
Using Multilevel, Multisource Needs Assessment Data for Planning Community Interventions

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African Americans and Latinos share higher rates of cardiovascular disease (CVD) and diabetes compared with Whites. These diseases have common risk factors that are amenable to primary and secondary prevention. The goal of the Chicago REACH 2010–Lawndale Health Promotion Project is to eliminate disparities related to CVD and diabetes experienced by African Americans and Latinos in two contiguous Chicago neighborhoods using a community-based prevention approach. This article shares findings from the Phase 1 participatory planning process and discusses the implications these findings and lessons learned may have for programs aiming to reduce health disparities in multi-ethnic communities. The triangulation of data sources from the planning phase enriched interpretation and led to more creative and feasible suggestions for programmatic interventions across the four levels of the ecological framework. Multisource data yielded useful information for program planning and a better understanding of the cultural differences and similarities between African Americans and Latinos.

Keywords: *planning; community interventions; multi-level; multisource; needs assessment data*

Immense disparities exist in risks for certain chronic diseases among racial and ethnic groups in the United States. These disparities are well documented and appear across the spectrum of U.S. society (Fiscella, Franks, Gold, & Clancy, 2000; Thomas, 2001; Vinicor, Burton, Foster, & Eastman, 2000; Williams & Jackson, 2000). In February 1998, former President Clinton authorized the Centers for Disease Control and Prevention (CDC) to allocate a competitive grant for community coalitions to address the disparities in selected chronic diseases. The purpose of this initiative, known as racial and ethnic approaches to community health (REACH 2010), was for these coalitions to eliminate disparities in health status experienced by selected ethnic and racial groups (African Americans, Native Americans, Asian Americans and Pacific Islanders, and Latinos) in six chosen health areas. These areas are infant mortality, cancer screening and management, cardiovascular disease (CVD), diabetes, HIV infection/AIDS, and immunizations. This CDC initiative is a two-phase, science-based project requiring extensive participation by community members and public health professionals with health promotion programming expertise. Phase 1 (the first year) involved a community-based planning process to develop a community action plan; Phase 2 (Years 2 through 5) is the implementation of the community action plan. The purpose of this article is to share community assessment data and major issues regarding the community learned by the evaluation team during the Phase 1 participatory planning process of the Chicago REACH 2010–Lawndale Health Promotion Project. The results will use the ecological framework for the multilevel community needs assess-

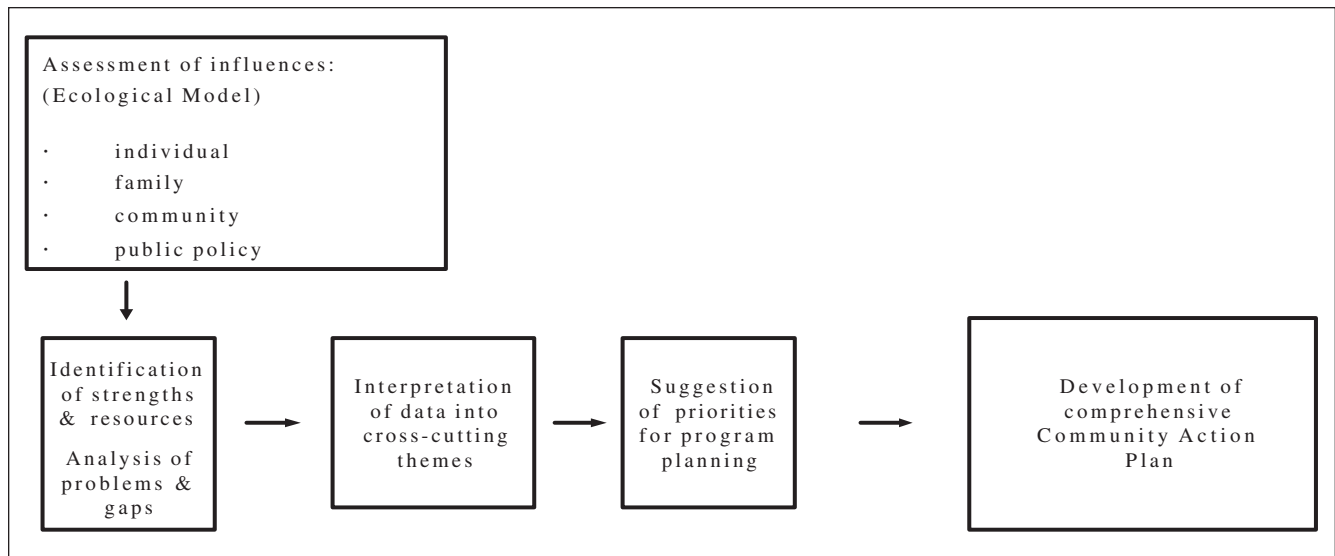


FIGURE 1 Chicago REACH 2010-Lawndale Health Promotion Project, Year 1 Planning Process Framework

ment and subsequent findings. The implications these findings have for programs aiming to reduce health disparities and prevent and control CVD and diabetes in multiethnic communities are discussed. Programmatic suggestions are made along with implementation strategies.

► BACKGROUND

In the summer of 1999, the Chicago Department of Public Health convened a group of individuals concerned with racial and ethnic disparities in the health status of Chicagoans to pursue the REACH funding opportunity. After a review of health department morbidity and mortality data, two contiguous communities on the west side of Chicago were chosen as the project community area. (The term *project community area* will be used to refer collectively to the two communities.) One community is primarily African American, the other primarily Latino, specifically Mexican American. Although African Americans and Latinos have distinct cultural practices, they share higher rates of CVD and diabetes compared with Whites. These diseases have common risk factors amenable to primary and secondary prevention, including risks associated with smoking, obesity, sedentary lifestyle, inadequate medical management, and inadequate access to primary care (Farquhar, 1993; Tuomilehto et al., 2001). Behavioral risk factors for CVD and diabetes are prevalent in both the African American and the Latino populations. Rates of obesity and physical inactivity are higher in Latinos and African Americans than in the overall U.S. population (CDC, 2001), making these two racial/ethnic groups at especially high risk for CVD and diabetes. The geographic proximity within Chicago of an African American and a Latino community provided the project with the unique opportunity to focus on these behavioral risk

factors amenable to the prevention and control of CVD and diabetes in both racial/ethnic groups.

► METHODS

Planning Process

Community participation began with the initial writing of the competitive grant proposal to the CDC and continued through the Phase 1 planning process. The planning process was designed to facilitate input by community members in developing a comprehensive and responsive community action plan. For the purpose of promoting continuity and structure to community involvement in Phase 1 activities, a planning council was created. The council was composed of representatives from more than 50 community agencies and organizations that may play a role in disease prevention and of community members. Planning council members included individuals from different racial and ethnic backgrounds with professional expertise across a broad spectrum of fields such as public health, medicine, nursing, community organizing, and evaluation. Representatives from the American Diabetes Association and the American Heart Association were on the planning council. Community members also participated, including persons affected by the targeted health conditions, local business people, and religious leaders. The planning council was made up of the following four workgroups: risk factors and programs, quality of clinical care, policy and advocacy, and data and evaluation. The planning council was charged with providing guidance and feedback during a comprehensive, multilevel assessment of both needs and resources within the project community area. All needs assessment data were presented to the council to ensure the most valid interpretation possible. Based on these needs assess-

TABLE 1
Levels of the Ecological Model, Data Sources, and Examples of Data

<i>Levels of the Ecological Model</i>	<i>Data Sources</i>	<i>Examples of Data and/or Performance Indicators</i>
Individual	Focus groups and key informant interviews	Difficulty in obtaining and paying for prescribed medications
	Behavioral risk factor surveillance survey	Between 32% and 36% of respondents uninsured
Family	Focus groups and key informant interviews	Issues related to disease management create stress for the entire family
	Behavioral risk factor surveillance survey	45% of adults have a family member who has or had diabetes
Community	Focus groups and key informant interviews	Availability of unhealthy food and limited knowledge of or access to healthy food make it difficult to control diabetes and hypertension
	Behavioral risk factor surveillance survey	78% of respondents not eating five or more fruits and vegetables per day
	Community landscape asset mapping	Scarce availability of fresh fruits and vegetables in community grocery stores; little nutrition information in stores and restaurants regarding healthy food choices
Public policy	Focus groups and key informant interviews	Feeling unsafe in the community is a source of stress
	Behavioral risk factor surveillance survey	34% of respondents would like to see more recreational programs in the community
	Community landscape asset mapping	Minimal police presence

ment data, the planning council developed a community action plan (see Figure 1).

Framework of Needs Assessment

The ecological model of health behavior (McElroy, Bibeau, Steckler, & Glanz, 1988) was the theoretical basis for the needs assessment. This model focuses on the relationship between the individual and his or her social environment, positing the following four levels of influence that affect and are affected by health behavior: public policy, community, family, and individual. By focusing on these four levels and types of social influence, appropriate interventions can be developed.

The major aim of the community needs assessment was to enhance the understanding of the multitude of factors that influence CVD and diabetes in individuals living in the community area. Planning council members brainstormed to identify direct and indirect contributing factors to CVD and diabetes. From this list, a comprehensive set of approximately 40 project performance indicators was developed. Project performance indicators correlate to the four levels of influence on health behavior outlined by the ecological model. Indicators included were lifestyle risk factors (e.g., the percentage of adults in the community who are currently sedentary), medical (e.g., the percentage of adults with elevated cholesterol levels), and individual- and community-level collateral (e.g., the types of sources used for health information and the number of community

grocery stores keeping fresh fruits and vegetables in stock).

Both quantitative and qualitative data collection methods, including focus groups and key informant interviews, the behavioral risk factor surveillance system (BRFSS), and community landscape asset mapping (CLAM), were needed and used to obtain substantial breadth and depth of information. The project performance indicators ensured that the specific data collected would be relevant to the aims of the Chicago REACH 2010–Lawndale Health Promotion Project and therefore useful in developing the community action plan. Specific variables and questions used in data collection were chosen to reflect these performance indicators (see Table 1 for examples).

Data Methods and Sources

Needs assessment data were gathered through three methods: focus groups and key informant interviews, the BRFSS, and CLAM. Together, these three methods addressed all four levels of the ecological model (see Table 1).

Focus group methodology and open-ended interviews are uniquely capable of obtaining information regarding individual and community group perceptions of specific topics. Focus groups and interviews allow participants to explore topics extensively, thereby providing data that reflect a comprehensive view (Kingry, Tiedje, & Friedman, 1990; Krueger, 1988). Focus group

and key informant interviews were conducted in order to elicit perceptions related to health concerns and identify community, family, individual, and public policy influences on health behaviors. The guides used for the focus groups and interviews were based on instruments used in previous studies and tailored to the Chicago REACH 2010–Lawndale Health Promotion Project with input from project staff members and the planning council. Council members identified community residents and health care professionals to participate in the focus groups and key informant interviews. A total of eight focus groups with 99 participants and 10 individual interviews were conducted during a 2-week period. In all, 52 African Americans between the ages of 20 and 50 or older participated in four focus groups of approximately 10 to 14 people; one of the groups was all male, two were exclusively female, and one was mixed. A total of 47 Latino community members between the ages of 25 and 50 or older participated in four focus groups of approximately 10 to 15 people. One was mixed sex, and the other three were entirely female. Focus groups took place at local community or social service agencies, and each group had an observer and a recorder present in addition to the focus group leader. The African American focus groups and interviews were conducted by an African American member of the evaluation team; the focus groups and interviews with Latinos were conducted by a Latino Chicago Department of Public Health staff member in the language (Spanish or English) preferred by the interviewee. Of the 10 key informants interviewed, 5 were African American and 5 were Latino, 5 were female and 5 were male, and 4 were health care professionals working in the community and 6 were community residents. Interviews took place at community agencies or in participants' homes.

The CDC BRFSS survey was used to collect data on individual-level characteristics such as knowledge, attitudes, and behavior. The BRFSS is a standardized telephone surveillance instrument that measures adult behavioral risk factors leading to increases in morbidity and premature mortality rates (CDC, 2001). A total of 150 questions from the core BRFSS questionnaire as well as the diabetes, CVD, and hypertension modules were used in the community assessment. A total of 406 individuals living in the project community area were surveyed. The BRFSS was conducted by the Survey Research Laboratory, a professional research and service unit of the College of Urban Planning and Public Affairs at the University of Illinois at Chicago. The sample design included both a random-digit-dial sample of 576 telephone numbers as well as a random sample of 1,982 listed telephone numbers. The maximum number of attempts made to contact an individual at a particular number was 20.

CLAM is a community-mapping tool used to identify community-level opportunities for and barriers to healthy behaviors (Issel & Searing, 2000). CLAM investigates the nature of geography and its relationship to

communities and personal health. It involves space and place and may identify key explanatory and mediating variables related to variations and disparities in health and chronic disease. The original tool was revised based on input from project staff members and members of the planning council and was tailored to the Chicago REACH 2010–Lawndale Health Promotion Project. Therefore, this version of the CLAM addresses community and policy influences on health. This method of data collection examines the following four types of landscapes through structured observations: ecological, materialistic, consumption, and therapeutic (Curtis & Jones, 1999). For example, the ecological landscape represents opportunities for clean air, water, earth, and safety. This is represented in CLAM data by noting the condition of vacant lots and streets, police presence, street lighting, and smoking in restaurants. City blocks, restaurants, and grocery stores were unobtrusively surveyed for factors that contribute to or help prevent CVD or diabetes. A total of nine trained community members working in teams of two or three surveyed 45 city blocks, 29 restaurants, and 24 grocery stores within five major north-south and four major east-west streets at various times during a 2-day period.

Debriefing sessions were conducted with the CLAM community surveyors. Discussions of data viewed from an emic perspective can enrich the interpretation of data (Maynard-Tucker, 2000). In the case of the CLAM, certain information would never have surfaced or may have been misinterpreted had “outsiders” been performing the surveillance instead of community members. For example, investigators on the evaluation team interpreted the absence of gang-related graffiti (“tags”) as a positive implication. However, community members explained that without gang tags, it is unclear which areas are gang territory and therefore safe or unsafe.

Data Analysis

Data from the focus groups and key informant interviews were analyzed first. The evaluation team collectively generated five thematic areas. Focus group and key informant data were then presented to the planning council organized by these themes for discussion and refinement. The BRFSS and CLAM data were then analyzed and organized according to these refined thematic areas. Again, these data were presented to the planning council for discussion and further development. The BRFSS data were entered and analyzed using SPSS 9.0 for Windows (SPSS Inc., 1998). Descriptive statistics were calculated for all the BRFSS questions. Selected questions were stratified by race, gender, and/or age. CLAM data were entered using SPSS 10.0 for Windows (SPSS Inc., 1999) and aggregated to yield overall descriptive statistics of the city blocks, restaurants, and grocery stores.

After the BRFSS and CLAM data were analyzed separately, findings were then examined through the unify-

ing lens of the themes. When data from any one source yielded a pertinent finding, the other data sources were reviewed to corroborate or impugn that finding. Overall, findings were generally confirmed across data sources, although as might be expected, each data source yielded some unique findings. Because data from multiple sources were integrated in the needs assessment, the approach taken can be described as triangulation (Thurmond, 2001). Triangulation is the combination of two or more theoretical perspectives, methodological approaches, data sources, investigators, or data analysis methods within the same study. A triangulation approach can decrease, negate, or balance the deficiency of a single strategy.

► FINDINGS

Presentation of the data is organized by the five themes derived from the qualitative data. Viewing all results as such enables a more comprehensive understanding of the project community area in terms of factors across the ecological levels.

Theme 1: In the project community area, accurate information on diabetes and CVD is limited. Focus group participants and key informants clearly recognized diabetes and CVD as diseases affecting their community. These were viewed as problems needing to be addressed on not only an individual but also a community level. Community members felt that credible and consistent health information is not readily accessible in their community. Focus group participants lacked basic knowledge of CVD and diabetes risk factors, symptoms, or causes. Community members felt that

community organizations not directly related to health, such as schools and churches, are suitable places to promote the community agenda for diabetes and CVD prevention and control. Focus group members expressed feelings of frustration because health-related pamphlets and other educational materials given to them by physicians are overly technical and laden with medical jargon. Latino focus group participants discussed the difficulty of finding Spanish-language materials.

Several questions from the BRFSS measure respondents' knowledge and beliefs regarding the causes, treatment, and complications of diabetes. Knowledge levels were low. For example, when asked, "What do you think causes diabetes?" approximately 27% responded that they did not know. A total of 69% either agreed or strongly agreed that "just a touch of sugar" is not really diabetes.

CLAM data supported the view expressed by focus group participants about the limited availability of information regarding CVD and diabetes. There was little information about healthy living present in public community spaces such as on billboards or public transportation. Health messages did not appear inside local businesses such as currency exchanges or laundromats.

Theme 2: Community members expressed a strong desire for more health education and healthy community activities, including exercise programs, to be located within the community. Focus group and key informant interview participants noted a need for more opportunities for disease prevention and felt that the community at large would support these programs. People knew that obesity, lack of exercise, and smoking

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were barriers to good health. They expressed the desire to make lifestyle changes but did not know where to go or how to begin. Focus group participants were not aware of very many programs in the community related to physical activity, nutrition, or general health education. They mentioned that information on nutrition, healthy cooking, and changing family eating habits was particularly difficult to find in the community. According to the African American key informant interviews, some formal health education programs had been implemented in the community by either a university or a local health department; however, Latinos appear not to have had the same awareness of or participation in these programs. African American focus group participants requested health promotion programs that were holistic and family oriented.

Data from the BRFSS questions about the use of recreational activity and exercise programs in the community showed that respondents were not using existing services, possibly because they were not aware of them or because they felt they were unsafe. Additional programs or services that community members stated they would like to see in their community are recreational programs (mentioned by 34% of respondents) such as YMCAs, parks, and basketball courts as well as neighborhood safety and violence prevention programs.

The CLAM data confirmed the minimal existence and use of walking paths in local parks. People wanting to make lifestyle changes would find little information in community restaurants or grocery stores regarding healthy food choices.

Theme 3: The high cost of health care and lack of adequate insurance coverage are barriers for many community members, regardless of disease status. The cost of prescription drugs and related supplies, often not covered even for those with health insurance, is a critical issue for those diagnosed with diabetes and CVD. According to data from the focus groups and key informant interviews, a significant number of community members have little or no health insurance coverage. Community members, both African American and Latino, depend heavily on free public health clinics or emergency rooms for their health care. Even for those with insurance, prescription medications are often not covered. Individuals diagnosed with CVD or diabetes often must pull together money for medications from several different sources.

The BRFSS data indicated that between 32% and 36% of community members surveyed were uninsured at the time of the survey, depending on the specific insurance question. A total of 15% of the approximately 66% who were insured at the time of the survey noted that there was a time in the prior 12 months when they did not have any health insurance. Latinos in this sample were less likely to be insured than were African Americans, although Latinos were more likely to be employed for wages. Almost 20% of all respondents, regardless of insurance status, reported

that there had been a time in the past 12 months when they needed to see a doctor but could not because of the cost.

The CLAM did not address cost and affordability of health insurance as this cannot be easily observed in public places.

Theme 4: In addition to the cost barriers previously discussed, there are sociocultural barriers to health care. Latino and African American focus group and key informant data indicated that factors affecting community members' health care experiences include treatment by health care providers and other staff members, clinic environment including cleanliness and condition of equipment, clinic ownership such as whether owned by a community member or an "outsider," and language compatibility with provider (which was an issue for English and non-English speakers). For African American community members, the primary complaint about health care services concerned condescending and disrespectful attitudes from providers, which can lead to a lack of trust in the health care system and noncompliance with treatment regimens. The relative scarcity of Spanish-speaking staff members in clinics was a major issue in the Latino focus groups, but issues regarding respectful and caring attitudes similar to those discussed in the African American focus groups also arose. Gender and age affected the use of formal medical services. Women—particularly younger women with maternal and child health issues—were most likely to use services because maternal and child health services are available in a cluster and therefore are more easily accessible. According to the key informant interviews with health care providers, adult men, both African Americans and Latinos, dramatically underused available health care services.

The BRFSS data regarding preventive medical services described health care service use by community members and supported findings from the focus groups and key informant interviews. The length of time since respondents had last visited a doctor for a routine checkup varied by both race/ethnicity and gender. African Americans were slightly more likely than Latinos to have visited a doctor for a routine checkup within the past year and slightly less likely to have never had a routine checkup. However, the greatest disparity in routine checkups was between men and women regardless of race/ethnicity, and this probably accounted for those small differences. Less than half of all men surveyed had a routine checkup within the past year compared with 76% of women. Almost 10% of men surveyed had never had a routine checkup.

The CLAM street-level data revealed a very limited number of health providers located in the community. It may be necessary for residents of the project community area to access services that are at a great distance from home. In addition, few buses were seen, which may indicate that public transportation services are difficult to use or are unreliable.

Theme 5: Community members perceive stress in their lives and stressors in their community as a constant threat to their health and well-being. The notion of stress was mentioned frequently in the focus groups and key informant interviews. The environment was mentioned as a general source of stress. This included lack of employment, safety issues, and pervasiveness of liquor stores and illicit drugs. Another source of stress mentioned by individuals affected by diabetes and CVD and their families was disease management. Stress related to disease management includes lack of knowledge about the disease by family members as well as misinterpretation of symptoms, embarrassment, lack of support, and poor understanding of medical regimens. Environmental and family stressors affect disease management and can contribute to feelings of guilt, blame, frustration, depression, and perceived loss of control over the future.

In the focus groups, diabetes was noted as a disease that negatively affects the whole family. This is a significant community issue as 45% of the BRFSS respondents have a family member who has or had diabetes. Smoking can be an indicator of stress (Heslop et al., 2001). A total of 26% of surveyed residents currently smoke every day or some days; this is slightly higher than the national average of 23% (CDC, 2001). Smoking is especially prevalent among those who are at high risk for diabetes and CVD. For example, 42% of smokers reported having a family member who has or had diabetes. However, it appears that community members are aware of the health risks related to smoking. Of those who reported smoking, 75% have quit smoking for one or more days in the past 12 months.

CLAM data were consistent with a perceived lack of safety, including minimal police presence, poor lighting, numerous vacant lots, presence of graffiti, and garbage on the streets. All of these could potentially contribute to stress. The shortage of walking paths may also be perceived as a lost opportunity to reduce stress through physical activity.

► DISCUSSION AND IMPLICATIONS FOR PROGRAMS

A comprehensive community assessment employing multilevel data sources suggests a need for health promotion programs that are developed with input from the community members they will serve, long-term, well-advertised, and easily accessible. Suggested program activities are organized according to themes parallel to those organizing the findings (see Table 2). Activities are diversified and address all four levels of the ecological model.

Despite apparent cultural and ethnic differences between African Americans and Latinos, the needs assessment data revealed that both groups have similar concerns related to diabetes and CVD. Community members' requests for usable information and comprehensive, respectful health care are clearly articulated

and strikingly similar. There are no programs suggested by the needs assessment data that are appropriate for one racial/ethnic group but not the other. Core program content will be similar for both African Americans and Latinos; culturally appropriate examples, activities, and printed materials should be designed specific to each group. In some cases, programs can successfully address cultural differences without having to be delivered to separate audiences. However, for the most part, geographical and language barriers in this community area necessitate the delivery of programs to African American and Latino groups separately. To ensure maximum participation, program recruitment strategies in particular must be culturally sensitive and specific. However, it is efficient, enriching, and favorable to plan and deliver diabetes- and CVD-related health promotion programs to Latinos and African Americans under the auspices of a single community-based health promotion initiative.

Dissemination of Health Information

Data revealed a great need in the community for general diabetes and CVD education and awareness. Health information needs to be presented in a user-friendly, easily understood, and culturally appropriate format and in both English and Spanish. As an overwhelming majority of community members are at high risk for diabetes and CVD, a media campaign targeting all community members is recommended. Such a campaign should focus on the importance of screening as well as on modifying individual health risk behaviors. Media messages should be developed with input from consumers and community health care providers and tailored to reach both African American and Latino community members. Data from the focus groups indicated that community members would be enthusiastic about providing input into making such messages relevant to their community.

A specific media and outreach campaign is recommended that targets individuals within the project community area who are at especially high risk for diabetes and CVD. The message needs to focus on reasons for screening and promoting screening for diabetes, high blood cholesterol, and high blood pressure. Community outreach workers could be used to increase awareness of screening needs and available services. Access to free or low-cost screening sites in the community could be increased, possibly at health fairs or sites such as drug stores, pharmacies, grocery stores, churches, and other interested community organizations.

Health Promotion Programs

The BRFSS and focus group data showed that African American and Latino community members are motivated to increase physical activity, improve eating habits, and quit smoking. However, data reflected an insufficient number of programs in the community or at

TABLE 2
Program Suggestions by Theme

<i>Theme</i>	<i>Program Suggestions</i>	<i>Program Objectives</i>
Accurate health information on diabetes and CVD is limited.	<i>Dissemination of health information</i> Conduct media campaign Coordinate community outreach Increase access to screening	Increase awareness of signs and symptoms of diabetes and CVD Increase awareness of need for screening Increase screening Increase detection
Community members desire more health education and healthy community activities.	<i>Health promotion programs</i> Increase promotion of and collaboration with currently available physical activity programs Increase safety at parks and other recreational sites Develop new physical activity programs with community groups Provide nutrition education to restaurant and store owners Establish farmers markets or community gardens Conduct smoking cessation programs	Increase number of available programs Increase awareness and use of new and existing services Increase availability of healthy foods Help smokers quit
Inadequate insurance coverage and the high cost of prescription drugs and medical supplies are barriers to quality health care.	<i>Alleviating the high cost of prescription medications</i> Increase use of indigent pharmaceutical programs Coordinate county indigent pharmaceutical program services Change local, state, and national health insurance policy	Help community members obtain needed prescription medications
Sociocultural barriers affect health care usage.	<i>Reducing barriers to quality health care</i> Educate health care providers, those diagnosed with diabetes or CVD, and their families regarding standards of care Teach health care providers cultural competency skills Ensure adequate number of health care providers with Spanish-language skills Target men for preventive services	Improve access to and quality of care, especially for those diagnosed with diabetes and CVD
Stress is perceived as a threat to health and well-being.	<i>Stress reduction programs</i> Conduct disease management support groups for those diagnosed with diabetes and CVD and their families Provide physical activity and smoking cessation programs as stated previously	Alleviate stressors in the community, particularly for those diagnosed with diabetes and CVD and their families

NOTE: CVD = cardiovascular disease.

least a lack of awareness of existing services. Currently, available and underused recreational programs, such as those offered by the Chicago Park District and the Chicago Hispanic Health Coalition, can be promoted. Perceived safety was cited in focus groups as a barrier to the use of park facilities, and CLAM data showed a lack of police presence and walking paths. Efforts need to be made to increase safety at parks, park district buildings, and the neighborhood in general so that community members can feel safe while walking or jogging. Partnerships can be made with churches, schools, local school

councils, block clubs, and other community and neighborhood groups in order to start new exercise programs and walking groups.

Focus group and the BRFSS data indicated a great willingness by community members to change individual health behaviors, but the current community environment is not conducive to healthy eating. Something as simple as having nutrition information available at neighborhood grocery stores and restaurants would greatly benefit those on special diets or those trying to choose healthier foods. Restaurant and store owners

could be encouraged to offer healthy choices to customers and be given assistance on how to provide customers with nutritional information. A program such as this might act as an impetus for restaurant owners to provide healthy choices to their customers, particularly once a demand for healthy foods is realized. Other community programs such as farmers' markets or gardening plots, which have been popular and successful in other Chicago communities but are not present in this project community area, could also help promote fruit and vegetable consumption.

The prevalence of smoking in the project community area is slightly higher than the national average (CDC, 2001). The BRFSS data also showed that a majority of smokers are actively trying to quit or have recently contemplated quitting. Smoking cessation programs would greatly benefit community members. Smoking can cause especially severe complications for people with CVD and diabetes. Therefore, low-cost smoking cessation programs tailored to these high-risk individuals should be made available in the community.

Alleviating the High Cost of Prescription Medications

The high cost of health care is exacerbated for community members by employment in lower paying jobs offering no or low-quality health insurance coverage. The cost of drugs and related supplies (e.g., diabetes test strips) can be substantial, even for those who have health insurance. Some insurance plans only cover certain prescription medications or do not cover prescriptions at all. Many community members are not able to take advantage of available payment assistance programs; these plans are often extremely complex and time-consuming and require assistance from the physician. Some community residents, including those who are not U.S. citizens or permanent residents, may not qualify for these programs. Although influencing national, state, and local policies related to health insurance and employment may be outside the scope of the project or may take longer than the project duration, immediate relief can be provided to those who are unable to afford needed medications. For example, participation in indigent pharmaceutical programs could be increased by having outreach workers help physicians and patients fill out forms. County pharmaceutical services could also be better coordinated.

Reducing Barriers to Quality Health Care

The BRFSS and focus group data suggested that diagnosed diabetics in the project community area are not receiving needed preventive care as recommended by current American Diabetic Association (2001) guidelines. Health care providers, those diagnosed with CVD and diabetes, and their family members need to be educated regarding the importance of flu shots, pneumonia vaccines, foot and eye exams, and hemoglobin A_{1c} mea-

surement. Patients need to be provided with tools that they can take to doctors' appointments, such as checklists, that inform them regarding what to expect and instruct them on how to request appropriate care if these expectations are not met.

Data indicated that community residents want providers to be more compassionate and respectful as well as demonstrate a better understanding of the complex and interrelated barriers they experience in trying to follow medical instructions. These barriers may include family, language, culture, and financial constraints. A health care provider education program focusing on culturally competent health care for both African Americans and Latinos could be designed and delivered to community physicians in order to address some of the issues that surfaced during the focus groups. Also, a program could be implemented to work with community clinics to ensure adequate Spanish-speaking staff.

There is a particular need to target both African American and Latino men in the project community area to increase their use of preventive services. Community outreach and media efforts could be used. Community health providers need to be made aware of and support all health promotion and education efforts, particularly those targeting men in the project community area.

Stress Reduction Programs

One strategy for alleviating stress among diabetics, those with CVD, and their families is to create community-based programs to assist with day-to-day disease management issues that fall outside of the clinical setting. These programs could be structured as peer support groups. Such programs may increase motivation to adhere to treatment regimens. Families of diabetics could benefit from similar support and educational programs focusing on disease treatment and management issues. Programs could be delivered in residents' homes or at accessible community sites.

Smoking can be a sign of stress, but it can also be a stressor. Community smoking cessation programs, as discussed in the section on health promotion programs, could serve as one potential way to mediate stress in the community. Community walking groups are another positive strategy for stress reduction, particularly if local police officers are involved to address safety concerns.

► CONCLUSION

The triangulation of data sources enriched interpretation and led to more comprehensive, relevant, and feasible programmatic interventions across the levels of the ecological model. The partnership between the university, local health department, and community members made the collection of multisource data possible. University resources made potentially expensive data collection methods such as focus groups or the BRFSS

cost-effective. Community support bolstered participation to ensure that collected data were representative, and community wisdom enriched the discussion and interpretation of findings. Multisource data yielded useful information for program planning and a better understanding of the cultural differences and similarities between African Americans and Latinos. Multisource data also helped the multicultural planning council to gain consensus in the interpretation of data and the development of a community action plan.

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