Reducing Disparities in Diabetes among African-American and Latino Residents of Detroit: The Essential Role of Community Planning Focus Groups

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Diabetes is prevalent among African-American and Latino Detroit residents, with profound consequences to individuals, families, and communities. The REACH Detroit Partnership engaged eastside and southwest Detroit families in focus groups organized by community, age, gender, and language, to plan community-based participatory interventions to reduce the prevalence and impact of diabetes and its risk factors. Community residents participated in planning, implementing, and analyzing data from the focus groups and subsequent planning meetings. Major themes included: 1) diabetes is widespread and risk begins in childhood, with severe consequences for African Americans and Latinos; 2) denial and inadequate health care contribute to lack of public awareness about pre-symptomatic diabetes; 3) diabetes risks include heredity, high sugar, fat and alcohol intake, overweight, lack of exercise, and stress; and 4) cultural traditions, lack of motivation, and lack of affordable, accessible stores, restaurants, and recreation facilities and programs, are barriers to adopting preventive lifestyles. Participants identified community assets and made recommendations that resulted in REACH Detroit's multi-level intervention design and programs. They included development of: 1) family-oriented interventions to support lifestyle change at all ages; 2) culturally relevant community and health provider education and materials; 3) social support group activities promoting diabetes self-management, exercise, and healthy eating; and 4) community resource development and advocacy. (*Ethn Dis.* 2004;14[suppl 1]:S1-27–S1-37)

Key Words: African American, Community Health Planning, Diabetes, Dietary Practices, Disparities, Focus Groups, Health Care, Latino, Physical Activity

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Introduction

Diabetes is prevalent among African-American and Latino residents of Detroit, with profound consequences to individuals, families, and communities. More than 70,000 African-American and 3000 Latino Detroit residents have diagnosed diabetes, while another 20,000 have unrecognized diabetes, and more than 35,000 have pre-diabetes, a condition associated with much greater risk of developing diabetes.[1] Thousands of residents are at risk for diabetes, cardiovascular and other chronic diseases, due to overweight, physical inactivity, and poor diets.[2] During the 1990s, several studies indicated that diabetes was a major concern for Detroit residents, and for the community and healthcare organizations that served them.[3–6]

In 1999, the Detroit Community-Academic Urban Research Center (URC), a coalition of community, healthcare, and academic organizations, formed the REACH Detroit Partnership to respond to the REACH 2010 call for proposals to reduce health disparities. Since 1995, the URC has supported interdisciplinary, community-based participatory research that strengthens the ability of partners to develop, implement, and evaluate health interventions aimed at improving the health and quality of life of families and communities in eastside and southwest Detroit.[7] This paper describes the design and results of the study and the essential role played by community focus groups in the process of planning community-based participatory approaches designed to reducing the prevalence and impact of diabetes and its risk factors in Detroit.[7–9]

Methods

Setting and Partnership Structure

Many of the environmental barriers to healthy eating and physical activity addressed by the REACH Detroit Partnership originated during the last 50 years, as middle-class residents and related businesses and services, such as grocery stores and recreational facilities, moved out of the city.[10–12] These social and economic dislocations deeply affected the REACH Detroit communities of southwest and eastside Detroit, where household poverty, unemployment, and low educational attainment were more prevalent than in Detroit overall.[13] African Americans represent almost 90% of eastside, and 40% of southwest, community residents. Another 40% of southwest residents are Latino, the largest concentration in Detroit.[13]

The REACH Detroit Partnership Steering Committee (SC) included 6 community-based organizations (Butzel

Family Center, Community Health and Social Services [CHASS], Friends of Parkside, Kettering Butzel Health Initiative, Latino Family Services, and Warren/Conner Development Coalition), the Detroit Health Department, the Henry Ford Health System, and the University of Michigan School of Public Health. The SC, assisted by work groups composed of state, city, and community health, social and diabetes-related organizations, and community residents, shared knowledge and expertise, identified relevant literature, data, and program models, hosted community meetings, reviewed and provided context for focus group results, and made final intervention recommendations. Community Health and Social Services (CHASS), a community board-directed federally qualified health center serving southwest Detroit, was the planning grant recipient and central coordinating organization.

Study Design and Population

Community-based participatory research principles guided the study design.[8,14–15] The SC and community residents developed recruitment materials, consent forms, and discussion guides; recruited and served as community moderators; participated in the focus groups; and analyzed the results. The focus group methodology facilitates participants', rather than interviewer-driven, exploration of beliefs and experiences.[16] The interplay between participants stimulates exchange and development of ideas, allowing them to more fully explore the topic of interest in a social environment.[16]

A family-based focus group approach, which considered the relative importance of gender, culture and language, was implemented.[17–21] The SC members identified community organizations that distributed invitational flyers to a diverse group of families; approximately 15–20 families were recruited. Participants in CHASS group diabetes visits were specifically recruited to assure inclusion of families affected by diabetes. In each community, separate groups for men and women were divided by age (more than and less than 45 years), and by primary language (English and Spanish), in southwest Detroit. Adolescents aged 13–18 years, and youth aged 8–12 years, met in separate groups. Childcare was provided at the meeting for younger children.

Focus Group Discussion Guide, Moderator Training, and Focus Group Procedures

The REACH SC developed the focus group guide. Questions were designed to stimulate discussion about the perceived prevalence and impact of diabetes; causes or risk factors for developing diabetes; relationships between eating/food, physical activity, and diabetes; barriers to, and facilitators of, healthy eating and physical activity; current physical activity preferences and practices; and strategies to make it easier for residents to eat healthy and be physically active.

The SC community organization members recruited moderators from each community who were aware of community issues and norms, and had the ability to encourage all group members to discuss the discussion guide topics and introduce new relevant topics.[22] Community organization staff and graduate students were recruited as assistant moderators. Moderators and assistant moderators for the southwest focus groups had oral and written bilingual Spanish-English ability. Training sessions, which were conducted at the eastside and southwest SC community organizations that hosted the focus groups, included the REACH Detroit aims and focus group objectives; moderator and assistant moderator roles; review of the focus group guide, process and logistics; summary analysis process; and role-playing.

The focus groups were conducted on consecutive Saturday mornings (one in each community) in March 2000. Assistant moderators greeted incoming participants, reviewed the focus group purpose, organization and process, and administered the consent form and a demographic information sheet, used to assign participants to specific groups. The focus groups lasted approximately 2 hours and were audiotaped. Afterward, participants shared a community lunch and informal discussion of family and healthcare issues. Each household received a $25 gift certificate for Detroit area grocery stores.

Data Analysis

Analysis took place at multiple levels, with community involvement throughout the process.[14] A summary analysis process was used to prepare a report for community planning.[23–24] Immediately after the focus groups, community moderators and assistant moderators listed topics and related issues discussed by participants on a summary form. During summary analysis meetings, community moderators, assistant moderators, and university investigators reported topics and issues until the group agreed that the resulting lists represented the focus groups from their community as a whole. Overarching themes, and the relative importance of issues within each, were identified. Specific age, gender, and other themes were noted. Overall, and community-specific, summaries were discussed at SC, work group, and partner organization meetings. The SC used recommendations generated at these meetings to develop the REACH Detroit Community Action Plan.

Subsequently, the audiotapes were transcribed verbatim, translated if in Spanish, and corrected, as needed, by the assistant moderators. At least 2 investigators read the transcripts to confirm the summary analysis themes, and to extract additional themes related to target issues. The investigators discussed, confirmed, and refined themes and developed a code book that included code definitions, inclusion and exclu-

sion criteria, and examples.[24–26] The transcripts were coded by 2 research assistants, using Atlas/ti qualitative software.[27] Intercoder reliability was assessed; any text coded with less than 80% agreement was reviewed by the investigators, redefined, and recoded.[28] Atlas/ti was used to retrieve queries of single and combined codes, in order to identify common themes and patterns of response across various groups (ie, gender, community, and language groups).[26,29] Quotations were chosen to illustrate major themes.

Table 1. Major themes and selected quotations: diabetes prevalence, impact, and awareness

Themes	Quotations
Prevalence	''. . . Nobody can tell me that they don't have a person in their family with high blood pressure, [or] diabetes.''
	''It's a problem . . . not just in this community, but to Latinos and African Americans.''
Impact on family	''Sometimes he [uncle] would ask me to go make sugar and milk. Instead of putting sugar in there I put Equal in it . . . he don't know because it tastes like sugar . . . I knew how to give him his shot, so I would do that for him. I think the reason I'm so worried about my uncle is because we're really close . . . he could be anywhere at any time and something could go wrong. But with me taking care of him, he also loves me too.''
Awareness	''My father-in-law is diabetic—He was not aware until they had to cut off his leg . . . his eyes were getting bad. He probably had signs and symptoms of these diseases were not easily recognizable getting bad. He probably had symptoms, it runs in the family!''
Denial	''When they tell us that we have diabetes, we do not take it seriously. This is what happened to me. I did not feel sick so I kept eating everything. The consequences are that I have a lot of complications right now. I have an infection in my leg that has been there for 4 years and it does not go away because I did not take care of myself.''

RESULTS

Participant Characteristics

A total of 97 people participated in 12 focus groups. The eastside focus groups included 59 participants, all African-American. The 17 males and 42 females ranged in age from 8–76 years. All eastside participants were US-born; two thirds were born in Detroit. Seven eastside participants reported having diabetes, 5 had heart disease, and 22 had high blood pressure. The southwest focus group comprised 38 participants, including 23 Latinos, 13 African Americans, and 2 non-Hispanic Whites. The 10 males and 28 females ranged in age from 8–80 years. Almost 80% of southwest participants were US-born, including 65% of Latinos, and all African-American and White participants. Five participants were born in Mexico, 2 in Puerto Rico, and 1 in Cuba. One third of participants were born in Detroit. Among southwest participants, 20 reported having diabetes, 5 had heart disease, and 17 had high blood pressure.

Prevalence, Impact, and Awareness of Diabetes

Table 1 summarizes major themes with illustrative quotations related to participant beliefs about diabetes prevalence, impact, and awareness. Community residents believed that diabetes was widespread in both communities and ethnic groups. Many knew of, and were concerned about, the rise in prevalence among children. Although most participants did not have diabetes, many had extended family members, neighbors, and friends with diabetes and had experienced the impact of death, major disability, care responsibilities, economic and social concerns, and restricted lifestyles, on their families and communities. Several participants, including children, described helping family members with personal care and insulin injections. Participants expressed fear of death or disability resulting from diabetes.

Many participants said that they, or their family members, had not known they had diabetes, or had denied their risk, until they developed serious complications, such as blindness and amputations. Many stressed the importance of early awareness, noting that they, or their doctors, had not taken the disease seriously when their status was defined as "borderline": *"I felt the symptoms. The doctor didn't believe me because he couldn't see it in the test of sugar."* Women in both communities described repeated episodes of gestational diabetes, when nutrition support had helped them control their weight and blood sugar during pregnancy, but had not been available after pregnancy, when they no longer had the diabetes diagnosis.

Perceived Causes/Risks of Diabetes

The primary reasons given for the development of diabetes were heredity, weight, and dietary habits (Table 2). Belief in familial inheritance of diabetes risk was widespread in both communities. Heredity was both a genetic or biological, and a cultural concept. Culture was seen as influencing family and community patterns of eating, in particular. Participants disagreed about whether diabetes was inevitable for those with a family history of the disease. A southwest woman believed people were born with diabetes. Another said: *"the doctor says you're 'bound.'"* Some participants emphasized their belief that family history conferred risk, but not destiny; that

Table 2. Major themes and selected quotations: diabetes causes

Themes	Quotations
Heredity	''My understanding is that it is supposed to be hereditary. In my case it affected my grandmother on my father's side but, as it filtered, it didn't touch my uncles, but that didn't mean that the possibility wasn't there. Fortunately, it has not touched me but at the same token, my mother has it . . . so you can see where the concern is . . . the genes are from both sides of my family. So, I feel that I am more apt to have it more so than you.''
	''Even if you diet and exercise, you could still catch it because it might be hereditary.''
Diet	''As far as the youth . . . they might go all day long. Eat breakfast and not even eat lunch and that can cause particular problems they might later on—have diabetes discovered in their bodies and it could have started at a younger age not taking care of their bodies like eating 3 meals.''
	''These hamburgers and things . . . don't nourish anybody. This is what does damage to a person. The life of much fat. And the fat accumulates in the body. And it doesn't just produce diabetes, it produces an infinity of illnesses, like the heart and cholesterol . . . I don't eat this stuff. I cook in my house.''
Weight and lack of exercise	''Now here today in Detroit, our jobs are not as strenuous like it was in the old days, and they still eat that, and it's putting fat on us.''
	''But if you take care of yourself, you reduce the risk of those diseases. Apart from the fact that it makes you fat; you always want to look good. That's where the exercise comes in. If you don't exercise you don't burn the fat, and so it accumulates.''
Stress or emotion	''Stress, nerves . . . it can be because of fear or anger, a strong emotion.''

lifestyle influenced whether people developed diabetes; and that people were responsible for their own health.

Many participants viewed overeating, eating sweets, high fat, or greasy and fast foods, and lack of exercise, as major causes of weight gain and excess weight, which contributed to diabetes risk. TV was identified as a culprit in weight gain and poor health, because it contributed to inactivity and "eating junk food." Several participants in both communities attributed weight gain to changes in diet and exercise that accompanied moving to Detroit, often from rural environments. African-American participants described retaining eating habits that included large meat- and starch-based meals, while Latinos described eating more fruits and vegetables in their home countries than in Detroit. Belief that excess sugar consumption was responsible for causing diabetes was also common in both communities: an eastside participant said: *"My brother-in-law, when he first came from Alabama, he was in perfect health, but then he was drinking a lot of pop with a lot of sugar in it, and now he is a diabetic."* Both Latinos and African Americans described walking more often, and having more physically demanding occupations, before moving to Detroit. Diet and exercise to manage weight were seen as possible ways to prevent diabetes, and, more often, its complications. Some participants felt that people were more likely to begin exercising, or to adopt healthy eating habits, if they had a family member with diabetes.

Participants in both communities described poverty, stress, alcohol, and smoking, as contributors to diabetes risk. Many African-American participants connected stress to increasing blood pressure, and, sometimes, blood sugar. Several Latino participants identified strong emotions, including shock, fright or anger, as causing the onset of diabetes.

Benefits of Healthy Eating and Exercise

Most participants described healthy eating as eating in moderation, including fruits, vegetables, and meat prepared without extra fat (eg, chicken or fish broiled, baked, or without skin; hamburger with the fat drained), and limiting sugar and salt consumption. Greasy and sugary foods were considered unhealthy by most. Eastside participants said that regular and "balanced" meals, with all food groups represented, were important for health. The benefits of exercise included weight control, burning excess fat or "fuel" from food, and increasing blood circulation.

Healthy Eating-Related Barriers

Participants identified numerous barriers to healthy eating in the social and physical environments of both communities (Table 3). Cultural and family traditions played a major role in food choices: "*Before I was diagnosed with diabetes, I cooked and ate what was cooked and fed to me when I was a kid . . . I didn't know that eating rice and pork chops for breakfast was not a nutritional breakfast.*" Eating patterns learned in youth were believed to be important predictors of adult tastes, and difficult to change. Some participants in both communities said they were not motivated to change their food choices because they preferred the taste of their usual foods, and often disliked healthy alternatives, particularly vegetables. Several participants described family taste preferences as a barrier to healthy eating. Planning separate meals was described as time-consuming, expensive, and often not under the control of the person who was trying to change his eating habits.

African-American participants in both communities were most likely to

describe access barriers to stores with healthy food. Neighborhood stores were described as stocking only poor quality foods, and having few, or no, fruits and vegetables, although several participants suggested that: *"The grocers will supply a neighborhood with what they see as the bulk of what people buy."* Participants in both communities described healthy foods as more expensive. They commented that public transportation and lower-cost, unregulated private taxis may not service, or will charge high prices to service, well-stocked suburban grocery stores. The time and money needed to arrange such trips, and their reduced frequency, were additional barriers to healthy eating.

Work and child-care responsibilities resulted in food choices based on convenience for many participants. Eastside women were especially likely to choose accessible fast foods, rather than spending the time and energy required to buy and prepare meals: *"I think fast food places in the neighborhood keep us from going to the grocery store."* Television advertising promoting sodas and fast food, instead of healthy food, was described as a powerful influence. A southwest man described changes in social norms: *"Before, they said if you are eating meat, you are eating well. Those who ate vegetables and fruits, it was because they were poor . . . Today the rich are eating fruits and vegetables, the poor are eating meat."*

Table 3. Major themes and selected quotations: barriers to healthy eating

Themes	Quotations
Lack of access to healthy foods/ ready access to fast foods	''You've got to go out in the suburbs now to get some decent food. And therefore, it's not available for us in this community. By the time you get to that store and get some fresh fruits and vegetables, you're going to pass about 30 fast food joints and about 100 liquor stores.''
Cost	''The diet itself requires that you spend more money than you would normally because it is easier to buy beans and rice but we can't; we need to buy vegetables.''
Lack of knowledge	''Working in the community and servicing women that have babies. If you go shopping with them and see what they put in their baskets you would be surprised. They don't know how to shop. They buying the big jugs of sugar Kool-aid. 3 for $7 box of whole sugar cereal. Ramen noodles. . .''
Lack of motivation	''Why go through that trouble; I'm not. I'm gonna be honest. Like me and my doctor discussed a lot of things that you can't eat. He said 'cut it down'. Like I told him I raised up and start cooking gravy and stuff. You gonna come in and tell me all of a sudden I gotta stop. Yeah, okay. I will cut back on it but I'm not going to stop.''
Food preferences	''The sweet stuff, the fatty stuff, just taste better; french fries! I want that candy.''
Family and other responsibilities/lack of time and energy	''Right now today, a mother might get off of work and she'll say, ''I gotta go home and cook. Or is it Mickey D's? You know she's going to pick Mickey D's because, you know, she's exhausted. She had to take the kids to school, go to work, pick them up. She actually got to decide what they gonna eat. That's the reason why a lot of our kids are not getting the nutrition they're supposed to because we are tired.''
Family preferences	''Johnny got diabetes but he's gonna have to eat like the rest of us . . .''
	''The whole family isn't going to be on the diet . . . I buy my salad dressing 'light'. They don't like it 'light', and sometimes I don't have enough money for myself, so I don't get any.''

Physical Activity Barriers

While many participants said they wanted to get more exercise, responses revealed several barriers (Table 4) to this practice. Social norms, including a US culture that emphasizes TV watching and convenience (eg, elevators, remote controls, cars) were important influences on community residents, particularly younger people. Southwest Latino participants who were born outside the Unitd States, and older African-American participants, described walking for transportation and recreation as bygone ways of life.

Many participants said they were not motivated to be physically active. Participants who worked outside the home described coming home tired, with the desire only to rest, whether or not their occupations required physical labor. Some described exercise as "boring" or "hard work." Work and family responsibilities depleted the time and energy needed to exercise. Lack of child care made it hard for women with young children to exercise. Several participants described being active when they were younger, but found that age, weight, and physical limitations associated with injury or diseases, made physical activity difficult or embarrassing.

The idea that exercise gyms or recreation centers were necessary for exercise was common. Well-maintained facilities and programs were described as too far away and too expensive for ready access. Several participants said that parks and recreation centers were poorly maintained, often unfriendly, and lacked a variety of programs. Middle-aged eastside men described their inability to "compete" with younger men as a barrier to exercising in public. Programs for teens and seniors were available in some community centers but: *". . . the middle segment, the 30- to 40- to 50-year-olds, there's nothing available for them."*

Southwest participants, especially women, were the most likely to describe barriers to exercise in the physical environment, including hot or cold weath-

er, and inadequate safety, with gangs, violence, men hanging out drinking, prostitutes, heavy traffic, dogs and a littered, broken down, unclean environment, without enough street lighting, each described as barriers. Participants from both communities said that unsafe neighborhoods contributed to feelings of isolation, making it harder to consider walking or other outdoor physical activities.

Table 4. Major themes and selected quotations: barriers to physical activity

Themes	Quotation
Physical limitations and embarrassment	''There's nothing worse than . . . watching TV and you see a Tae Bo commercial. All those itty-bitty people on it . . . and you know those people weren't fat 3 months ago. So I think that people being discouraged about their own weight. Weight, age, lack of self confidence has a lot to do with why people don't go and join and participate in classes.''
Lack of motivation	''Like I said, force of habit, you know. Nowadays, what would you consider a good day? Sit in front of the TV with the remote or go outside and run around the block a few times? You know . . .''
Family and other responsibilities: lack of child care	''We can't find time to exercise together . . . I work, look after my child, go to school. I can only exercise at night or on weekends. The only time for us to exercise together is on the weekends.''
	''I was going to Fitness USA. I had one of my children watch the other children and an accident had occurred. So I couldn't go back to Fitness USA. I felt kind of bad because I really wanted to tone up and lose a little bit and became frustrated because I had no outs. I was stuck at home because I didn't have adequate child care.''
Lack of social support	''Exercise. I have a problem because I need to have a group or something because I do not do it by myself. I try to exercise by myself, but I might do it a day or 2 and then stray away and I need something to—a support group. Or I'm not there.''
Social norms	''In the country from which they came, they were used to walking—walking, walking, walking everywhere. Here they don't walk in the summer because it's too hot, and they don't walk in the winter because it's too cold. This is what they are used to. If they want to buy something, they don't walk.''
Lack of safety	''You can't really do it in our community because of all of the gang members and the bums on the street. If it was a little cleaner and a little safer, like the way it used to be.''
	''A lot of people be too scared to walk around in their community because . . . you got these drug dealers . . . you got to walk past them drugs.''

RECOMMENDED STRATEGIES FOR PREVENTING DIABETES AND ITS COMPLICATIONS

Building Community Awareness and Capacity

Focus group participants identified many strengths and resources in their communities, and recommended specific strategies to promote healthy lifestyles (Table 5). They suggested that residents work together to improve the community environment. Several eastside participants suggested that residents work with grocers to maintain cleaner stores, stocked with fresh, low-cost foods. Participants from both communities suggested: having fruit and vegetable trucks, carts, and stands, that could bring fresh produce closer to people in the neighborhood; implementing neighborhood clean-ups; getting together to demand action to make the streets safer; and having a community garden, as a way to promote healthy eating and exercise.

Participants emphasized the need for increased community awareness of diabetes and its causes. They recommended community education to increase residents' knowledge and skills related to healthy eating, including classes for children. Suggestions included information about the effects of food on health; how to shop for, and prepare, healthy foods, including recipes for foods commonly eaten by Latinos and African Americans; and healthy food demonstrations. Participants suggested that the media inform the public about diabetes, its causes, and prevention methods. Several said that role models could help motivate participants to make lifestyle changes: *"If I saw Michael Jordan walk. I can't run no more, but I can walk."* Participants recommended public education about how to exercise safely, since some people thought that exercise could worsen, rather than improve, disease-related complications.

Provide Family-Based Activities

The importance of family involvement was emphasized by participants from both communities, since many perceived diabetes risk to be transmitted through both family inheritance and behavior, particularly eating. They recommended family-focused programs to increase awareness of diabetes, its causes, complications, management and prevention: *"It is very important to begin keeping a good diet and teach our children. If we are going through the process of a disease, then teach our children that they shouldn't follow those steps."* Free or low-cost activities, such as dance and water aerobics, housed in community centers where the *"whole family could be involved . . . the children and adults,"* were recommended.

Participants from both communities saw women as pivotal to the success of family-based interventions, but said that

Table 5. Major themes and selected quotations: strategies to promote healthy eating and exercise

Themes	Quotation
Community awareness	''And I also think that it should be advertised more—the importance of knowing the conditions of our race so that it can be—people can be aware of the symptoms.''
	''To be educated about diet before it [diabetes] strikes . . . what runs sugar up. Since diet controls, [it] should also be able to prevent.''
Family activities	''This could be for men and women and children, so they can maintain their health and know how they need to change their eating habits. It's for the whole family, not just for the females and their children.''
Companions/social support	''They should have a center where we could go and do exercise, and maybe talk to someone, a counselor or a therapy group that would focus on diabetes. There are times that we have so much stress and we do not have anyone to talk to . . . support groups would be good in the community.''
Fresh produce trucks and stands	''You can set up a fruit stand; let people buy all through the summer. All kinds of fruit: oranges, apples, bananas . . . just so they can have somewhere right there they can go to.''
Healthy food demonstrations	''If they had a place that you could go and taste the other food you should eat instead. People may say 'I can do without this . . . and I'll try this!''
Nutrition education	''I'd offer classes to kids because a lot of times the correct eating habits are formulated when the kid is a child; that's something they will grow into . . . the parents will probably sit down with the child and help them do the homework and discuss it with the child and that's food for thought for them.''
Exercise activities in community centers	''A free training center would be good, in a targeted area . . . not just for the adults because a lot of us would get exercise if we didn't have to worry about a babysitter. Where people can come in exercise and don't have to worry about day care cause maybe they got something for the kids to exercise. Exercise don't just start when you become an adult.''

programs should have flexible schedules to encourage men to participate after work. Participants said programs should include exercise activities for children and child care, to help families become more active. Both men and women discussed the importance of the other in food preparation, motivation, and caring for the family. Men emphasized the importance of women in their lives in lifestyle decision-making, while some women called for special efforts to: *". . . call out men . . . guys shy away . . . we can branch out to recruiting fathers, husbands, and sons."*

Provide Social Support Group Activities

Groups were seen as an effective means for sharing new information about healthy cooking and physical activity strategies, and for providing mutual encouragement for efforts to adopt and sustain healthy lifestyles: *"It is important to have those groups so that they can show us how to change, to teach our children . . . to break some of the traditions."* Women suggested creating "buddy systems" to increase safety, and to reduce the boredom and cultural constraints on solitary public activity. Support groups, such as breakfast clubs, were suggested to help develop and reinforce healthy eating habits. Southwest participants with diabetes discussed depression, and recommended support groups to reduce isolation, and provide a way to share concerns. Women with previous gestational diabetes mentioned that social support after pregnancy would help them sustain healthier eating and physical activity habits learned during pregnancy, and would reduce their feelings of isolation at home.

Healthcare System Issues and Strategies

Participants discussed several healthcare-related issues that influenced their awareness of diabetes, its risk factors, and their ability to obtain appropriate care. Many said their healthcare providers didn't understand, or care for, their needs, describing insurance status, gender, culture, and language barriers. Many distrusted the healthcare system: *"My problem is not trusting doctors to diagnose your child or self accurately. I went to the doctor; they have the chart up there to tell you about the symptoms of diabetes. Looking at it, I noticed I have those symptoms. Seemed to me like they kind of brushed it off. We go to him because that's our doctor . . . I couldn't just go to another doctor because that's the closest one that we could go to. That's kind of a problem that he didn't take it serious."*

Participants expressed frustration with the lack of preventive health services, compared to medical care provided "only when complications struck." They recommended that insurance and healthcare providers support preventive care, nutrition services, education, and monitoring of people at high risk, because of family history, gestational diabetes, overweight, or "borderline diabetes."

Participants said that medical staff gave little time to addressing their concerns, making proper diagnoses, or educating them about their health; however, they had no alternatives. Poverty, lack of adequate, affordable, comprehensive medical insurance, unreliable transportation, and high costs for diabetes self-care supplies, such as glucose test strips, were major concerns. Several participants received health care from CHASS, but undocumented status was described as a barrier preventing many

Latinos from obtaining needed care from other providers. *"Many are afraid to go to the doctor because they have no insurance or social security, and they will be asked questions like, 'How do you make a living here?"*

Several participants from both communities were members of the CHASS "diabetes group," which provides medical care, nutrition counseling, guidance about diabetes self-monitoring, and mutual support within a group setting. Participants said the diabetes group helped them monitor their health, and make lifestyle changes. Participants recommended that doctors, nurses, dieticians, and other healthcare staff be educated about patient, family, and community needs, as well as cultural issues, including learning how to help patients follow their recommendations. Southwest participants emphasized the need for both Spanish-language materials and bilingual staff, who would understand their culture, and could communicate with them.

DISCUSSION

Community-based participatory research principles and methods provide a strong foundation for planning realistic interventions. They facilitate integration of the perspectives and daily realities of community residents, including community assets and strengths, and promote direct engagement in developing and implementing interventions.[5,8–9,15,17–19,30–41] The REACH Detroit Partnership applied these principles to the development and implementation of family focus groups designed to gain the wisdom of community residents, and to account for possible variations by age, gender, culture, community, and health status in the intervention design.

The use of focus groups, conducted by community moderators in well-established neighborhood organizations, was a successful strategy for identifying community residents' awareness of, and beliefs about, diabetes, and for garnering their recommendations for ways to decrease barriers to healthy eating, exercise, and health care. Participants described the focus groups as an important venue for discussing health-related issues affecting themselves, their families, and communities. Several joined subsequent community planning meetings.

The focus groups revealed several consistent themes. Participants perceived diabetes to be a common disease among African Americans and Latinos, and a growing problem among children. They described serious consequences for themselves, family members, friends, and the community, but believed the public lacked awareness about early symptoms and the seriousness of pre-symptomatic diabetes. Most participants believed that family factors, including heredity and shared lifestyle patterns, were important causes of diabetes. Participants expressed a nearly unanimous belief that diabetes risk is strongly influenced by eating habits, especially high intake of sugar and fat. These findings are consistent with previous studies conducted with African Americans or Latinos.[5,17–21,31]

Some Latino participants identified strong emotional responses to stressful life events as a cause of diabetes. This concept of diabetes causation has been identified in other studies among Latinos, most often using the term "susto."[5,20,42–43] The perception by several African-American participants that diabetes may be caused by a stressful lifestyle, or environment, has not often been reported. A recent review of factors affecting the health of African-American women with diabetes cited societal, family, and personal stressors, as barriers to diabetes self-management and glucose control.[44]

The focus group participants identified personal, cultural and family barriers to healthy eating and physical activity that have been reported previously for African Americans and Latinos.[5,17–21,30–35,42,45–47] For many participants, the time and energy needed to buy and prepare healthy food, and to arrange opportunities for physical activity, competed unsuccessfully with work and family responsibilities. Since women are frequently caretakers of others, especially in African-American and Latino communities, where this social norm is dominant, and in which child care responsibilities may extend beyond middle age, taking time for self-care activities is difficult.[17–18,20–21,44,48]

Neither social norms nor community resources supported healthy eating or regular physical activity in either community. Few readily accessible stores and restaurants carried affordable, healthy foods, and a lack of programs and safe recreational facilities posed barriers, even to those motivated to make changes. Inadequate or inaccessible community level resources have a demonstrated effect on the food choices and physical activity levels of individuals.[49–53]

Neighborhood safety has frequently been cited as a barrier to physical activity, particularly by women.[5,20,34,51] For Latinas in Detroit, lack of safety and cultural constraints to walking unaccompanied were barriers to accessing community stores.[5] For those participants with low income and lack of transportation, time and access barriers were compounded. Even in the presence of resources and programs, the importance of support from family and friends for adopting and maintaining healthy eating and regular physical activity was emphasized by participants, as has been described by other studies.[5,17–18,46,54–55] Group activities that provide social support for healthy eating and exercise may have a positive impact on the adoption and maintenance of weight loss regimens.[55]

Analysis of the major focus group themes resulted in recommendations for a complex, multi-level intervention design. While age, gender, and community differences were noted in some of the data, overarching themes were more

prevalent. Therefore, the design facilitated tailoring specific components, while maintaining the following essential elements: 1) *Provide family-oriented activities* since even those family members without diabetes are "at risk." Intervention activities promoting diabetes awareness, and healthy lifestyles, may reduce the risk of diabetes and its complications in the whole family. Family interventions also acknowledge participants' views that lifestyle habits are acquired in childhood, that family members can be role models for each other, and that lifestyle changes are easiest when members support each other. 2) *Educate healthcare providers* about patient, family, and community needs. Suggested aspects of health system interventions included training healthcare providers to attend to cultural, language, and insurance issues; skills needed for communicating with community residents, including how to help residents accomplish provider recommendations, and having bilingual staff and educational materials available; and placing more emphasis on preventive services. 3) *Develop social support group activities* for people with diabetes, family, and community members. Support groups were seen as an important way to provide mutual education and motivation, social contact, discussion of concerns, and strategies for lifestyle change and increased safety. 4) *Develop community-level activities* designed to increase awareness of diabetes and its risk factors, and to influence the development of resources needed for healthy lifestyles. Participants recommended community education and demonstrations on preparing tasty and healthy foods, and exercising safely. They stressed the importance of working with city and neighborhood organizations to increase access to healthy foods and exercise programs, and facilities for people of all ages. The need for flexible hours, child care, and transportation, as well as the provision of culturally competent, bilingual staff and materials, were emphasized for each area of intervention.

Next Steps

The REACH Detroit Partnership adopted this complex model. Its linked family, health system, social support groups, and community interventions were funded by CDC in October 2000. The interventions were designed to reduce risks associated with diabetes and its complications among African-American and Latino residents of the eastside and southwest Detroit communities by reducing barriers to healthy lifestyles, and by promoting health and appropriate health care. REACH Detroit is conducted by African-American and bilingual Latino staff recruited from the REACH communities. Family Health Advocates work directly with people with diabetes, their family members, and healthcare providers by conducting group classes on healthy lifestyle choices and diabetes self-management, and by providing case management and referral services. Major outcome objectives include increased regular exercise and healthy eating behaviors, increased diabetes self-management, and improved glucose control. Community Facilitators and Community Health Advocates work to increase community level awareness of diabetes and its risk factors, and ways to reduce those risks, through public education and activities like healthy cooking demonstrations. They develop and link community residents with social support resources on topics such as diabetes, walking, and healthy eating groups; and community resources, such as exercise classes, community gardens, and fresh produce mini-markets in community organizations.

The REACH Detroit Partnership SC, which expanded to include the Southeast Michigan Diabetes Outreach Network, the Michigan Department of Community Health, and St. John Health System, oversees implementation and evaluation. Community Health and Social Services (CHASS) remains the grantee and central coordinating organization. The REACH-Out Network, an informal group of community organizations and residents, help to identify and develop resources, and to disseminate results. The project's progress, data, and evaluation findings are shared with the eastside and southwest Detroit communities through meetings, community activities, newsletters, and their web site: reachdetroit.org.

REACH Detroit family focus group participants identified both barriers and potential solutions that were thoroughly grounded in the daily realities of the social, cultural, and physical environments of eastside and southwest Detroit. The resulting intervention design was believed by the SC to promise future success in efforts to prevent diabetes and its complications, and to promote community health. Community members and partners remain integral to the maintenance of a community-based, participatory approach to addressing disparities in diabetes.

ACKNOWLEDGMENTS

This study was conducted in collaboration with the Detroit Community-Academic Urban Research Center and its member organizations. The authors wish to thank the SC and staff of Community Health and Social Services for support of REACH Detroit planning activities; Butzel Family Center and Latino Family Services for hosting the community focus groups and related meetings; the focus group moderators, assistant moderators, and, most of all, participants for sharing their insights and ideas. Special thanks to Drs. Barbara Israel, Sherman James, and Kimberlydawn Wisdom, for their leadership during the REACH Detroit planning process, and to Dr. Michael Spencer, for thoughtful review of this manuscript. The project was supported by a Centers for Disease Control and Prevention, Racial and Ethnic Approaches to Community Health, Phase I Planning Grant. Additional support was provided by the W.K. Kellogg Foundation Community Scholars Program.

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