

Cleveland's Nutrition Intervention

Bringing food that's good to the neighborhood.

by Tamar Nordenberg



"We have a culture of fast food and immediate gratification ... Some of our cooking customs involve a lot of saturated fat, grease and salt. Changing how we prepare our food has to be an integral part of the plan."

They're flush with fast food joints and minimarts selling high-calorie convenience foods. But these same Cleveland neighborhoods that offer easy access to cheap, quick-fix edibles have been dubbed "food deserts" because they're barren of fruits, vegetables, whole grains and lean meats. In these communities, where grab-and-go meals are plentiful and the nearest full-service grocery store can be miles away, Case Western Reserve University School of Medicine is working to make nutritious choices available.

"Teaching people that adding fruits and vegetables to your diet could improve your health is certainly important," says Jessica Kelley-Moore, PhD, a Case Western Reserve associate professor of sociology and principal investigator on a new research project to bring healthy food to Greater Cleveland neighborhoods. "But realistically, this education has limited usefulness when Doritos and donuts are available to you, but apples and carrots are out of reach."

To lay the groundwork for bringing a more healthful diet within reach of urban Cleveland's residents, the School of Medicine, with its partners in the university and the larger Cleveland community, has already participated in fruitful precursor projects. But it is the school's fresh win

in a competitive bid for Centers for Disease Control and Prevention (CDC) funds that will support sustained gains for Cleveland's neighborhoods in need. As part of its far-reaching "Increasing Access to Healthy Foods in Urban Neighborhoods" study, researchers will canopy some urban Cleveland communities with healthy food options—while winning over residents to wholesome eating habits. "Our goal is to change the total food environment in Cleveland neighborhoods, cutting across the components that have been the focus of previous efforts," explains Elaine Borawski, PhD, associate professor of epidemiology and biostatistics, and co-investigator on the research project.

Impetus for Change: Neighbors in Need

By many measures, Clevelanders have long been in dire need of a nutrition intervention. One indication: More than two-thirds of Cleveland adults fall short of five servings of fruits and vegetables per day, according to city data from the 2005 Behavioral Risk Factor Surveillance System. "What this portends," laments Terry Allan, health commissioner for Ohio's populous Cuyahoga County, "is increasing rates of early-onset type 2 diabetes, heart disease and a whole range of other chronic illnesses."

Recently, inner-city residents, working with the public health community, have initiated interventions to reverse the scarcity of healthy food and resulting threats to health. Says Allan, "From my point of view, it's a matter of health equity: In a country like America, we have a responsibility to help create conditions in which people can be healthy."

To help reduce the chronic disease burden of Cleveland's residents, Case Western Reserve's large-scale effort will help to bring healthy foods to the places in underserved communities where people make their food choices—at corner stores and schools, for example. "The university is clearly interested in reaching out to those who are most disadvantaged," Allan says. "To me, that's a great demonstration of community commitment."

The commitment to improving health through nutrition is one that First Lady Michelle Obama is championing at a national level. At the February 2010 launch of her "Let's Move" campaign against childhood obesity, Obama remarked that 23.5 million Americans live in food deserts. "So let's move to ensure that all our families have access to healthy, affordable food in their communities," she encouraged.

Corner Stores as Cornerstone

Early Case Western Reserve-led efforts to bring healthful food alternatives to Cleveland residents focused on persuading and helping the owners of several local corner stores to stock nutritious items alongside those that are nutritionally inadequate. Based in Case Western Reserve School of Medicine's Center for Health Promotion Research, the "Cleveland Corner Store Project" was a community collaboration involving the university, the City of Cleveland Public Health Department, the Ohio State University Extension (OSUE), the Healthy Corner Stores Network and other partners. The project's simple slogan: Healthy Food, Healthy Neighborhoods.

The project confirmed by surveys that Cleveland's small corner stores often substitute for much larger supermarkets and, for some, are the main game in town for food purchasing. In one

Cleveland Corner Store Project survey, 85 percent of respondents reported shopping at these small shops at least once a week. Customers were eager to see a larger selection in these stores, including fresh fruits and vegetables—according to Case Western Reserve research.

School-aged children, too, frequent the corner stores, Kelley-Moore and her research colleagues found. “Most children walk to school in Cleveland, going right past these corner stores, often purchasing soda, chips and candy,” she says. “The proximity of these corner stores to schools makes them ideal for intervention—and expanding the healthy food choices available.”

Many kids are willing to give healthy food choices a chance, according to Lauren Melnick, a registered dietician with OSUE. “Kids in school said ‘I would eat an apple if it were available at my corner store,’” Melnick says. “But too often all they have is food that’s high in fat and high in sugar.”

The Corner Store Project recruited shop owners willing to offer an array of healthier food options, and then tested approaches—such as live cooking demonstrations, healthy food kiosks and signs around the neighborhood promoting participating stores—for enticing residents to buy the new, better-for-them foods. “Take down your tobacco posters, and here’s some advertising for your store’s healthier fruits and vegetables” was one trade that was offered to owners, explains Matt Russell, the project’s coordinator, who now works at the U.S. Department of Agriculture on its national healthier eating initiative. “We were reducing alcohol and tobacco signage and replacing it with CDC messages such as the positive ‘More Matters’ materials encouraging a diet higher in fruits and vegetables.”

As part of her “Let’s Move” campaign, Michelle Obama has recently announced her own plans for a similar effort in underserved communities to “help places like convenience stores carry healthier food options.” The corner store pilot project demonstrated that such a feat is feasible, despite store owners’ initial hesitations such as produce spoilage and extra labor expenses. Attests Anne Gross, a Cleveland corner store owner who participated in the Corner Store Project, “It’s been a benefit to me as a business person because we picked up on sales we didn’t have before.”

But the best payback, says 66-year-old Gross: “Personally, it’s good to see young people that come in and pick up an orange where before all they got was candy. And the elderly people in the community can get bananas, for the potassium they need, much more easily now.” Gross has seen an increase in produce sales and says she expects to continue selling healthier foods such as apples, oranges, pears, grapes and broccoli alongside the snacks and soda. In fact, some of these healthy alternatives have earned a place in “the most expensive real estate in the store,” she says—right by the register.

Local Stores to the Larger Community

The pilot Cleveland Corner Store Project, completed in the summer of 2009, served as valuable evidence of Cleveland’s readiness for change, but addressing the daunting problem of food desert neighborhoods would require broad-scale follow-through. To support expanded efforts in this and other areas of neighborhood health, the School of Medicine went after and won a prized

grant from the CDC to launch the Case Western Reserve University Prevention Research Center for Healthy Neighborhoods (PRCHN).

“Increasing Access to Healthy Foods in Urban Neighborhoods” is the first major research effort—the core project—for the PRCHN. “The kick-off project takes aim at the problem of poor nutrition and its adverse health effects, which disproportionately plague those in underserved urban communities,” says Borawski, who is director of the School of Medicine’s Center for Health Promotion Research and co-director and principal investigator of the PRCHN.

Of the scope of the new project, Kelley-Moore, says, “Multiply the corner store project by four. Add schools, community gardens and community centers as points of impact with corner stores, and you have an idea of the promise of this Healthy Neighborhoods core project.”

The project is not inventing new kinds of food access programming, but leveraging existing community resources and putting proven strategies to simultaneous use in a concentrated, coordinated effort. Some approaches were validated during the Steps to a Healthier Cleveland collaboration—a predecessor program aimed at encouraging Cleveland residents to make healthier lifestyle choices—while others were shown effective in various endeavors around the country.

The project will work with four disadvantaged and underserved neighborhoods in Greater Cleveland—areas that not only lack healthy food options, but also show potential for community collaboration for change. Two have been selected for the first round: Central and suburban East Cleveland in Cuyahoga County. Two more will be selected in consultation with the community in the coming year. The neighborhoods were selected because of their economic disadvantage, but they vary in terms of their specific food environment needs. Some neighborhoods have significant numbers of fast food restaurants and others have to rely on corner stores as primary food sources.

MULTI-PRONGED APPROACH

In each of the four communities, a neighborhood working group made up of researchers, community partners and residents will coordinate healthy food programs at four types of neighborhood venues: schools with students in kindergarten to 8th grade, food retail stores, community gardens and community centers.

In all four neighborhoods, common concepts will be applied: increase in healthy food availability, nutrition education, marketing strategies and a community-designed tactic.

Increase in Healthy Food Availability

This component—led by partner Ohio State University Extension—will aim for such improvements as the expansion of salutary selections at corner stores, the addition of good-for-you snacks such as granola bars in school vending machines and more choices in school lunches and senior food programs. The project also plans to increase the number of community gardens in the areas and the number of gardeners in existing gardens.

"Cleveland has one of the strongest community gardening programs in the country," says Punam Ohri-Vachaspati, PhD, RD, an assistant professor with Rutgers University's Center for State Health Policy and core project co-investigator. Research has shown that a vast majority of those who planted fruits and vegetables under Cleveland's community garden programs consumed at least five servings of fruits and vegetables a day, both during the harvest and lean seasons. What's more, says Ohri-Vachaspati, "most gardeners shared their produce with other members of the community and with their church and other institutions."

Mark McClain, who helped start a community garden in his East Cleveland neighborhood four years ago, saw a definite change in his eating habits. "I used to spend most of the time in the grocery store in the meat section," he says. "Now, I spend practically all of my time in the produce section. Growing my own food gave me a better appreciation for fruits and vegetables."

Nutrition Education

Making healthy food items available is just part of the equation in increasing access to healthy foods. Critical, too: educating consumers about the benefits of proper food selection and preparation, and safe storage.

"It's going to take a regearing of our habits," says McClain. "We have a culture of fast food and immediate gratification. To make this work, we need not only access to healthy food, but we need to be sure people know how to prepare it in a healthy way—because some of our cooking customs involve a lot of saturated fat, grease and salt. Changing how we prepare our food has to be an integral part of the plan."

The program will use proven education and training approaches to teach community members about nutrition, food purchases and food preparation. The schools, for example, may use the "Nutrition in the Garden" curriculum that teaches kids about how, and why, to make healthier food choices. Additional teaching tools will likely include lessons on food and cooking for adults and children alike, and live cooking demonstrations at community gardens and retail stores.

Marketing Strategies

To improve people's diets, efforts have to go beyond making healthful foods available, and make them alluring to residents who have gotten used to pre-packaged, high-calorie fare. "Why do McDonald's and Burger King spend money on marketing? Because it works," Allan says. "Public health is getting into the marketing game like private industry has for so long, because where there's a market, there can be profit and an incentive for businesses to carry the product." The marketing component, to be designed in collaboration with each neighborhood's residents, will provide consistent food messages such as produce ads in store windows, school mailings for parents, and posters and banners at community centers.

Community-Designed Tactic

A fourth strategy will be specific to each of the four neighborhoods and selected by those who know the community best: its residents.

Residents are crucial partners in every aspect of the "Increasing Access" project, Kelley-Moore stresses, and figure prominently, along with community leaders, in neighborhood working groups that identify opportunities for, and barriers to, healthy food access in the community. "In our research, which is based on the principles of community-based participatory research, everyone has an equal voice at the table," says Kelley-Moore. "It would be presumptuous of us to say, 'We, as researchers, are coming in and fixing the problems in your community.'"

An additional gain of this project is that the neighborhood working groups will build residents' skills so they can sustain gains in nutritious food availability, and can apply these skills to address other challenges in their neighborhoods. "We're empowering residents to work directly with community organizations," says Kelley-Moore. "Our multidimensional design is expected to achieve changes—broad improvements that apply to food that children get in school, that families buy in their local stores and that growers produce in local gardens—but we also want the reversals in food scarcity to be sustainable."

(Sidebar)

Neighbors Helping Neighbors: New Prevention Research Center

As part of a Centers for Disease Control (CDC) network of Prevention Research Centers (PRCs), the Case Western Reserve University Prevention Research Center for Healthy Neighborhoods (PRCHN) will partner with urban neighborhoods to reduce the burden of chronic health conditions—including diabetes, hypertension, heart disease and cancer—which the CDC estimates account for 70 percent of U.S. deaths. There are 37 CDC-funded PRCs spanning 27 states, all working to find innovative ways to promote health and prevent disease.

The PRCHN, whose faculty come from five Case Western Reserve schools and colleges, was launched in 2009 with an initial CDC grant of \$790,000 to start the center and support its "Increasing Access to Healthy Foods in Urban Neighborhoods" core research project. The center has the potential to be funded up to \$1 million for each of the next five years.

The core research project, "Increasing Access to Healthy Foods in Urban Neighborhoods," falls under the PRCHN priority area "Improve Healthy Lifestyles in the Neighborhood—one of five primary areas of focus for the center, along with Environmentally Healthy Homes and Communities, Tobacco Prevention and Control, Reducing the Burden of Chronic Disease, and Urban Planning Poverty and Health Promotion.

Says CDC's Eduardo Simoes, MD, director of the PRC Program, "The PRCHN is wisely partnering with residents and community organizations that serve urban neighborhoods in Cleveland to address environmental and lifestyle issues associated with chronic diseases such as obesity, diabetes and cancer. In particular, the funding of the PRCHN was approved on the strength of its application to systematically address the lack of healthy foods in a large urban area as its first project under this mission."

(Sidebar)

The Undeniable Association: Diet and Ratcheted-up Health Risks



In Ohio, more than one in every three children—and about two in three adults—are overweight or obese, due in large part to the what types of food they have greatest access to, which are generally inexpensive, highly processed, and high in sugar.

The proclamation "Fruits and Veggies: More Matters" by the Centers for Disease Control and Promotion (CDC) is backed up by compelling evidence that a diet rich in fruits and vegetables can help fend off common conditions such as heart disease, high blood pressure and some cancers.

Respected studies indicating such a connection between nutrition and health include the Harvard-based Nurses' Health Study and Health Professionals Follow-up Study, and the Dietary Approaches to Stop Hypertension (DASH) study by the National Institutes of Health.

In Ohio, more than one in every three children-and about two in three adults-are overweight or obese, according to a 2008 Ohio Family Health Survey. The survey, conducted by the Center for Children's Health and Policy at University Hospitals Rainbow Babies and Children's Hospital, with colleagues from the University of Cincinnati, found that:

- Ohio's obese kids are more than four times as likely to have diabetes, nearly twice as likely to have limited ability to do things, and nearly twice as likely to have asthma.
- Ohio's obese adults are more than five times as likely to have diabetes, nearly 2.5 times as likely to have hypertension, and about twice as likely to have had a heart attack.

"For multiple reasons, people who live in food deserts are more vulnerable to obesity and obesity-related chronic illnesses," says Leona Cuttler, MD, the William T. Dahms Professor of Pediatrics, director of the Center for Child Health and Policy at Rainbow Babies and Children's Hospital and lead author of the Ohio Family Health Survey Report "Obesity in Children and Families Across Ohio."

Some factors, according to Cuttler: the lack of available and affordable healthy foods and lack of adequate opportunities for exercise in some neighborhoods. "Addressing the issue of food availability is a critical factor in obesity and obesity-related chronic diseases," says Cuttler, but by no means the only one. "We didn't get into the epidemic by any single cause, and we won't get out of it through any single action."