groups," said Joel Meister, PhD, a professor with the center who studies policy and works closely with the SAGs.

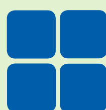
"We kind of play the role of community developers, full partners," Dr. Meister said. "We really focus the community on the whole issue of environmental shift and policy change as the next obvious step. For health promotion ultimately to be effective and to reach a broad part of the community, it has to go beyond traditional boundaries."

The border divides the towns of Douglas, Arizona, on the left, and Agua Prieta, Sonora, Mexico, on the right. The two cities act as one metropolitan region, according to locals.

The community involvement is important because without it programs might not continue after the researchers have to leave, Dr. Staten said. "It's very shortsighted if you don't work with communities. That's our only hope of sustainability. These communities are fighters."

*"We must elevate prevention from a concept into public policy and standard practice nationwide."*

John R. Seffrin, PhD
Chief Executive Officer
American Cancer Society



## Planet Health—A Health Education Program for School Children

**Harvard University Prevention Research Center on Nutrition and Physical Activity**
**http://www.hsph.harvard.edu/prc**

Between 1980 and 1999, the prevalence of overweight in the United States nearly tripled among adolescents and nearly doubled among children 6 to 11 years of age. This trend forecasts an increase in chronic disease as the younger generation ages. Little is known about effective ways to reverse this alarming trend, although its root cause of insufficient physical activity in relation to excess calories consumed is well known. Because most children spend a substantial portion of their day in school, the school environment is a promising venue for teaching children about healthy lifestyles.

Program achievements:

- Physical activity and nutrition lessons woven into existing middle school curriculum; readily adopted by teachers.
- Effective in reducing TV viewing time among both boys and girls and decreasing obesity among girls.
- Cost-effective and projected to save health care costs later in life.
- Disseminated by Boston Public Schools and Blue Cross/Blue Shield of Massachusetts.

# Reading, Writing, and Reducing Obesity

"Carbohydrates. Who has any idea what that's all about?" Heather Bacon stands in front of her 6th grade class in Ludlow, Massachusetts, and takes answers from a dozen students with raised hands.

They are working on a "word splash," connecting concepts about nutrition as they learn reading comprehension skills. The lesson is part of a unique curriculum designed at the Harvard University Prevention Research Center on Nutrition and Physical Activity.

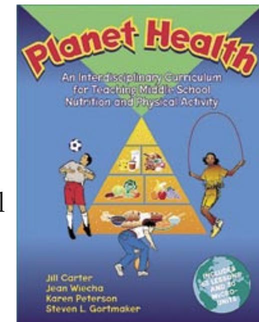
Called Planet Health, the lessons combine important messages on nutrition and physical activity with four academic subjects: social studies, math, science, and language arts.

Two 11-year-old girls discuss how to relate concepts on their word splashes.

"'Energy source' can go with 'sugar,'" says one girl. "Really?" asks another sitting opposite her. "Yeah, it makes you bounce off the walls," the first explains. "Oh, yeah," her friend replies with a giggle. They go on to connect 'balanced diet' and 'protein' and discuss their answers with their teacher and classmates.

Even though obesity is affecting many of America's children, health classes, nurses, and physical education (P.E.) still disappear from public schools because of tight budgets. These lessons are more important than ever, teachers say.

"The time kids spend in health and P.E. has been cut down," says Tracy Dawson-Greene, a 7th grade social studies teacher at John F. Kennedy (JFK) Middle School in Northampton, Massachusetts. "I asked the kids about food groups. It was sketchy. One of the kids asked me if fish is in the dairy group. They're just not getting it in the other classes."



Planet Health lesson book

The Planet Health curriculum meets Massachusetts academic standards and includes lessons designed to fit into a teacher's busy schedule. Kids get 24 lessons a year, six from each teacher in the four main subjects, plus special activities in their P.E. classes.

Planet Health also challenges students to turn off their televisions. Harvard researchers have shown

## “For each hour of television viewing, kids consume an extra 167 calories a day.”

Steven Gortmaker, PhD
Director, Harvard University Prevention Research Center on Nutrition and Physical Activity

that television viewing is directly related to obesity. The curriculum encourages kids to have 2 hours or less of “screen time” a day, including television, video games, and computer time.

“For each hour of television viewing, kids consume an extra 167 calories a day,” says Steven Gortmaker, Ph.D., director of the center, who has studied childhood obesity since the 1980s. Planet Health focuses on middle school children because extra weight put on in adolescence can stick around until adulthood, Gortmaker said.

Tracy Dawson-Greene sets out healthy snacks for her 7th grade class at John F. Kennedy Middle School in Northampton, Massachusetts, after a Planet Health lesson on nutrition.

Dr. Gortmaker looked for curriculum writers for Planet Health who would incorporate the knowledge of families, teachers, and principals. “We wanted to make sure we were connected to the way the kids were thinking about the world,” he said.

One Planet Health lesson shows children how much of their day they spend watching television by using a pie chart and then lets students choose other activities to fill the pie. Gortmaker said it’s important that the students make their own decisions about how to live healthfully.

“If kids choose stuff, they are more empowered. We’re not focused so much on the parents. They’re telling the students what to do. We want the kids to make their own choices.”

In a 2-year study at 10 middle schools, Planet Health not only reduced the amount of time boys and girls watched television, but also lowered the prevalence of obesity among girls. Another

study shows the program will save money for the children later in life; 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.

BlueCross/BlueShield of Massachusetts picked up the program in 2004 as part of an overall school wellness program, and it is now used in more than 120 schools across the state. The YMCA has also started offering a version of Planet Health during after-school programs in Massachusetts. Since 2001, when the curriculum was put into book form, more than 4,000 copies have sold. Researchers are working on a new edition that will add and update information about sugar-sweetened beverages, the different types of fats, and whole grains.

Jill Carter, co-author of the curriculum and a former science teacher, said she especially enjoyed coming up with lessons for science classes.

“Sugar-sweetened beverages can be a chemistry lesson,” she said. So can talking about how the body uses calcium and iron—when it is combined with a look at the elements on the periodic table, she explained.

Middle school students taking Planet Health lessons created this wall display to explain food labeling and portion size.

And don’t forget the physics in physical activity, Ms. Carter said. “The long jump lesson can relate to potential energy and kinetic energy.”

Teachers are encouraged to adapt the lessons as needed. Amy Burlingame, a 6th grade teacher at JFK Middle School, recently did that for children with a learning disability. For a lesson on physical activity, instead of having the students write an

Eric Bowler, a 6th grader at John F. Kennedy Middle School in Northampton, Massachusetts, works on a brochure detailing his favorite physical activity—archery. Eric said he also enjoys climbing trees.

essay, she had them create brochures about their favorite physical activities and asked them to use whole sentences. The students, who named bicycling, skating, and swimming as favorite activities, were required to use two sources to research the brochure.

"All the skills that they are learning and practicing are skills they need anyway," Ms. Burlingame said. "And the content, it's all the stuff that I believe in."

Researchers and administrators say the biggest success of the program is the lifestyle changes it inspires—not just in classrooms, but also in whole communities. Schools that use Planet Health have begun to hold fitness days for families. Teachers have started yoga classes for themselves. At a school in Warren, Massachusetts, the food service coordinator stopped serving fried food. Mini-grants that come to schools with Planet Health participation pay for exercise equipment for students.

"It can snowball into these really huge collaborative efforts," said Christine Horan, a state coordinator for the program.

In Ms. Dawson-Greene's class, the Planet Health lesson of the day is about healthy food in foreign countries.

> "Today's nutrition lesson was a success. They're late to lunch because they're chowing down on fruits and vegetables."
>
> Tracy Dawson-Greene
> Planet Health teacher

First, the students talk about the fruits and vegetables that they eat at home and the benefits of eating them. Ms. Dawson-Greene hints at a snack if the students are productive, but she won't tell them what it is. "You're not allowed to decide how productive you're going to be based on what the snack is," she tells the groaning 12-year-olds.

The students get charts with five places on them: Cambodia, Haiti, Brazil, Puerto Rico, and the United States. They find them on a map. The charts list some foods eaten in the different places and how they are prepared. The students then compare the types of foods and talk about what they have and have not eaten.

Finally, they get to try mango, papaya, green and red peppers, red cabbage, and pomegranate-cranberry juice. The mango is a big hit.

This was Ms. Dawson-Greene's second Planet Health lesson since being trained in the curriculum. In her first, 8th grade students compared the level of physical activity in the United States before the Industrial Revolution with the present. She said the Planet Health curriculum inspires her, and she is planning a themed lunch to go along with an upcoming lesson on the Middle East.

"Today's nutrition lesson was a success," Ms. Dawson-Greene said. "They're late to lunch because they're chowing down on fruits and vegetables."

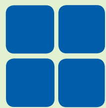
One girl seemed to agree, as she left the classroom with a handful of green pepper slices.

"We have to do this again!" she said. ■

The Planet Health curriculum encourages children to participate in 1 or more hours of physical activity per day.

*"Government public health agencies…must build and maintain partnerships with other organizations and sectors of society, working closely with communities and community-based organizations, the health care delivery system, academia, business, and the media."*

The Future of the Public's Health in the 21st Century
*Institute of Medicine Report, 2002*



## Partnership for an Active Community Environment

**Tulane University Prevention Research Center**
**http://sph.tulane.edu/prc**

The physical environment can make it easier or harder for people to practice healthy behaviors that directly affect rates of obesity, heart disease, diabetes, and other chronic diseases. Neighborhood characteristics—the availability of parks and healthy foods, and the layout of sidewalks, streets, traffic lighting, and other features—can influence residents' health. The flooding after Hurricane Katrina destroyed not only houses and levees, but also neighborhood infrastructure and social networks.

Program achievements:

- Advocates for rebuilding New Orleans to improve safety, activity, and nutrition.
- Supports community members' drive to influence rebuilding.
- Works with local and state governments and community organizations.
- Conducts surveys to help monitor residents' change.

# Building a Healthier New Orleans*

One hundred people sit in the Musician's Union Hall in New Orleans on a steamy Wednesday summer night, listening to speakers from the Louisiana Recovery Authority. The presenters explain how the residents can help rebuild their city, devastated by Hurricane Katrina a year ago. A summer storm threatens to end the presentation when the power goes out. But in the pitch black room, as thunder shakes the small building, all 100 people stay in their seats.

"Finish what you were saying," someone says.

A little thunder can't shake the resolve of people who lived months without electricity or gas and still drive past miles of rubble on streets yet to be repaired. They are determined to recognize their city again.

Two of the audience members are from Tulane University's Prevention Research Center. Center staff have attended more than 60 community meetings since January, and they have something to ask. What if New Orleans wasn't just brought back? What if it was brought back better? Healthier?

New Orleans residents struggle with debris on their streets as the city tries to put itself back together 1 year after Hurricane Katrina.

New Orleans, world-renowned for its jazz and jambalaya, has never been the healthiest of cities. CDC has consistently ranked Louisiana among the worst states in the country for obesity, cancer, and infant mortality. Many health problems are concentrated in poor neighborhoods and can be traced to unhealthy diets and a lack of physical activity.

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**This article was first published by the Prevention Research Centers Program in August 2006.*

The Prevention Research Center had planned before the storm to work with at least one of those neighborhoods to show that a community-led intervention could increase its residents' physical activity. In the researchers' and community members' vision, the built environment would be changed to make it easier for people to spend time outdoors. Changes would include adding sidewalks for pedestrian safety; adding parks for recreation; increasing lighting and visibility to reduce crime; locating schools, health clinics, and stores with fresh fruits and vegetables within walking distance of residential areas; making public transportation easy to access; and ridding neighborhoods of crime-attracting liquor stores. Each of these "healthy neighborhood" concepts is backed by research.

The project's intervention neighborhood is in the historic Upper 9th Ward of New Orleans, which received 1 to 3 feet of floodwater after Hurricane Katrina.

But after Katrina's flooding, miles and miles needed to be rebuilt. What was once a research project for the PRC became an opportunity and a mission: to improve not just one neighborhood, but all of them.

"We had a historic opportunity to rebuild things differently," said PRC director Tom Farley, MD, MPH. "We wanted to say, 'Stop, don't rebuild things how they were.' How many times have any of us said, 'If I had to rebuild it again from scratch, I certainly wouldn't rebuild it this way.' Well, we *can* rebuild it from scratch."

Just after the storm, he met in Baton Rouge with health officials and experts who released one of the first plans for a better health infrastructure, "Framework for a Healthier Greater New Orleans."

"We have a mixture of every possible walk of life here. The question for me is whether or not we can sustain the individual fortitude to keep going."

Kate Parker
Tulane Prevention Research Center

"I insisted we incorporate in it the idea of building healthy neighborhoods," Dr. Farley said. "We're not just rebuilding hospitals and clinics."

That plan went to all levels of government and the media. New Orleans mayor Ray Nagin asked Dr. Farley to sit on his Bring New Orleans Back Commission's Health and Social Services Committee.

In July, the city and the nonprofit group, Greater New Orleans Foundation, agreed on a unified process to plan how to rebuild the city's neighborhoods. Planners, funded by the Rockefeller Foundation, are gathering information from all previous plans and reports and taking input from neighborhood residents across the city. The hope is to have a city plan by the end of the year to present to the Louisiana Recovery Authority for federal rebuilding money.

A year after the hurricane, just under half of New Orleans' 450,000 population is back. Rebuilding progress is slow and sometimes hard for residents to see. About 50,000 returnees live in FEMA trailers, located in trailer parks or, more commonly, on their front lawns. Debris from gutted houses still lines the streets, and it appears faster than the city can clean it up. Abandoned, flooded cars are a common sight. Homes are scarred with spray-painted messages like "all clear" or "one body inside." Crime is up, thought by police to be tied to rising drug traffic. In some areas of the city, there is a sense of normalcy. In other parts of the city, many businesses and restaurants remain boarded up. Few schools and grocery stores are open.

If people weren't healthy before, post-hurricane life hasn't helped, says Carol Fernandez, who serves on the community advisory board for the PRC. She is working with the PRC on a program promoting vegetable consumption, and she is very interested in measures to help corner groceries provide more produce.

"If you don't take care of you and your health, then you're not going to be able to address all the rebuilding issues," she said, "For you to fight the insurance company, work on the house, all the things you need to do personally for rebuilding, if you're sick, if your health declines, you're not going to be able to do that."

But Ms. Fernandez acknowledges the challenges; she, too, faces them. She commutes 3 hours from Lake Charles, Louisiana, where she moved after

"It's like being hurt and sad that someone in your family has been hurt. New Orleanians have a really strong sense of place."

Dee Boling
Tulane Prevention Research Center

the hurricane. She and her husband and her two boys stay in a FEMA trailer when they are in New Orleans. Once you squeeze a man, a woman, two growing sons, and three dogs into a 240-square-foot FEMA trailer, she says, there's really no elbow room to chop vegetables for a healthy dinner. Fast food becomes very tempting.

An August 2006 article in the *Journal of the American Medical Association* reports that anxiety and stress are getting to the residents. The suicide rate in New Orleans has tripled, and mortality on the whole has gone up 25%. Fernandez estimates she has been to 10 funerals in the past year.

"Maybe their health was already compromised, and it's just exacerbated that," she said.

So she and the PRC are trying to make healthy choices easier for an already burdened population.

Kate Parker, MPH, program manager for the PRC, struggles to find her way around the Upper 9th Ward. Although she's driven the area dozens of times, mapping out a route to conduct physical activity observations, she finds it hard to orient her colleagues—many street signs have been down since the storm. The facility that makes the street signs was flooded.

Kate Parker, program manager for the Tulane Prevention Research Center's core project, stands by a beached boat in an empty lot in the intervention neighborhood. This lot could be turned into a playground or a community garden in a healthy neighborhood, she said.

When the PRC staff reunited in November, they decided to move ahead with their research project to show how community-driven physical change could affect one neighborhood and, at the same time, educate the city and planners about healthy neighborhoods.

"Now being the time when everyone is hyped up and super interested in what the new city can look like, there's no better time," Ms. Parker said.

The decision to continue with the project was cemented after the center conducted a survey this spring, funded by the Robert Wood Johnson Foundation, asking 1,073 returning residents what they want to see in their rebuilt neighborhoods. A resounding number cited less crime, good street lighting, clean streets, public transportation, grocery stores, parks, and sidewalks—just the things that the healthy neighborhoods plan would target.

The PRC's chosen intervention area remained the same—a small slice of the St. Roch and St. Claude neighborhoods in the Upper 9th Ward. This historic residential area is bounded by several high-traffic roads. Once it was home to the legendary streetcar named Desire, which brought customers to shops on St. Claude Avenue, but the streetcar was replaced by a common bus in the 1940s. Jazz musicians such as Jelly Roll Morton lived here. Before the hurricane, the area was 90% African American, and 40% of people owned their homes.

Most of the intervention area had just 1 to 3 feet of floodwater, coming to the top of the front steps on most houses but not covering the floors. Several blocks that were more flooded were not attracting residents back as quickly and had to be dropped from the study. People started moving back last fall, and the PRC estimates about 30% were back by July, based on observations of the number of operational cars in the neighborhood, trailers, for sale signs, and lights on in houses at night.

The St. Roch Market, a historic institution, has been closed since the storm, but community leaders would like to bring a farmers' market back to the building to provide fruits and vegetables for the neighborhood.

> "You want to have it where it's okay for the kids to play, but it's not safe for them."
>
> Frederick Jarmon
> New Orleans resident

This fall the PRC is beginning to gather baseline data by conducting 700 interviews in the intervention area and two comparison neighborhoods. They also will observe and count how many men, women, and children are biking, walking, playing, or running outside. In January 2007, the PRC trained 20 community health advisors from the intervention neighborhood, and together the group will choose the first environmental change to implement. Money for the intervention will come from the PRC, but also, they hope, from new funding sources and donations from groups that have an interest in improving the city.

Ms. Parker wants to leave those 20 people with greater capacity to influence and rebuild their neighborhood. "It doesn't take physical labor on the neighborhood's part, just a constant barrage of meetings and phone calls to get people to listen to you," Ms. Parker said. "It's not just a let's-give-you-the-money sort of situation. It's more about giving people skills."

Because choosing the physical change in the neighborhood will be a participatory process, the PRC staff doesn't know what the project will be. But this neighborhood has plenty of areas prime for change, they say.

Frederick Jarmon, 22, moved to the intervention neighborhood in May with his daughter Ani, 1.

Playgrounds are currently covered in trash or used as trailer parks. If parks were restored, they could be used as places for children and adults to exercise.

"You want to have it where it's okay for the kids to play, but it's not safe for them," said Frederick Jarmon, 22, who moved to the neighborhood in May with his daughter Ani, 1, after staying in hotels for months after the hurricane. "I let her run around, but I'm pretty sure she'd like to swing, things of that nature, get on a sliding board."

Andrew Jackson, 62, agrees. "The kids, they need pools, something to keep them busy," he said, watching his neighbor's children play in front of his house. "They used to use the park in the summer, now they're up and down the streets." He has lived

in the neighborhood 41 years, and luckily the damage to his house was minimal—a roof leak and a torn gate.

"When I came back, I was the only one back, me and my godfather," he said. "We cleaned up the streets." Mr. Jackson had no utilities until December and had been taking cold baths and cooking on a butane stove, driving to a suburb for ice. His godfather has since died. "He got worse after the hurricane came in," Mr. Jackson said. "I think that had a lot of effect on it."

A neighbor recently mowed the empty lot on their street and tied a cord across it so people wouldn't dump garbage there. The city comes once a week to pick up garbage, but piles are still everywhere, as well as broken-down cars and even abandoned boats, beached when the floodwater receded. Flocks of pigeons gather to feed at the junk mounds.

Another potential project would improve pedestrian safety so that people feel safe walking outside. Several intersections in the intervention area are hotspots for traffic accidents involving pedestrians, according to Jennifer Ruley, a PRC advisory board member and engineer.

"We can focus on making those safer, through sidewalk improvements, intersection improvements, crosswalks, bus shelters, better lighting," said Ruley, who is stationed at city hall and helps push through projects that improve safety for bicyclists and pedestrians. She thinks the city has a great setup for bicycling and walking—it's small, has flat terrain, there are not too many large freeways interrupting access, and there are many roads that connect to each other. "The challenge is making it more bicycle and pedestrian friendly," she said. By making St. Claude Avenue, a commercial corridor, more attractive and safer, "you could improve not only the streetscape but also the economic environment."

So could bringing back a streetcar line on St. Claude Avenue, something that some business owners in the neighborhood would like to see. The PRC believes public transportation also enhances public health in a number of ways. It gets people out of cars, which increases their physical activity, and reduces air pollution from cars, helping to limit asthma.

When more people are on the street, it also helps reduce crime, which Dr. Farley says is not something that people normally think of as an

environmental function. But police records show that more crime happens around liquor stores and in unlit areas. Actions such as putting windows and porches on buildings to keep people's eyes on the street, putting transit stops in well-lit areas, and removing liquor stores can make a difference to safety and health, both in reducing someone's chance of being a victim and in encouraging people to spend more time outside. "It's not like we're going to make crime disappear from New Orleans," he said, "but even if we could reduce it by 10% that would be a huge accomplishment."

Farmers' markets are being proposed.

The PRC would also like to see healthier food in the neighborhood, which has few grocery stores nearby. People without cars depend heavily on corner groceries, said Greta Gladney, president of the St. Claude Merchant's association and a longtime community activist who serves on the PRC advisory board. One measure could be to help corner grocers afford to buy coolers for fresh produce, she said. She wants to see stores like she's seen up north, with displays of fruit, iced melon and pineapple, and flowers along the streets. She also has plans for the St. Roch Market, a landmark in the neighborhood that most recently was a fish market with celebrated seafood po-boy sandwiches. Since the storm it has been boarded. Ms. Gladney imagines a renovated structure that would include cafes with bright umbrellas and a weekly farmers' market. The building's attic could store historical artifacts from the city's Mardi Gras Indians, African American revelers who dance down the neighborhood's streets.

"Food, eating here, so much of it is culture, folks having grown up eating certain foods, a certain way," she said. "I see the market as an opportunity for people to try out foods, recipes, and meals they haven't tried before."

“Ultimately, we want to see our communities rebuilt in a smarter, more healthy way.”

Jennifer Ruley
Tulane Prevention Research Center

So far, only about three or four of the 44 members of the St. Claude Merchant’s Association are back in business. “I think there’s hope among people who have come back, and determination,” Ms. Gladney said. “But it’s going to take a while.”

If the hurricane and flood divided New Orleanians’ lives irrevocably into before and after, at least there’s a sense that after is somewhere that is okay to be—stronger, more empathetic, and very proud.

Amid the piles of debris across town, small signs poke out in front of houses. “We’re coming back!” they say, or “Rebuild.”

“I have never seen civic engagement at levels that I’ve seen in New Orleans, even close, anywhere else, ever,” Dr. Farley says. “It used to be, if a neighborhood organization had a meeting and five people showed up, they were happy. Now we have meetings where 200 people show up. It’s unbelievable. I hope we figure out how to sustain that enough to channel it into rebuilding a healthy city.”

Jennifer Ruley thinks that’s possible. In addition to working on the PRC project goals and making the city more pedestrian friendly, she, like others

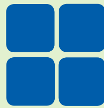
Jennifer Ruley, a Tulane Prevention Research Center advisory board member and engineer, points out areas on a map of New Orleans that could be turned into walking or bicycle paths.

at the PRC, is also involved in rebuilding her own neighborhood.

“What I’ve heard from people is, we don’t want to return to (pre-Katrina) New Orleans,” Ms. Ruley said. “Ultimately, we want to see our communities rebuilt in a smarter, more healthy way.”

*"We cannot have a healthier and safer America without effectively addressing the marked disparities in health that we see today. Business as usual is not working. CDC is committed to supporting community approaches to eliminating health disparities."*

George A. Mensah, MD, FACP, FACC, FESC
Associate Director for Medical Affairs
National Center for Chronic Disease Prevention and Health Promotion
Centers for Disease Control and Prevention



Flying Sparks
University of Alabama at Birmingham Center for the Study of Community Health
http://www.uabchp.org

Alabama's Black Belt is a low-income, medically underserved, rural area of western Alabama. Grocery stores that offer healthy foods are scarce, and transportation is a daily challenge. Two-thirds of the area's residents are African American and at considerable risk for chronic conditions such as heart disease, obesity, and diabetes.

Program achievements:

- Peer-helper model emphasizes family and community.
- Trained more than 130 community health advisors.
- Offers a tool kit to help advisors raise community health awareness.
- Led to creation of a walking trail, walking groups, aerobics classes, local farmers' markets, and training in low-fat cooking.

# Community Health Advisors Light Up Alabama's Black Belt

The light from John the Baptist Church in Orrville, Alabama, could be seen a mile down the dark county road. Inside, 12 residents of the largely African American, rural region called Alabama's "Black Belt" took their first steps in learning to be community health advisors.

The group is part of the Flying Sparks study, in which researchers are testing if a proven peer educator training program has wings of its own.

Orrville is one of 22 Black Belt communities whose residents are being trained by the University of Alabama at Birmingham's Center for Health Promotion, one of the Prevention Research Centers supported by the Centers for Disease Control and Prevention. Community health advisors will learn about diabetes, stroke, tobacco, and heart disease—all major problems in this region—and learn how to promote physical activity and good nutrition in communities where the nearest doctor's office can be an hour's car ride away.

Counties of the Alabama Black Belt

*Produced by Center for Economic and Business Research, University of Alabama.*

Vee Stalker, right, community liaison for the University of Alabama at Birmingham PRC's Flying Sparks project, speaks with Community Health Advisor trainer Doris Smith. The project was instrumental in building this walking trail in Pine Apple, Alabama. Community health advisors trained by the project also helped bring a farmer's market to the area.

"People perish because of lack of knowledge," said Jerolene Williams, a school administrator and wife of the church's pastor, who said she recruited volunteers because she saw a need in her community for more health resources.

The communities will get varying levels of assistance from the center as it tests how much assistance is needed to implement the training and what factors determine success.

Connie Kohler, principal investigator for the Flying Sparks project, said she suspects that the amount of "social capital" (whether people in the community have the ability to work together and trust each other) will make a big difference. Researchers at the center have developed a survey to assess the level of social capital.

The Black Belt region is named after its rich, black soil, but may be known better for its poor material resources. In some areas, the population density is a mere 15 people per square mile, and banks, hospitals, and grocery stores are sparse. In one Black Belt county in the study, the high school graduation rate is only 60% and half of the children live in poverty.

Doris Smith, a 10-year community health advisor who grew up in the area and now helps lead the training effort, said that in the past 15 years she has seen saw mills and sewing factories that used to employ locals move out, leaving more people to depend on public assistance.

The economic situation goes hand-in-hand with health problems, researchers say. Vee Stalker,

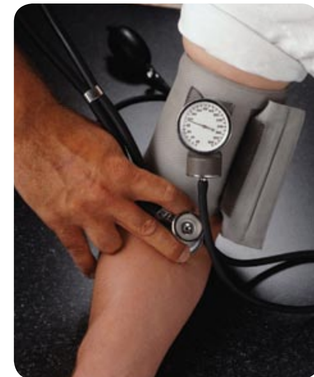
Many former textile workers now depend more on public assistance, due to factory closings.

community core director for the project, said that not only are doctors in short supply in the area, so are medical necessities such as insulin for people with diabetes and social resources such as support groups. Chronic disease flourishes in this area, according to the Alabama Department of Public Health. Obesity rates are higher than in the rest of the state; in fact, a 2004 study by the Auburn Cooperative Extension System found the percentage of overweight girls aged 9 to 10 in the Black Belt was twice the national average.

Racial mistrust also lingers among some people in the Black Belt, which encompasses the cities of Montgomery and Selma and was a hub of the civil rights movement. Some people believe that doctors are racist and do not take their concerns seriously, so they avoid physicians until their problems are life-threatening, Ms. Stalker said. Other people just can't afford the gas money to go see a doctor.

UAB researchers began working with community health advisors in the Black Belt in 1995 when CDC funded an intervention to prevent cardiovascular disease among women in Uniontown, a town of 1,730 people in Perry County. Over the past decade the center and its partners have graduated 130 community health advisors in two counties.

These advisors have subsequently obtained funding from foundations and the local government to build a walking trail and have led walking groups and aerobics classes. With the help of the Alabama Farmers Market Authority they have brought fresh produce to several small towns. They have also trained parents in low-fat cooking techniques and organized healthy church dinners.



Preventing cardiovascular disease is an important goal for the Flying Sparks project.

"You hear people talking about, 'I shouldn't be eating

this,'" Ms. Smith said. "They started reading labels. A lot of little exercise groups started."

Now, the center wants to replicate this success.

Each of the new communities receives a tool kit that includes community health advisor training manuals, activity descriptions, and a cookbook, written with community input, that amends traditional southern recipes to include less fat and salt. Dishes include "mock fried chicken" that is

Community members in Pine Apple, Alabama, built this walking trail while working with the University of Alabama at Birmingham's Center for the Study of Community Health to reduce cardiovascular disease in their neighborhoods.

Fresh vegetables are an important component of a healthy diet.

baked and collard greens flavored with turkey instead of ham. The manual includes facts on common conditions, discussion topics, and advice on helping neighbors develop action plans to tackle health problems. Some communities, such as Orrville, will receive hands-on help and visits from the university, while others will get a 4-hour training session and help by telephone and e-mail.

Researchers want to discover the most effective way to choose promising communities and to spread the program in other rural and underdeveloped areas.

Ms. Stalker said community health advisors are especially effective in isolated communities where people lack transportation and institutional resources. "In rural communities, people depend on each other more," she said. This type of peer-helper model, which has been used in Latin America and

"You be the first person to make the change. You be the first to stop eating ham hocks. You do it, and your children will do it."

Ethel Johnson
Flying Sparks Project

across the United States, tends to be successful in cultures that emphasize family and community, she said. The health advisors are natural leaders who share geography, culture, and ethnic background with the neighbors they are impassioned to help.

"We are more likely to make changes in behaviors if someone who is similar to us makes a connection or shares information," Ms. Stalker said.

In addition to learning about common health problems, trainees in the program are encouraged to identify community-specific issues. The women at John the Baptist Church decided to focus on high blood pressure, teenage pregnancy, and marijuana use.

Farmers' markets provide inexpensive, healthy food.

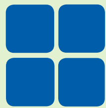
Ethel Johnson, the community coordinator for the Flying Sparks project, who was raised in the Black Belt, said that while a lack of education, poverty, and drugs are obstacles to health, so is getting people out of their complacency. That's where community health advisors who are good motivators come into play.

The Flying Sparks tool kit includes manuals, a cookbook, and other materials to educate community health advisors and help them bring awareness to their communities.

"I've heard people say, 'Well, my mother was overweight, I'm going to be big. I'm big-boned,'" Ms. Johnson said. "People are set in their ways. I tell them, 'You be the first person to make the change. You be the first to stop eating ham hocks. You do it, and your children will do it.'" ■

*"The case for prevention of chronic disease is compelling. Although Americans are living longer than previous generations, we are witnessing an unprecedented increase in the prevalence of chronic diseases."*

Michael O. Leavitt
Secretary, U.S. Department of Health and Human Services



## PEARLS

University of Washington Health Promotion Research Center
http://depts.washington.edu/hprc

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.

Program achievements:

- Involves seniors in creating their own tailored plans for wellness.
- Significantly decreased depression.
- Improved participants' functional and emotional well-being.
- Recognized by the National Registry of Effective Programs.

# PEARLS Gives Seniors with Minor Depression New Hope

It's easy to open up to Carl Kaiser, with his calm nature and understanding smile, and many people do. As a counselor in Seattle's Program to Encourage Active, Rewarding Lives for Seniors (PEARLS), Kaiser visits the elderly every day, listens to their problems, and helps them figure out solutions. Kaiser estimates he has helped 60 seniors overcome minor depression since 2004.

PEARLS, developed at the University of Washington's Health Promotion Research Center, is a 6-month-long program consisting of eight in-home visits with a counselor.

One client who had limited vision told Kaiser, "I just can't contribute any more." Another woman spent weeks lying hopelessly in bed after recovering from pneumonia. Both found help in PEARLS, which uses structured behavioral therapy and positive event scheduling to resolve depression. The counselor helps the client name and write down the factors contributing to his or her depression and to develop and evaluate solutions.

Minor depression is characterized by loss of interest or pleasure in activities and feelings of sadness or hopelessness. It strikes about 14% of seniors, many of whom are dealing with isolation, loss of friends and family, and debilitating chronic diseases. Seniors who have diabetes are more than twice as likely as other people their age to be depressed.

Chuck Lazenby, left, of Seattle talks with Carl Kaiser, a counselor in the Program to Encourage Active, Rewarding Lives for Seniors (PEARLS).

"It was like a pit. I was trying to dig myself out. I couldn't do it alone."

Catherine Peten
PEARLS participant

"I tell them, just like the cold or the flu has symptoms, so does depression," Kaiser said. "There is a close connection between depression and unsolved problems. If the problem is, 'I can't do anything worthwhile,' the goal can be, 'Find something I can do on a small scale that will be beneficial to other people.'"

Kaiser helped the woman with limited sight find ways to help others, such as knitting baby blankets and calling isolated people—activities suited to her skills, interests, and personality. Other components of PEARLS include scheduling social and physical activities and planning simple pleasures—such as taking a walk, calling a friend, or soaking in a hot bath.

In its 3-year study phase, PEARLS was shown to eliminate depression completely for more than a third of participants. Of seniors in a comparison group, who received usual care, only 12% eliminated depression completely. PEARLS also reduced depressive symptoms by half for 43% of participants—almost three times as many people achieved that result as in the comparison group. PEARLS has also been shown to reduce the number of hospitalizations—for any reason—among participants.

Researchers attribute the success of PEARLS to the behavioral therapy, which affects the same parts of the brain that some antidepressant drugs do, according to Dr. Jim LoGerfo, director of the Health Promotion Research Center. Behavioral therapy can be more permanent than drugs, is less expensive, and can be used outside a clinical setting.

Because the clients come up with solutions of their own, they feel capable of following through on them.

"It's an empowering, skill-building approach," said researcher Sheryl Schwartz. "When you learn a new skill, no one can take that away from you."

Catherine Peten, 68, said she started to feel blue in May 2004 after coming down with pneumonia. Even after she recovered from the illness, normal activities seemed too difficult.

"That was when everything fell apart," she said. "It was like a pit. I was trying to dig myself out. I couldn't do it alone. I couldn't even sit up. And my house was so bad. I couldn't get going."

Her social worker recommended PEARLS, and Kaiser stepped in as her counselor. Working with Kaiser, Peten listed all her medications. After

consulting with a psychiatrist, Kaiser informed her, to her surprise, that three of her medications cause drowsiness. Peten talked to her doctor, who was able to change her prescriptions. Peten thought of other things she could do to encourage herself to get out of bed, such as plan to attend religious services with a friend and set out clothes the night before.

"All I can say is, it works," she said of PEARLS. "I have to make myself go on ahead and do what needs to be done. I know how to do that now."

*As you well know, illness and depression walk hand in hand for persons like me who have no family or real friends to cheer my darkened corner. Life holds little joy...*

*I have to create order out of chaos and happiness out of almost continual sorrow. It is not easy being alone and struggling to find validation in a youth-worshipping society... (Carl) left no stone unturned when it came to looking for tools to assist me in solving my predicaments, and he would always leave me with a feeling that my situation was somehow brighter. He truly helped me to discover ways to maintain better control of my life.*

PEARLS participant Lacey Gannon wrote a letter thanking the city of Seattle for providing her with a counselor, Carl Kaiser.

PEARLS is offered by the City of Seattle's Adult and Disability Services division to low-income seniors who receive state social services. Researchers at the Health Promotion Research Center hope it can be used statewide. Of about 40,000 seniors in Washington who receive state case management services, about 8,000 have minor depression, or dysthymia, a chronic form of mild depression, and could benefit from the program, Dr. LoGerfo said. Additional organizations are giving PEARLS a try. Seattle's Northshore Senior Center is offering PEARLS to members, and Senior Services of Seattle/King County and the Asian Counseling and Referral Service are training social workers to provide PEARLS counseling. A home health agency in Houston has also started offering a variant of the program.

Implementing the program presents some difficulty to social service agencies, which are already strapped for resources, Schwartz said. Training case managers takes time, data collection is complicated, and getting long-term funding is a challenge.

To help obtain more money to run the program, the City of Seattle is working on a study that will track financial savings that PEARLS brings about, said Rosemary Cunningham, a planning

manager for the city's Aging and Disability Services. Organizers believe that PEARLS will show cost savings because once people have their depression under control, they are better at taking care of themselves in general and have lower medical costs.

"We're trying to take these studies and find sustainable funding sources," said Cunningham.

The Health Promotion Research Center is also adapting a version of the program to be offered in senior centers instead of clients' homes so it can reach more people. The center is also studying which parts of the program are most effective and why, and researchers are adapting the program for use with adults with epilepsy.

In the meantime, Kaiser continues to find the work rewarding. "I like having a variety of opportunities to see people change and respond and find their depression going down," he said. "It feeds my spirit."

**Barbara Myerson's story: "I would always leave our meetings with a feeling of hope."**

Barbara Myerson pulled a stack of old pictures from under the coffee table. They were all of her—a young, lithe, strong ballerina with a confident smile. Now 68 and tipping the scales at more than 300 pounds, her earlier life seemed irretrievable.

Barbara Myerson, PEARLS participant

To avoid an abusive husband, she spent 20 years moving from shelter to shelter, trying again and again to restart her life. The emotional wounds led to overeating, which caused weight gain, diabetes, and other health problems that she must now manage.

Although Myerson had suffered serious depression in the past, now, she said, her depression had become "more typical of older people." She was lonely, low on money, and dealing with serious health concerns. All those problems added up. "It sort of globs together into a general malaise," Myerson said. "You get to feeling, 'This is sort of the way it is.'"

Her latest sad feelings began after a recent trip to Colorado to visit family. She had been thinking of moving there to be closer to them, but said she felt humiliated and rejected instead.

"Because of my weight they didn't want me to sit in chairs. I was going to break things. I felt helpless

and powerless. They left me feeling really bad about myself, that I wasn't fit to be around respectable people."

Upon returning home to Seattle, Myerson stopped attending meetings of a movie and discussion group, a crowd of senior native New Yorkers who love to talk about culture and music and always seemed upbeat. "I began to be ashamed of myself, conscious of my appearance," she said. "I love the people so much in my group. I couldn't stand to think they were just tolerating me." She began staying at home and neglected her health.

Myerson discovered the PEARLS program through her state-assigned case manager. An analytical person, she connected with its method of separating problems and finding solutions one by one. "It's not general misery but something specific," she said.

For Myerson, those problems boiled down to not taking her medicine on time, not exercising, and not reaching out to socialize with people. With her counselor, she came up with solutions.

"I developed a schedule that I would follow from the moment I got up," she said. "Take my blood pressure, take my blood sugar, take my medications."

She tries to remember that her schedule is not really a choice; if she doesn't do the log and remember her medicine, she will experience pain and deteriorating health. One week's goal was, "Do not get distracted and get motivated."

Myerson began a regimen of medicine, acupuncture, and Chinese herbs, and noticed that her blood pressure dropped. She joined Overeaters Anonymous and tried to eat healthy meals. From another program for seniors, she was able to get exercise equipment for her home. PEARLS encourages clients to come up with pleasurable activities, and Myerson's list included reading and playing the piano.

One session away from completing PEARLS, Myerson said she was optimistic about rejoining her movie group, and she was thinking about exercising at a new senior center.

"We started identifying solutions, advantages, and disadvantages," Myerson said. "It tended to focus on the same basic problems, but every week I would focus on a different aspect of the problem. I would always leave our meetings with a feeling of hope."

**Chuck Lazenby's story: "I never used to laugh like this."**

It was only after his partner David's death that Chuck Lazenby talked about their 50-year relationship and the grief he felt about David being gone.

David died on an Easter Sunday. Lazenby remembers getting in the car and driving around town. "I found a little church. I sat in the parking lot."

Chuck Lazenby, PEARLS participant

"I didn't have any confidence," said Lazenby, 74. "I couldn't make a decision. Actually, I was miserable. The apartment was nice, but I just sat there. I didn't do anything. I had a problem, but I didn't know where to go, who to contact, where to start. I thought after you lost a partner of 50 years, this is how you're supposed to feel. I figured that was life."

His feelings of helplessness increased when he tried to obtain an American flag to use at David's funeral, an honor bestowed by the U.S. Veterans Benefits Administration on all veterans. The funeral home told him only relatives of the deceased could take the flag. "They said, 'Who are you?' I said, 'I'm the guy he lived with for 50 years.' They said, 'We can't give you the flag.' I buried him without it."

He said he felt "suicidal and everything else," but thought it was just his grief and not depression. But when he saw a flier for the PEARLS study at a senior center, Lazenby wondered if the program was for him. He made a phone call.

The first visit by his counselor felt like school, Lazenby said. There was paperwork to do, making lists of problems. Lazenby thought he probably wouldn't go through with it.

But after the counselor left, he sat at his kitchen table and started working on it. "A light bulb went off in my head," he said. "I thought maybe there is something to this."

A retired office and payroll manager, Lazenby could not afford his rising rent. He needed a new place to live. He wrote that down on the paper. He also wrote down that he needed to socialize more. And he needed to exercise to help his diabetes.

After writing down the problems they seemed more manageable. Lazenby found a new apartment near

"I've got to give credit to the PEARLS study. It has completely turned me around. It's what saved me, really."

Chuck Lazenby
PEARLS participant

downtown Seattle, in a building with many seniors. The new apartment has a bus stop a block away and Lazenby was able to get rid of his car. He also walks in the new neighborhood. "Here, in the front lobby, we greet each other. We sit down and talk to each other. My best friend down the hall is a Chinese lady."

He also became involved in a church group called "Spirit of the Sound," which reaches out to the lesbian and gay community. Through that group, he met filmmaker Drew Emery, who was working on documentaries about gay relationships. Lazenby shared his stories about life with David and his trouble getting the American flag when David died.

Emery's film, "The Bridge," went on to win prizes and gain attention, and concerned community members presented Lazenby with an American flag mounted on a plaque with David's name.

The PEARLS problem-solving method also helped Lazenby find an exercise machine. He learned about a once-a-year giveaway, called up a friend, and went and picked one up. Before PEARLS, that kind of problem would have seemed too difficult to manage, he said. PEARLS has given him self-confidence and self-empowerment.

Now, Lazenby stays active, attending plays with new friends. He appeared in Emery's next documentary, "Inlaws and Outlaws." Lazenby laughs at the thought that he's now recognized for his roles in the movies. "I never used to laugh like this," he said in wonder. "I was a sourpuss."

"People asked how I'm able to survive this after 50 years. I said, well, I've got to give credit to the PEARLS study. It has completely turned me around. It's what saved me really. How lucky I was it came into my life. I probably would not have been here talking to you today."

Up to 20% of seniors may be depressed.

He said he wishes he could bring the program to more people.

"It's such a need out there that it's unbelievable. I've had more people say, I wish I could get involved. It isn't just whether people are gay or not, it fits the whole realm of people."

He sees many of his peers just getting through their weeks alone and sad. "People are just living their life to the end of the day." ■

# Prevention Research Centers: Core Projects

**University of Alabama at Birmingham**
Reducing health risks and health disparities in Alabama's underserved, rural, predominantly African American communities.

**University of Arizona**
Influencing policy and conducting behavioral interventions to prevent and control diabetes in multiethnic communities along 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, reducing risk behaviors, and preventing disease among adolescents.

**University of Colorado**
Reducing the risk for overweight, obesity, and diabetes among children and adults in the Rocky Mountain region of Colorado.

**Columbia University**
Developing a tailored Web site to improve communication to promote the health of low-income 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 groups in rural Iowa to improve the health and quality of life of community residents.

**Johns Hopkins University**
Preparing young people in Baltimore to become 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, prevent disease, and reduce health disparities.

**University of New Mexico**
Promoting the mental health and well-being of American Indian youth and their families.

**University of North Carolina at Chapel Hill**
Reducing the risks for obesity among rural, low-income, and minority women by empowering them to make healthy life changes.

**University of Oklahoma**
Promoting healthy lifestyles among students in public schools.

**Oregon Health & 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 risk for heart disease, stroke, and cancer among residents in medically underserved, rural areas of 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 and reducing disparities in physical activity levels in underserved communities.

**University of South Florida**
Using community-based prevention marketing to improve community health.

**State University of New York at Albany**
Preventing and controlling diabetes among medically underserved residents in the capital region of New York State.

**Texas A&M University**
Preventing diabetes and other chronic diseases in underserved rural communities.

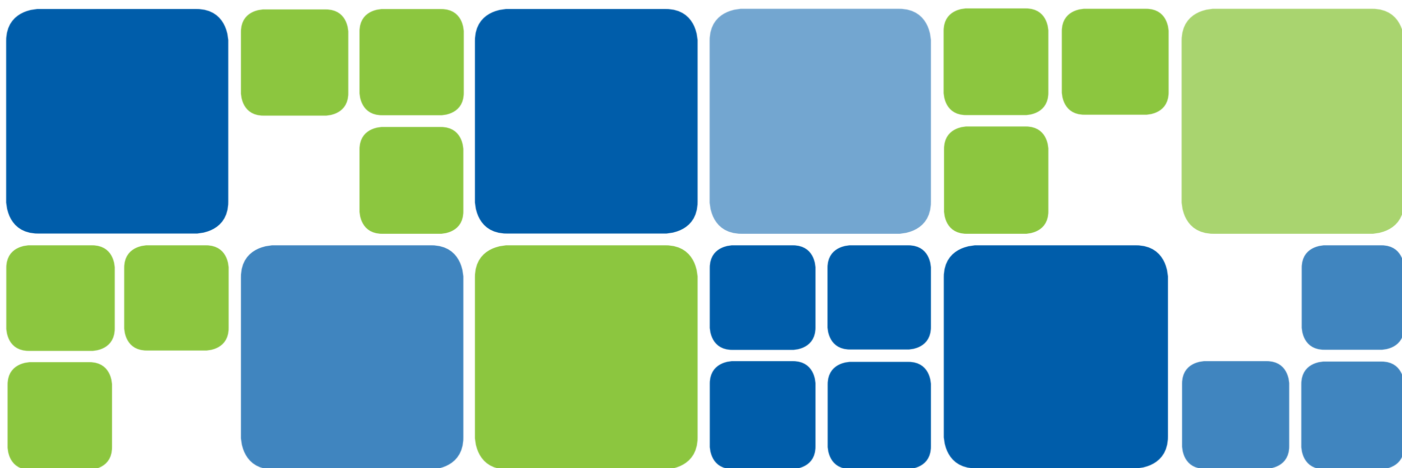
**University of Texas Health Science Center at Houston**
Investigating influences on children's behavior as they age to early adulthood.

**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 among residents of Connecticut's economically disadvantaged cities.



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