

**ASSURING HEALTH FOR ALL: AN EMPIRICAL CASE STUDY OF THE  
KANSAS CITY-CHRONIC DISEASE COALITION'S EFFORTS TO REDUCE  
RISK FOR HEALTH DISPARITIES AMONG RACIAL AND ETHNIC  
MINORITIES**

**BY**

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Submitted to the graduate degree program in Applied Behavioral Science  
and the Graduate Faculty of the University of Kansas  
an partial fulfillment of the requirements for the degree of  
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4/24/2009

Date Approved

**ABSTRACT**

Health disparities have had a deep impact on the health status of minority populations over the last century. The purpose of this study is to examine the effects of the comprehensive community initiative implemented by the Kansas City Chronic Disease Coalition. The goals of this coalition were to prevent health disparities related to cardiovascular disease and diabetes experienced by African Americans and Latinos. This study relied on two measurement sources: the use of a documentation system to record instances of environmental change and a self-report behavioral survey. Between 10/01 and 9/07, the KCCDC implemented activities to support the mobilization of partners across all sectors of the community. This resulted in 655 community changes. These changes are associated with improvement in population-level outcomes. Between 2001 and 2005, the percentage of African American adults reporting consumption of five or more servings of fruits or vegetables daily increased from 16.4% to 26% ( $p=0.007$ ).

## **Acknowledgement**

Life's opportunities come in the most unexpected forms. When meeting Dr. Stephen Fawcett and Dr. Jerry Schultz after completing my freshman year in college, I would never have anticipated the opportunities ahead of me. I am grateful for the patience, kindness, and encouragement I have received from them as teachers, mentors, and advisors. Their persistence in engaging me in the study of the Kansas City Chronic Disease Coalition led me down another road filled with opportunities that taught me about community, leadership, and the transforming power of participatory research. I am also grateful to other teachers and colleagues I have encountered in the course of my learning. Under the leadership of Dr. Matthew Kreuter, I was encouraged to explore ideas, engage in rigorous research, and to remember that the behavior of many affects the conditions in which people can be healthy. John Cyprus, Cathy Davis, and Marianne Ronan taught me about having a vision for a healthier community and the tenacity for seeing an initiative grow and develop.

## **Dedication**

To my husband, Eric, thank you for your enduring support in this endeavor. Thank you for being a true partner no matter the distance our pursuits have taken us. To my dear, sweet boy, Andrew: You are a wonder that inspires me to work harder to ensure that yours is a world where equity exists. To my father, thank you for teaching me the importance of justice and service. I only hope that I teach my children as well as you have me. To my mother, grandmother, and sisters: your support, encouragement, and

reminders that I am doing something important have been a source of constant motivation without which I would not have even attempted this.

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## INTRODUCTION

### Review of the problem of health disparities

Dramatic changes have occurred over the last century in the United States – technological improvements, expansion of civil rights, desegregation – yet health disparities between racial and ethnic groups persist (Satcher et al., 2005). The National Center for Minority Health and Health Disparities defines health disparities as “a significant disparity in the overall rate of disease incidence, prevalence, morbidity, mortality or survival rates in the population as compared to the health status of the general population” (National Center for Minority Health and Health Disparities, 2000, p. 2498). Although the health disparities most commonly mentioned are related to racial and ethnic populations, health disparities also occur among socio-economic groups, and by geography, gender, age, and disability status (Centers for Disease Control and Prevention, 2007a).

Health disparities are particularly apparent for most racial and ethnic minority populations. In 2004, African Americans had the highest age-adjusted mortality rates from cancer, diabetes, cardiovascular disease, and HIV/ AIDS of all populations (National Center for Health Care Statistics, 2007). African Americans and Latinos are more than twice as likely to have diabetes as white Americans (Centers for Disease Control and Prevention, 2008). Death rates from heart diseases among African Americans are 29% higher than for whites (Centers for Disease Control and Prevention, 2007b). Related to breast cancer, African American women have a lower incidence rate than whites (127.8 per 100,000 women compared to 132.5), but a

higher mortality rate (33.8 per 100,000 vs. 25.0) (National Cancer Institute, 2007). Latino women have the highest incidence rate for cervical cancer of all racial and ethnic groups (13.8 per 100,000) (National Cancer Institute, 2007).

Because of disparities in incidence and differential rates of mortality, some populations do not live as long as others. The National Center for Health Statistics (National Center for Health Care Statistics, 2006) that the expected life span for African Americans is 73 years compared to 77 years for most Americans. Satcher and colleagues (2005) used standardized mortality ratios from 1960 to 2000 to estimate excess deaths attributable to disparities in mortality rates between African Americans and whites. They estimated that 83,570 deaths each year were excess deaths that would not have occurred if no disparities existed between African Americans and whites in mortality rates (Satcher et al., 2005).

### **Causes of health disparities**

Health disparities have no single cause of health disparities, but rather health disparities are influenced by a confluence of personal and environmental factors. Citing evidence from studies comparing incidence rates of heart disease among West African populations, Kawachi and colleagues indicate that “it is a gross oversimplification to assume that differences in genetic susceptibility could explain observed racial disparities” (Kawachi, Daniels, & Robinson, 2005, p. 344). Increasingly, research suggests that socioeconomic status is an important contributing factor to health disparities. Kawachi et al. (2005) suggest that the focus on racial and ethnic disparities is inappropriate and obscures disparities between “classes” or

socioeconomic groups. Based on a study to geocode health outcomes data and demographic data, Krieger and colleagues concluded that measures of socioeconomic status, particularly “percentage of persons below poverty” (Krieger et al., 2003, p.1660) better explain health disparities.

Another factor affecting health disparities is access to quality, non-discriminatory health care services. At the most basic level, this is a question of who has access to care and who does not. In a report for the Kaiser Commission on Medicaid and the Uninsured, Brown et al. (2000) estimated that 23% of African Americans and 37% of Latinos do not have any form of health insurance, compared to 14% of whites. This disparity in those who have greater ease of access is compounded by the effects of discrimination on access to health care services. A review of healthcare related disparities by the Institute of Medicine found that the greatest evidence of disparate care is related to cardiovascular disease, and that even when controlling for potential confounders, evidence of disparities in care still exist (Smedley, 2003). For example, Peterson et al. (2002) assessed treatment patterns for patients presenting with acute myocardial infarction at Veteran’s Administration hospitals. The researchers found that African Americans were more likely to receive aspirin (a less effective treatment strategy) at arrival to emergency rooms rather than thrombolytic therapy and less likely to receive heart bypass surgery (Petersen, Wright, Peterson, & Daley, 2002). In addition, several factors that likely contribute to disparities in health care include accessibility of care, geography, and patient and provider experiences and expectations (Smedley, Stith, & Nelson, 2003).

Behavioral and social determinants contribute to the development of health disparities at multiple ecological levels. House (House, 2002) identified several factors at the personal and interpersonal levels, including: chronic stress, engagement in health behaviors, social roles, and social support. At the community level, Shavers and Shavers (2006) indicated that “exposure to disease-causing or promoting agents” (p. 387) contribute to health disparities. This might include overt exposure, such as living near hazardous waste, or less obvious exposures, such as areas with scarce availability of fresh fruits and vegetables or other healthy eating options. Smedley et al. (2003) also indicate that living in geographic areas that are medically underserved and having sociocultural differences between providers and patients are factors contributing to health disparities. This complex nature of causality makes promoting health equity a daunting, yet important goal to address.

### **Efforts to address health disparities**

In 2000, the United States Department of Health and Human Services (DHHS) published *Healthy People 2010*, an agenda-setting document identifying health objectives for the United States. One of the two goals laid out in the document was to eliminate health disparities. For the first time, the elimination of health disparities was part of the national public health agenda. The Surgeon General at the time, Dr. David Satcher, provided several recommendations for efforts to address health disparities, including: “efforts to address disparities must be comprehensive”, “efforts must recognize the diversity of America’s racial and ethnic communities and the diversity of their needs,” and “changes must be driven by the communities

themselves” (Satcher, 1999, p. 285). Efforts to address health disparities and promote health equity have varied in form, efficacy, and adherence to these recommendations.

Some interventions addressing disparities focused exclusively on improving health care. Smedley et al. (2003) found that although education of health professionals to prepare them to provide culturally-competent care has been increasing over the last several decades, there is little evidence of impact. Perhaps the largest and most systematic intervention to improve healthcare as a strategy for eliminating health disparities is the Health Resources and Services Administration’s (HRSA) Health Disparities Collaboratives. The Health Disparities Collaboratives (HDC) were intended to improve health care delivery by implementing guidelines for care and related data collection and feedback systems. HDC are implemented primarily through federally-qualified health centers, and there are separate collaboratives for different disease topics (e.g., diabetes, cardiovascular disease, depression). Among key achievements of the health disparities collaborative are: 21% increase in foot exams for people with diabetes participating in a collaborative, 16% increase in use of measures of hemoglobin A1c to assess disease management by people with diabetes, and a 14% increase in use of anti-inflammatory medications by patients with asthma (Landon et al., 2007). Although successful in changing health care provided at federally qualified health centers, the HDC do not reflect Dr. Satcher’s recommendations for community-centered approaches to eliminating health disparities.



By contrast, the U.S. Centers for Disease Control and Prevention's Racial and Ethnic Approaches to Community Health (REACH) 2010 initiative was intended to be responsive to Dr. Satcher's recommendations for community-centered approaches. Initiated in 2000, the Centers for Disease Control and Prevention established the REACH 2010 initiative as a flagship demonstration program to reduce health disparities. As with approaches to improving health care, the forms and efficacy of the REACH initiatives vary greatly. The research publications resulting from funded REACH 2010 projects fall largely into four categories. First, several epidemiological studies used the REACH 2010 Community Survey (based on the Behavioral Risk Factor Surveillance Survey) or other sources of secondary data to examine the health status or prevalence of health disparities (e.g., prevalence of diabetes) or contributing factors (e.g., use of preventative services, perceptions of discrimination) (Gee, Ryan, Laflamme, & Holt, 2006; Hlaing & Darrow, 2006; Kieffer et al., 2006; Koch-Weser, Liang, & Grigg-Saito, 2006; Neal, Magwood, Jenkins, & Hessler, 2006; Spencer et al., 2006). For example, Neal et al (2006) examined community health center patient charts to determine that African Americans with diabetes were underdiagnosed for obesity.

A second category of published studies focused entirely on assessment (Carlson et al., 2006; DeBate, Plescia, Joyner, & Spann, 2004; English et al., 2004; Kaplan et al., 2006; Sloane et al., 2006). For example, Kaplan and colleagues (2006) examined how African Americans and Latinos living in the South Bronx perceived the health care system. The researchers conducted focus groups and presented

qualitative findings of their research. Third, there are published reports that are descriptive of the processes undertaken by REACH 2010 initiatives to develop partnerships or interventions (Carlson et al., 2006; Fort & McClellan, 2006; Giachello et al., 2003; Selig, Tropiano, & Greene-Moton, 2006). For instance, Giachello et al. (2003) described the participatory process undertaken by the Chicago Southeast Diabetes Community Action Coalition to develop their coalition, build the capacity of community members to assess epidemiological information, and make informed decisions about the research methods.

The fourth category are those publications that describe intervention programs implemented within a broader REACH 2010 project (Bachar et al., 2006; Findley et al., 2006; Garvin, Cheadle, Chrisman, Chen, & Brunson, 2004; Jenkins et al., 2004; McKeever, Faddis, Koroloff, & Henn, 2004; McKeever, Koroloff, & Faddis, 2006; Two Feathers et al., 2005). For example, Jenkins et al. (2004) reported on an effort to improve care provided to people with diabetes through lay health advising and changes in practice of health care providers. The investigators reported a significant improvement in the use of hemoglobin A1c assessments, dilated eye exams, and kidney testing among African American patients. All of these articles reported findings on the effects of specific programs, but not for the overall initiative.

Published reports of intervention research within REACH 2010 have several common features. First, half of the articles contained reports of programs that took place within health care settings (Jenkins et al., 2004; Findley et al., 2006; Garvin et al., 2004, Two Feathers et al., 2005). Second, many of the articles reported on a

program that was part of a broader initiative. For example, the two articles by McKeever and colleagues (2004; 2006) described two separate programs, the Wellness Within REACH and African American Wellness Villages, and their related results. Rather than presenting the overall initiative, the findings are parsed into several manuscripts. Finally, although all of the articles provide some measures demonstrating success, the large effects are reported for immunizations, not for risk factors related to chronic diseases (Findley et al., 2006). Of those REACH initiatives addressing chronic diseases, the most frequent measures were related to improving care for people with the diseases rather than primary prevention (e.g., changing risk/protective behaviors).

There are two REACH-related articles that present discussions of comprehensive community initiatives. Sotomayor, Dominguez, and Pawlik (2007) described a multi-component initiative that included the use of Promotoras, study circles, and community forums to reduce diabetes among Latinos in Nueces County, Texas. Although the article does not provide any results of the study, the investigators express the intent to “find the resources to document the contribution” of their efforts (Sotomayor, Dominguez, & Pawlik, 2007). Nguyen et al. (2006) reported on a comprehensive community initiative to promote use of the pap exam by Vietnamese American women. The intervention included such components as a media campaign, lay health advisors, patient navigators, patient reminders, and education of health care providers. The investigators reported a significant increase in receipt of pap exams by Vietnamese American women. Although these two

articles conveyed the potential impact of REACH 2010 projects, more research is needed to provide a picture of the effects of comprehensive REACH 2010 initiatives.

The purpose of this study was to examine the effects of the comprehensive community initiative implemented by the Kansas City Chronic Disease Coalition, a REACH 2010 project. This study is an extension of prior studies describing KCCDC's efforts in three substantial ways: a) it describes data from all six years of KCCDC's operation under REACH 2010 funding, b) it presents unpublished data (e.g., the population-level outcomes data and assessment of key factors, strengths, and challenges), and c) it presents additional analyses of data that have yet to be published.

## **RESEARCH METHODS**

### **Context**

In 1999, the U.S. Centers for Disease Control and Prevention (CDC) began funding cooperative agreements with applicant organizations to address health disparities in the United States, the Racial and Ethnic Approaches to Community Health 2010 (REACH 2010) initiative. The REACH 2010 initiative prioritized populations that were racial and ethnic minorities (e.g., African Americans, Latinos, and Native Americans) and the following health issues: cardiovascular disease, diabetes, immunization, infant mortality, HIV/ AIDS, and breast and cervical cancers. In response to information about the availability of funding, the Missouri Primary Care Association began convening partners to pursue resources for addressing health disparities in Kansas City, Missouri. The Missouri Primary Care Association

(MPCA) is a membership organization that represents community and migrant health centers (also referred to as federally-qualified health centers and look-alike centers) throughout the state of Missouri, including three centers in Kansas City, Missouri. Initially, MPCA convened representatives from Swope Health Services; Cabot Westside Health Center; Samuel U. Rodgers Health Center; the Kansas City, Missouri Health Department; the Missouri Department of Health and Senior Services; and the United Auto Workers - Ford Community Health Care Initiative (UAW-Ford CHCI). On behalf of the convened group, MPCA applied for a one-year planning grant from the CDC. MPCA was awarded this planning grant, which ran from October 2000 to September 2001.

Several key activities occurred during this one-year planning period. First, MPCA engaged the University of Kansas' Work Group for Community Health and Development to assist with the assessment and planning process. Second, the initial group began assembling information about health disparities in Kansas City, Missouri. Two key reports were issued at this time by partnering organizations that greatly influenced the effort. A study by the Kansas City, Missouri Department of Health (2000) (Kansas City Missouri Health Department, 2000) found that significant health disparities were present among African-American and Latino residents of Kansas City. In particular, this study determined that Kansas City, Missouri residents who were racial and ethnic minorities had a life expectancy 11 years shorter than white residents in Kansas City. Additionally, African-Americans and Latinos were far more likely to die of diabetes than whites, 2.5 and 1.5 times more likely,

respectively. African-Americans were also 1.5 times more likely to die from cardiovascular diseases than whites. A report commissioned by the UAW-Ford CHCI (Lewin Group, 2000) further documented findings of health disparities. The KU Work Group conducted focus groups to identify contributing factors and possible solutions to the health disparities. Third, the initial small planning group expanded to include representatives from neighborhood associations, faith organizations, the Missouri Patient Review Organization, Blue Cross/Blue Shield, the Kansas City Parks and Recreation Department, and the University of Missouri at Kansas City School of Medicine. Fourth, the planning group produced several key products, derived from an assessment of health disparities and contributing factors to provide focus for their efforts. The KU Work Group (including the author) facilitated planning sessions that led to the following key planning products:

- Statement of Vision: excellent health for all.
- Mission: Improve health outcomes for diabetes and cardiovascular disease by promoting access to quality health care, healthy environments, and lifestyles through integrated, affordable, culturally sensitive, and accountable community-based healthcare and preventive services
- Targeted disease processes: cardiovascular disease and diabetes
- Prioritized populations: African Americans and Latinos residing in the following zip codes: 64105, 64106, 64108, 64109, 64110, 64124, 64127, 64128, 64130, 64131, and 64132.
- Objectives. The group selected five objectives.

- By 2004, the number of residents in the targeted Kansas City neighborhoods (11 zip codes) who can identify a personal doctor or healthcare provider will increase by 35%.
- By 2004, the number of residents in the targeted neighborhoods who have been diagnosed as a diabetic and have had their HcA1C measured in the past 12 months will increase by 50%.
- By 2004, the number of residents in the targeted neighborhoods who reported eating more fruits and vegetables to lower their risk of developing heart disease or reduce cholesterol will increase by 30%.
- By 2004, the number of residents in the targeted neighborhoods who reported engaging in more physical activity to lower their risk of developing heart disease or reduce cholesterol will increase by 30%.
- By 2004, the number of residents in the targeted neighborhoods who reported that people in their neighborhoods work together to improve living conditions in their community will increase by 30%.
- Action plan. The group identified and prioritized 86 action plan items. A complete listing of the new programs, policies, and practices to be sought is available in Appendix A.

Finally, the planning group founded the Kansas City-Chronic Disease Coalition (KCCDC) in 2001. Upon completion of the year of planning, MPCA, acting as fiduciary agent, submitted an application for implementation of the action plan. The

cooperative agreement with CDC began October 1<sup>st</sup>, 2001. The cooperative agreement was renewed annually after 2004, and ended on September 30<sup>th</sup>, 2007.

### **Study Population and Setting**

The Coalition chose two prioritized populations: African Americans and Latinos residing in the following zip codes: 64105, 64106, 64108, 64109, 64110, 64124, 64127, 64128, 64130, 64131, and 64132. These zip codes generally correspond to the areas or neighborhoods of: northeast Kansas City, the Westside, and the Brushcreek Corridor. A map of the Coalition's target area may be viewed in Appendix B. According to the 2000 United States Census Bureau (2000), approximately 159,580 people reside in these 11 zip codes. Of this population, 57% (91, 088) are African-Americans and 8.5% (13515) are Latino. Further, 24% of individuals in this area live below the poverty line.

### **Guiding Frameworks for the Coalition**

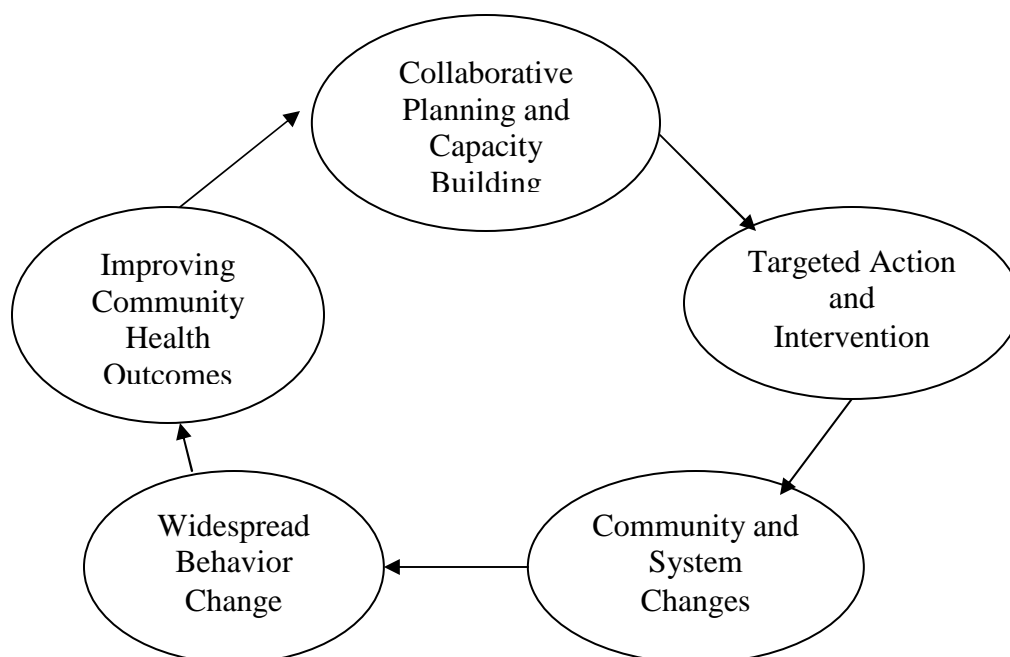
KCCDC was guided by three frameworks or logic models for achieving success with different aspects of the initiative. Although the functions of the frameworks sometimes overlapped, they each contributed uniquely to the processes and activities implemented by the initiative. During planning, the group selected two complementary frameworks to influence their effort. The first is a version of the Institute of Medicine's Framework for Collaborative Public Health Action in Communities (Fawcett et al., 2000; Institute of Medicine, 2003). As depicted in Figure 1, it informed how the coalition believed that improvement in population-level outcomes could occur. This logic model conveys five interrelated phases: (a)



collaborative planning and capacity building; (b) action and intervention; (c) community and system changes; (d) widespread behavior change; and (e) improving community health outcomes. During the collaborative planning and capacity building phase, partners used quantitative and qualitative information to develop a plan with several proposed actions. The second phase, targeted action and intervention, involved the work that was necessary for community changes to take place. This included meeting with key stakeholders or advocating for a change in program or policy. The third phase involved facilitating and implementing community and system changes; that is, new or modified programs, policies, or practices facilitated by KCCDC and related to its mission. In this logic model, community change serves as an intermediate outcome. The benefit of this type of measurement is that it helps the initiative understand their progress and anticipate how their activities might be contributing to changes in (more distant) population-level outcomes. At the same time, reported community change can serve as a measure changes in the environment and of the unfolding of the independent variable for comprehensive community initiatives. This should lead to the fourth phase, which is widespread behavior change. For KCCDC, targeted behavioral changes were named in their objectives. They included increases in fruit and vegetable intake (objective of healthy nutrition) and amount of physical activity (objective of physical activity) undertaken, diabetes management behaviors, or preventive health screenings (objective of access to health services). For the final phase, improving community-level health outcomes, hypothesized that widespread changes in behavior, such as healthy nutrition and

physical activity, were hypothesized to reduced incidence and prevalence of the two targeted chronic diseases and related complications (longer-term population-level outcomes related to diabetes and cardiovascular diseases). This model is both interactive and iterative (Fawcett, Francisco, Schultz, 2004). The interactive nature of the framework allows for consideration of information gathered in one phase to be used in another phase. Additionally, the model suggests that the process is iterative or repeating over time.

Figure 1. The logic model used to guide KC-CDC's efforts (Fawcett et al., 2000; Institute of Medicine, 2003)

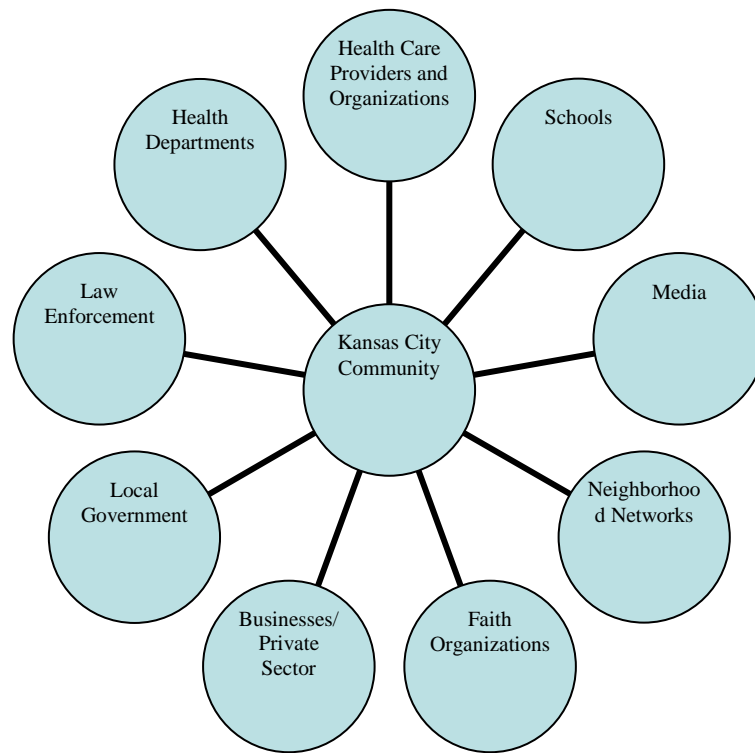


Accompanying this logic model is a working hypothesis that expands upon the relations between community/ system change and population-level outcomes. The working hypothesis posits that if community changes target the initiative's goals, are of sufficient duration, use more intense behavior change strategies, penetrate

appropriate sectors, and reach targeted groups of people in particular places success will be achieved in improving population-level outcomes.

A second multi-sector framework displayed the sectors or parts of the community that needed to be engaged in the change effort. This multi-sector, or the “spokes of the wheel,” model represented the belief that improvement in population-level outcomes required environmental changes in all settings in which the prioritized populations lived, worked, worshipped, shopped, and engaged in leisure-time activities. This multi-sector framework informed KCCDC’s approach for ensuring that, as a grassroots coalition, all sectors of the community were engaged in creating change. Figure 2 displays the multi-sector framework used by KCCDC.

Figure 2. The multi-sector framework used to display the ecological approach of KCCDC



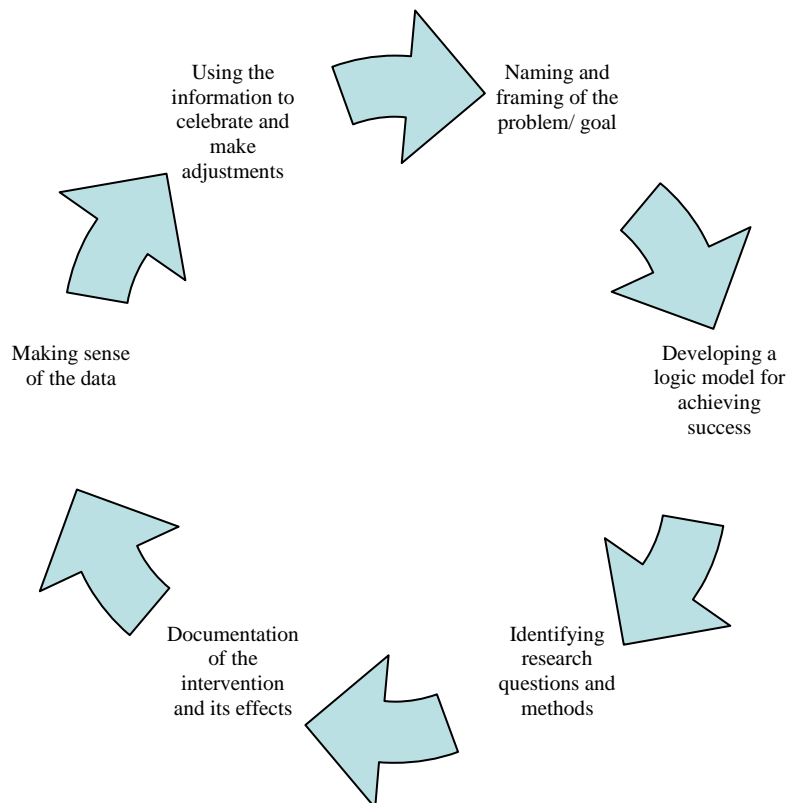
The third framework described the process of community-based participatory research used by KCCDC. KCCDC chose to operate from a community-based participatory research (CBPR) perspective. CBPR is a research paradigm in which community members and researchers share equal responsibility for all steps of a research project (Minkler & Wallerstein, 2003). Depicted in Figure 3, Fawcett et al. (2003) presented an outline for a six-step process: naming and framing the problem/goal, developing a logic model for achieving success, identifying research questions and methods, documenting the intervention and its effects, making sense of the data, and using information to celebrate and make adjustments. To name and frame the problem, community members and researchers reviewed information about health disparities in the community and they identified the problem to be addressed.

The KU Work Group identified a logic model for success and possible research questions and methods which were reviewed and approved by the Coalition.

Community members and research partners alike were involved in documenting the activities of the Coalition. Data was prepared and presented to the steering committee for sensemaking. The KU Work Group facilitated sensemaking. Although these steps are suggestive of a process, it is the way in which these steps are implemented that allows CBPR to occur.

Nine principles have been identified as critical to a CBPR process (Israel et al., 2003). These include: recognizing community as unit of identity; building on strengths and resources in a community; facilitating collaborative, equitable partnership throughout research; promoting co-learning and capacity building among all partners; achieving a balance between research and action for all partners; focusing on local public health problems and ecological perspectives that attend to the multiple determinants of health; involving systems development through a cyclical and iterative process; disseminating findings and knowledge gained to all partners and involves all partners in dissemination; involving long-term effort and commitment (Israel et al., 2003, pps. 55-58). For instance, KCCDC worked to “build on the strengths and resources in the community” by operating within already established networks. They also worked to promote co-learning and capacity building by sharing lessons about what worked and holding trainings for partners. Throughout the duration of this project, the KU Work Group served as KCCDC’s scientific partner and worked to maintain these principles as best as possible.

Figure 3. A CBPR framework used to guide the research process with KCCDC (S.B. Fawcett et al., 2003)



### Study Design and Research Questions

The study design used was an empirical case study with a pre-test, posttest non-equivalent comparison for the primary behavioral outcomes. Although outcome data became available that provides pre- and posttest data, this was not the planned design. KCCDC collected information to answer four research questions: (a) after implementation of the supports to partners, to what extent did KCCDC serve as a catalyst for change in the community, (b) what factors were associated with discontinuities in the rates of community change, (c) how did the community changes

contribute to intended changes in population-level outcomes, and (d) how were changes in population-level outcomes associated with implementation of community/systems changes? Questions one through three were answered using a case study design. To answer question four, a pre-posttest with non-equivalent control group design was used.

### **Intervention**

KCCDC implemented several activities that correspond to the phase of “targeted action and intervention” in KCCDC’s framework for change. These coalition supports represent the independent variable (see Table 1). Very early in the study period, the Coalition adopted the “Pick Six” approach to ensuring implementation of their 86-item action plan. In order to make implementation of the action plan seem more achievable and less overwhelming, the Coalition sought to mobilize organizations, such as neighborhood organizations and faith organizations, so that each organization would select six new or modified programs, policies, or practices from the action plan to be implemented (this was referred to as the Pick Six approach). The independent variable is defined as the programs, practices, and processes (e.g., action planning, mini-grant implementation) that were implemented by KCCDC for the purpose of catalyzing change facilitated by KCCDC partners. Over the six-year period of KCCDC, the independent variable evolved. For the most part, one set of Coalition supports was operational until 2006. This set of supports shifted as new coalition leadership emerged in 2006 and 2007.

The Table below describes components of the independent variable (coalition supports). Partial descriptions of these components have been published elsewhere (Collie-Akers et al., 2007; Collie-Akers et al., in press).

Table 1. Description of intervention components and elements

Independent Variable Components	Phase One: 2001-2006	Phase Two: 2006-2007
Providing information and enhancing skills	<ul style="list-style-type: none"> <li>- Use of a newsletter and coalition meetings to educate partners on CVD and diabetes and related risk factors.</li> <li>- Provision of information resources available to all partners.</li> </ul>	<ul style="list-style-type: none"> <li>- Use of a newsletter and coalition meetings to educate partners on CVD and diabetes and related risk factors.</li> <li>- Training in facilitating health education related to nutrition and physical activity.</li> </ul>
Enhancing services and support	<ul style="list-style-type: none"> <li>- Employment of community mobilizers to recruit neighborhood and faith organizations and assist in the development of action plans for implementation of their activities. <i>Example: Mobilizer discussed with each partner which changes would work best in their group and how they could make it happen.</i></li> <li>- Use of documentation and feedback to inform the ongoing efforts of the partners.</li> </ul>	<ul style="list-style-type: none"> <li>- Employment of community mobilizer to recruit neighborhood and faith organizations and in coordinating training and distribution of resources. <i>Example: Mobilizer coordinated what pamphlets a group would receive.</i></li> <li>- Use of documentation and feedback to inform the ongoing efforts of the partners.</li> </ul>
Modifying access, barriers, and opportunities	<ul style="list-style-type: none"> <li>- Establishment of a coalition with a stated vision and mission and a clear framework for action.</li> <li>- Development of an action plan that allowed for organizations to see a place for their contribution to be made. <i>Example: A plan that included who would do what by when was developed.</i></li> <li>- Provision of grants/ contracts to partners to support implementation of the Community Action Plan.</li> </ul>	<ul style="list-style-type: none"> <li>- Maintenance of a coalition with a stated vision and mission and a clear framework for action.</li> <li>- Development of a subset of action plan items to prompt neighborhood and faith organizations to be engaged in implementing approved evidence or practice-base activities. <i>Example: Partners selected from a limited list of actions to conduct with their organization.</i></li> </ul>
Changing the consequences	<ul style="list-style-type: none"> <li>- Provision of annual recognition ceremonies celebrating the accomplishments of partners.</li> </ul>	<ul style="list-style-type: none"> <li>- Provision of informational resources, and supplies in exchange for participating in coalition activities and disseminating items within participants' organizations.</li> <li>- Provision of annual recognition ceremonies celebrating the accomplishments of partners.</li> <li>- Recognition of partners in coalition newsletter.</li> </ul>



## Measurement

The four core research questions suggest two key measures as dependent variables: community/ systems changes and data about population-level outcomes. Community change was defined as reports of new or modified programs, policies, or practices facilitated by or on behalf of KCCDC and related to KCCDC's mission or objectives. Population-level outcomes of interest included: (a) the percentage of people who report consuming recommended daily amounts of fruits and vegetables, (b) the percentage of people who comply with daily recommendations for activity, and (c) the percentage of people who have seen a provider in the previous 12 months (three measures most closely related to KCCDC's objectives and related research questions.)

Several sources of measurement were used in this study, including measures of intermediate outcomes, long-term outcomes, and social validation. First, an online documentation system was used to capture activities/ events facilitated on behalf of KCCDC. Partners were required to report their activities to KCCDC, which were subsequently documented by KCCDC staff. Events and activities were described in a narrative format and then coded using definitions and scoring instructions to differentiate four types of events: a) community changes (e.g., an expanded policy or program change), b) community action (e.g., a meeting conducted to coordinate a new program), c) planning product (e.g., a completed strategic or action plan), and d) other (i.e., an activity that does not meet any other coding definition) (Fawcett et al., 2003). The events were then further analyzed for their contribution to the goal and

sector targeted, the behavioral change strategy used, and the duration of the event or activity.

The primary measure documented for this study was instances of community change. A community change is defined as a new or modified program, policy, or practice facilitated by the coalition and related to the mission. To be coded as a community change (CC), the following criteria must have been met: (a) the event must be an instance of a new or modified program, policy, or practice; (b) the event must have already occurred (e.g., not a forthcoming program); (c) include members of the broader community who are external to the initiative (e.g., not a change in coalition policy); (d) are related to the initiative's chosen goals and specific objectives; and (e) are facilitated by the initiative or individuals who are members of the initiative. For example, a church that is a coalition partner began holding fitness classes in their gymnasium. This was recorded as an instance of a community change since it is a new program, it did occur, is related to the coalition's goals and mission, and was facilitated by a member/ partner of the initiative. A non-example of community change might be the U.S. Centers for Disease Control and Prevention piloting a weight reduction program in the community since this was not facilitated by the local initiative. This was not facilitated on behalf of KCCDC so it would not be scored as a community change.

KCCDC staff were trained by KU Work Group staff regarding how to make entries using the Online Documentation and Support System (ODSS) and how to code entries. Training included written and oral descriptions of coding definitions,

examples and non-examples of community change, opportunities to practice scoring, and feedback on the accuracy of scoring. Local documenters were asked to make entries as they occurred (e.g., monthly) or at a minimum during contract reporting times (e.g., twice a year). In some instances, coalition staff and KU Work Group staff recorded events on behalf of the partner. This was done by either reviewing written contract reports or by interviewing the partner about accomplishments. A KU Work Group graduate research assistant (the author) served as primary coder, recoding all of the entries as a community change (CC) or another code (e.g. community actions or planning products). The KU Work Group project director served as secondary coder for the purpose of establishing reliability. The secondary coder provided independent scoring of 10.7% (n=132) of the total entries (N=1234). Inter-observer agreement of the scoring of recorded events was calculated by dividing the number of agreements by the sum of agreements and disagreements, and multiplying the result by 100. The interobserver agreement between primary and secondary coder was 90.08%. The Kappa score for this was 0.8312.

Reports of community changes could be validated by supporting documents, pictures, or other products of the community changes. This information was available for about 10% of the community changes, but was rarely examined.

Longer-term outcomes related to population-level risk/ protective behaviors were measured through the use of a self-report survey implemented by independent CDC contractors as part of the cooperative agreement. A partnership with the Missouri Department of Health and Senior Services allowed KCCDC to access data

from 2001, which served as pre-intervention measurement of the longer-term outcomes. Using the REACH 2010 Survey (based on the CDC's Behavioral Risk Factor Surveillance System - BRFSS), the target area was oversampled using random-digit dial surveys in 2003, 2004, 2005, and 2006. Because of changes in the sampling procedures, KCCDC was advised not to use data from 2006. Thus, the final available data point was from 2005. Three variables were used that closely align to KCCDC's objectives: the percentage of adults reporting they consume five or more servings of fruits or vegetables daily, the percentage of adults reporting they meet recommendations for physical activity, and the percentage of adults reporting they saw a health care provider in the previous 12 months. The percentage of adults reporting consuming five or more servings of fruits and vegetables is calculated by using data from six separate questions that ask about frequency of consumption of fruit, fruit juice, salad/greens, carrots, potatoes, and other vegetables. The percentage of adults reporting meeting recommendations for physical activity is calculated by combining several questions that ask about the number of days and minutes in which the respondents engage in moderate or vigorous physical activity. Meeting recommendations means that the respondents engage in either 30 or more minutes of moderate activity five or more days a week or 20 or more minutes of vigorous physical activity three or more days a week.

Data from the national BRFSS were used as a non-equivalent control group. National data was used as no data from a suitable comparison community (either state

or municipality) has been identified. National data was only available for two of the three outcomes presented.

Social validity of the procedures and effects was assessed using a survey administered to KCCDC partners in 2006. This survey was intended to obtain qualitative measures about the procedures and results of KCCDC (Wolf, 1978). The survey consisted of 11 questions related to satisfaction with supports provided by KCCDC to serve as a catalyst for community change. Two surveys were developed, one for neighborhood and faith organizations and another for “agency” organizations, as their efforts differed slightly. A sample survey is available in Appendix C. A five-step process, the Dillman Method (Aday, 1996), was used to conduct the survey about procedures and effects. First, a preview letter from the KC-CDC project manager was sent to participants detailing the purpose of the survey and informing participants of what to expect of the survey process. One week later the survey was sent to 295 people involved with the coalition. Enclosed with the survey was a cover letter and self-addressed, stamped return envelope. Two weeks after the first survey was sent, a reminder postcard was sent to all participants asking them to complete and mail the survey if they had not already done so and thanking them if they had. Two weeks later, follow-up surveys were sent to people from whom a response was not received. Two weeks after dissemination of the follow-up surveys, phone calls were conducted to reach people who had not mailed a survey. During these phone calls, it was requested that people return the survey and offered to send another copy of the

survey. A \$10.00 gift certificate to Wal-mart or Price Chopper grocery store was provided as an incentive to participants.

Qualitative interviews were also conducted in January 2009. Using a semi-structured interview format, the intent of these interviews with KCCDC leadership was to identify factors that contributed to success, strengths and challenges, and critical events throughout the study period. Participants were asked to identify key events based on examining the data. Asking participants to make sense of data is consistent with a CBPR approach (Fawcett et al., 2003). Key informants were selected from the Coalition leadership and staff. A list of interview questions is available in Appendix D. Qualitative data from the interviews were analyzed to identify themes and subthemes about coalition functioning.

## **RESULTS**

*Research question one: After implementation of the supports to partners, to what extent did KCCDC serve as a catalyst for change in the community?* Between October 1<sup>st</sup>, 2001 and September 30<sup>th</sup>, 2007, 1234 discrete activities were documented using the KU Work Group's Online Documentation and Support System (ODSS). Of these activities 655 were scored as community changes; that is, as new or modified programs, policies, or practices. Table 2 provides a list of illustrative examples of the community changes facilitated by KCCDC and its partners in different sectors of the community.

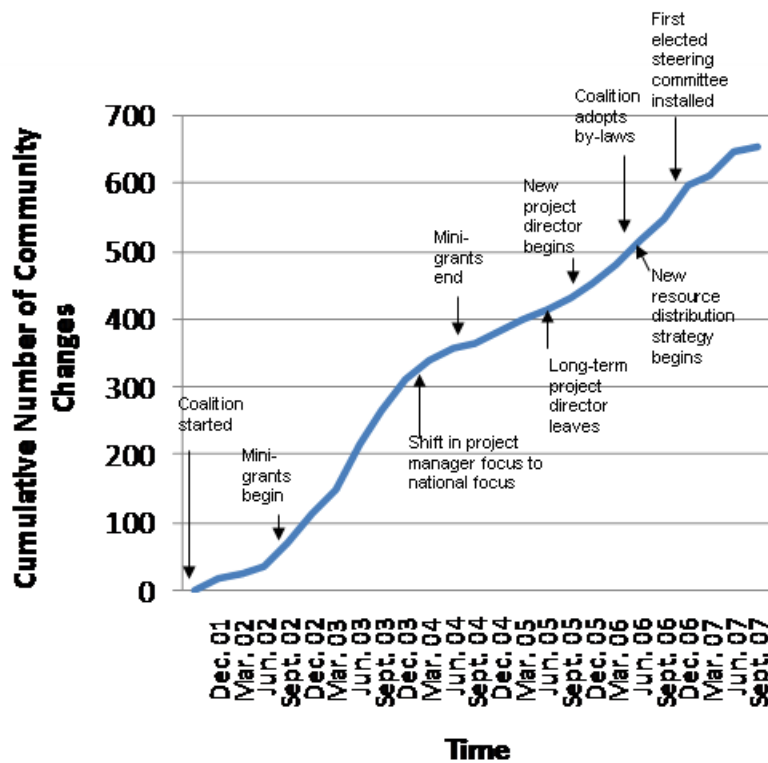
Table 2. Illustrative examples of community changes facilitated by KCCDC and its partners in different sectors of the community

Sector	Illustrative Community Change
Faith organizations	Covenant Presbyterian Church implemented a fellowship hour after Sunday service each week to conduct a Healthy Heart Nutrition Program. (New program)
Health care providers and organizations	Cabot Westside Clinic implemented a policy of mandatory attendance of a 3 hour class for diabetes patients and their relatives. (New policy)
Health departments	KC-CDC partnered with Region VII-HHS to implement the first "Kick Butts Day" at Illus Davis Park. (New program)
Human services	El Centro, Inc. held a Lunch and Learn for adults in healthy nutrition. (New program)
Media	As part of its "5 Steps to Healthy Habits" the Kansas City Star In Education staff created an "Instructors Guide" as a supplement to assist community representatives in using the tabloid as a learning tool. (New practice)
Neighborhood networks	Swope Park Campus made use of neighborhood newsletters to promote healthy habits. They devoted a section of their bi-monthly newsletter to promote nutrition, exercise, and available services. (New practice)
Private sector	KCQIC membership, including local health plans, agreed to adopt locally developed guidelines for diabetes management in their organizations. (New policy)
Schools/ education	KC-CDC established an in-service training for KCMO school district nurses promote Healthy Habits with students and their families in conjunction with School Health Index. (New program)
Worksite	Swope Health Services began an Employee Wellness Program. This program targeted water intake, walking, and weight loss. 261 employees participated in this program. Pedometers and water bottles were distributed to the participants. There was a competition to see which team drank the most water and walked the most. (New program)
Other community settings	The Phi Delta Kappa nutrition trainers taught the KC-CDC "Eat Right" nutrition series to 20 people attending the nutrition classes held at Southeast Library. (New program)

Figure 4 graphically displays these 655 discrete community changes over time. This graph displays a cumulative line graph of the onset of community changes as they occur over time. Community changes are totaled each quarter and added to the previous total. Steep increases in the line indicate higher rates of change, while places in which the line flattens or becomes less steep indicate lower rates of change.

Figure 4. Distribution of community changes over time, 10/1/2001 – 9/30/2007

(N=655)



The rate of community change was not constant over the whole time period, but rather varied substantially from one year to the next. The table below (Table 3) displays the number of community changes reported per fiscal year. Fiscal year was used because KCCDC organized itself by fiscal year (October to September), as opposed to calendar year due to the CDC funding that required activities and reporting based on the federal fiscal year. The greatest number of community change occurred during fiscal year 2003 (n=195). Two years later, the number of community changes dropped to 68 during the 2005 fiscal year.

Table 3. Number of community changes documented for each fiscal year of KCCDC

Fiscal Year	Actual Time Period	Number of Community Changes	Percentage of Overall Community



			Changes
FY02	10/1/01-9/30/02	70	10.7
FY03	10/1/02-9/30/03	195	29.8
FY04	10/1/03-9/30/04	99	15.1
FY05	10/1/04-9/30/05	68	10.4
FY06	10/1/05-9/30/06	118	18.0
FY07	10/1/06-9/30/07	105	16.0

*Research question two: What factors were associated with discontinuities in the rates of community change?* To identify factors associated with discontinuities (marked increases and decreases) in rates of community change, information from qualitative interviews was used. Of seven people invited to participate in the interviews, five agreed and completed the interviews. Participants were asked about specific events that contributed to success or, more specifically, events that seemed to influence rates of change. Figure 4 displays the events identified by participants on the cumulative line graph. The following were key events identified by participants in the interviews:

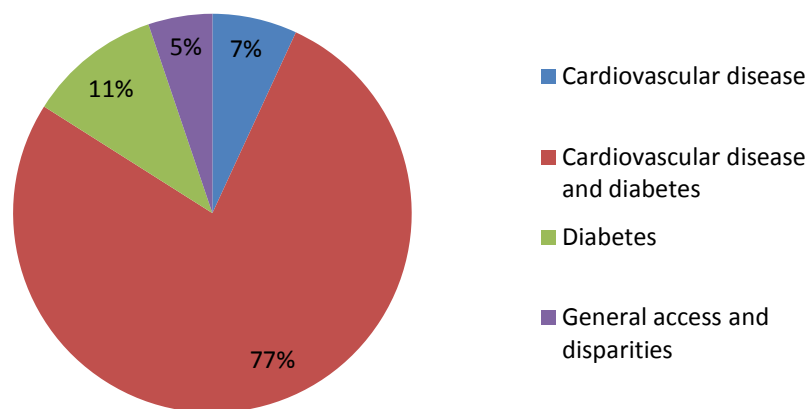
- The establishment of the coalition (onset in 2001).
- The onset (September 2002) and end of the mini-grant program to neighborhood and faith communities (August 2004).
- A shift, beginning in 2004, by leadership from local change efforts to a national focus.
- The departure of the long-term project manager in the summer of 2005.
- The addition of a new project manager in 2006.
- The onset of a new resource distribution strategy in July 2006.
- The adoption of by-laws in the summer of 2006.

- The installation of an elected, as opposed to appointed, steering committee in December 2006.

Other events mentioned included monthly coalition meetings and monthly coalition newsletters.

*Research question three: How did the community changes contribute to intended changes in population-level outcomes?* Community changes were coded according to several key characteristics, including: goal targeted, duration, strategy, risk factor, sector, population, and level. Figures 5-11 graphically display the distribution of community changes by each key characteristic in the analysis of contribution.

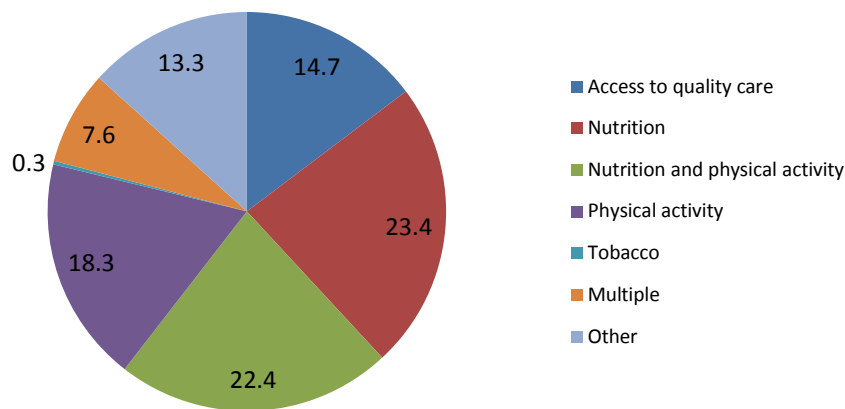
Figure 5. Distribution of KCCDC's community changes (N=655) by primary goal being addressed



Community changes were secondarily coded by primary goal area; that is, whether it primarily addressed cardiovascular disease; cardiovascular disease and diabetes; diabetes; and general access and disparities. An overwhelming majority of

the community changes documented targeted both cardiovascular disease and diabetes (77%). Most of these changes were oriented to primary prevention of these disease processes, targeting risk factors (e.g., healthy nutrition, physical activity) common to both disease processes. Conversely, about 18% targeted a specific disease process; and these changes promoted secondary prevention by addressing early detection (e.g., blood pressure screenings) or disease management (e.g., classes for people with diabetes). About 11% of the community changes targeted diabetes alone, while 7% targeted cardiovascular disease alone.

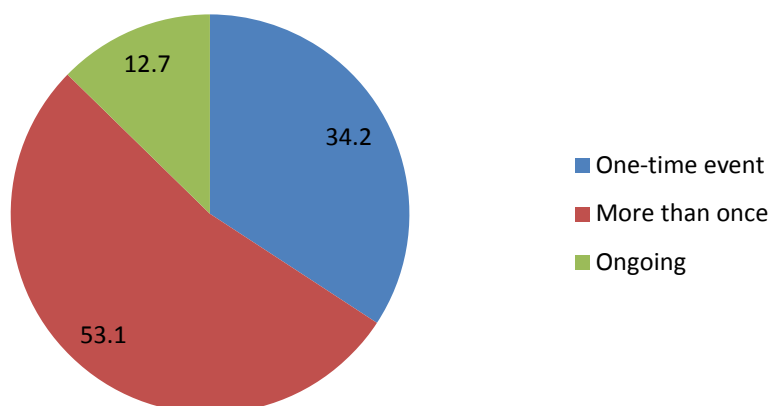
Figure 6. Distribution of KCCDC's community changes (N=655) by risk factor targeted



Several risk factors were considered important to KCCDC's mission, including nutrition, physical activity, tobacco, and access to health care. Three additional risk factors were included to accommodate most circumstances. The option to code events as targeting both nutrition and physical activity was made available because many of the primary prevention efforts focused on both of these

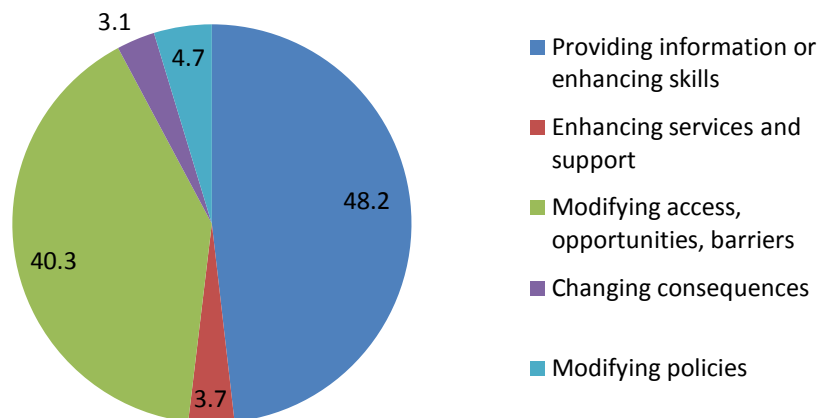
risk factors. Multiple was added to capture events that combined more than one of the listed options. Other was added to capture risk factors such as self-management or disease management that was not planned to occur very frequently. Nutrition and physical activity (alone or combined) accounted for 64.1% of the total community changes (not including those that might be in the multiple category), with nutrition addressed in more community changes (45.8) than physical activity (40.7). Access to quality care was targeted in 14.7% of the entries.

Figure 7. Distribution of KCCDC's community changes (N=655) by expected duration



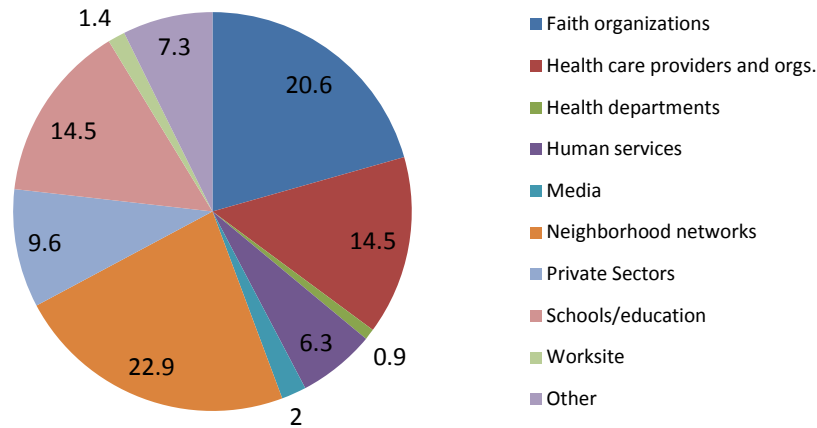
Community changes were also coded secondarily as one-time events, occurring more than once, and ongoing to categorize the duration of the activities. A large majority of the events occurred once or more than once (87.3%), while a small portion (12.7%) were ongoing.

Figure 8. Distribution of KCCDC's community changes (N=655) by behavioral change strategy



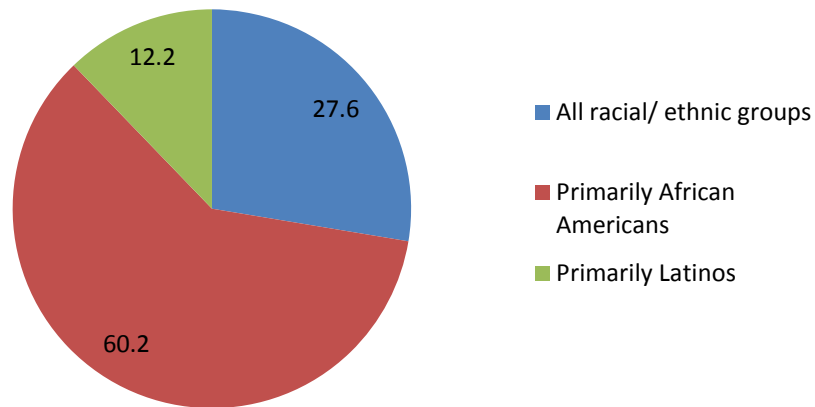
Behavioral change strategies used by the initiative included providing information or enhancing skills; enhancing services and support; modifying access, opportunities, or barriers; changing consequences; and modifying policies. The two strategies used most frequently were providing information or enhancing skills (48.2%) and modifying access, opportunities, or barriers (40.3%). The other three strategies accounted for less than 5% each.

Figure 9. Distribution of KCCDC's community changes (N=655) by sector



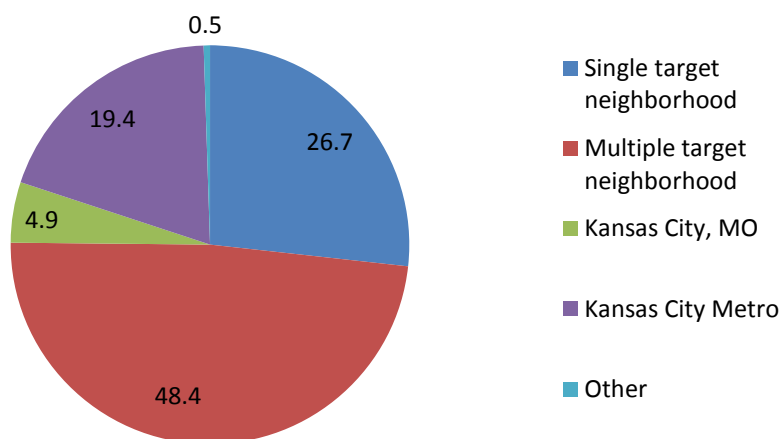
Community changes were coded by the sector of the community in which they were brought about. The options available included cultural organizations, faith organizations, health care providers, health departments, human services, local government, media, neighborhood networks, private sector, schools/ education, worksite, and other. Two sectors, cultural organizations and local government were not targeted at all. Faith organizations or neighborhood networks were targeted in about 43% of the community changes. About 14.5% of community changes targeted health care providers/ organizations, and a similar number of changes occurred in schools. The private sector was targeted in 9.6% of the community changes.

Figure 10. Distribution of KCCDC's community changes (N=655) by prioritized population



Because KCCDC prioritized two racial and ethnic minority groups as intended beneficiaries, entries were coded according to the prioritized population. Nearly two-thirds of the community changes prioritized African Americans (60.2%), while over a quarter did not prioritize any population and was directed at the overall population. A much smaller percentage of community changes (12.2) prioritized Latinos.

Figure 11. Distribution of KCCDC's community changes (N=655) by geographic level



To better understand how community changes were reaching people in places, community changes were secondarily coded for geographic level. That is, did the community change target a single neighborhood in the target area, multiple target neighborhoods, all of Kansas City, or some other geographic level? About 75% of the changes targeted one or more of the neighborhoods in the target area, while about one-quarter targeted areas broader than the selected target area.

It is notable that, like the rate of change, the distribution of community changes by the aforementioned characteristics varied over time. Table 4 displays the number (and percentage) of community changes (N=655) per characteristic per year for each aspect in the analysis of contribution.

Table 4. Annual distribution of community changes by each aspect of the analysis of contribution

Characteristic of Community change	FY02 N(%)	FY03 N(%)	FY04 N(%)	FY05 N(%)	FY06 N(%)	FY07 N(%)
<b>Goal Area</b>						
CVD	9(12.9)	6(3.1)	9(9.1)	7(10.3)	11(9.3)	3(2.9)
CVD and diabetes	47(67.1)	154(79)	74(74.7)	56(82.4)	85(72.0)	89(84.8)
Diabetes	13(18.6)	21(10.8)	11(11.1)	2(2.9)	13(11.0)	11(10.5)
General access & disparities	1(1.4)	14(7.2)	5(5.1)	3(4.4)	9(7.6)	2(1.9)
<b>Risk Factor</b>						
Access to quality care	23(32.9)	26(13.3)	12(12.1)	15(22.1)	14(11.9)	6(5.7)
Nutrition	11(15.7)	58(29.7)	33(33.3)	21(30.9)	21(17.8)	9(8.6)
Nutrition & physical activity	3(4.3)	30(15.4)	6(6.1)	7(10.3)	39(33.1)	62(59.0)
Physical activity	9(12.9)	39(20.0)	22(22.2)	10(14.7)	20(16.9)	20(19.0)
Tobacco	0(0)	0(0)	1(1.0)	1(1.5)	0(0)	0(0)
Multiple	14(20.0)	15(7.7)	6(6.1)	6(8.8)	8(6.8)	1(1.0)
Other	10(14.3)	27(13.8)	19(19.2)	8(11.8)	16(13.6)	7(6.7)
<b>Duration</b>						
One-time event	6(8.6)	76(39.0)	41(41.4)	33(48.5)	39(33.1)	29(27.6)
More than once	37(52.9)	84(43.1)	47(47.5)	29(42.6)	76(64.4)	75(71.4)
Ongoing	27(38.6)	35(17.9)	11(11.1)	6(8.8)	3(2.5)	1(1.0)
<b>Strategy</b>						





For the most part, the distribution of community changes by goal area was consistent over the six-year period. Community changes targeting both cardiovascular disease and diabetes accounted for between 67% and 84% of the community changes. More variation was observed in the distribution of community changes by risk factor. During the first year of activity, almost 30% of the community changes targeted access to quality health care. However, in subsequent years, far fewer (between 5% and 22%) addressed this risk factor. During FY03, FY 04, and FY05, it appears that nutrition and physical activity were more frequently targeted separately. This appears to have shifted to combined approaches during FY06 and FY07.

Similarly, a great deal of variability was observed in the distribution of community changes by expected duration. During the first year of activities, only 8.6% of the community changes were one-time events, while changes coded as ongoing accounted for 38.6%. From then on, one-time events made up 27% and 48% of the total changes, while the percentage of community changes listed as ongoing were reduced by half during FY03 and steadily declined to 1% of community changes in FY07.

Throughout KCCDC's period of operation (2001-2007), providing information or enhancing skills and modifying access, opportunities, and barriers were the two most prominently used strategies for behavior change. During the first phase of KCCDC's operation (2001-2005), providing information or enhancing skills was used more frequently (ranging from 52% to 61%), but decreased to 46% and

21% in the second phase (FY06 and FY07). At the same time, the use of the strategy of modifying access, barriers, and opportunities increased from a mean percentage of 28.75 for Phase one, to 60% for phase two. Although the strategy of modifying policies accounted for well over a quarter of the changes during the first year, the percentage using this strategy subsequently declined and was not used at all during the final two years of the study period.

The sectors through which the community changes were carried out changed throughout the study period as well. Neighborhood and faith organizations were targeted by at least one-third of the community changes every year except FY06. Although the private sector was targeted by 28.6% of community changes during the first year, the percentage in this sector decreased throughout the next five years. Schools accounted for 4% of the community changes every year during FY02, 03, and 04, but increased during the next three years, peaking at 41% during FY07.

Community changes were differentially distributed by prioritized population as well. Although the percentage of changes prioritizing Latinos was generally low throughout the study period, it was lowest in the first year (7.1%) and highest in FY05 (19.1). By contrast, the percentage prioritizing African Americans was generally higher throughout the study period; FY05 (47%), FY06 (72%), and FY07(53%). This appears to have been related to a change in the percentage of community changes targeting all racial and ethnic groups, which varied greatly from FY05 to FY07.

Finally, the distribution of community changes by targeted geographic area fluctuated throughout the study period. KCCDC shifted its change efforts from the actual target area (i.e., single or multiple target neighborhoods) to the entire Kansas City metropolitan area. More specifically, the percentage of changes targeting the actual target area was 82.5% in FY03, but dipped to 65.2% in FY06. In FY03 only 13.8% targeted the broader Kansas City Metropolitan Area; but this increased dramatically to 31.4% in FY06.

This information about the analysis of contribution (i.e., how the community changes facilitated are contributing to population-level outcomes) can also be used to characterize the intensity or weighting of the documented community changes. For each category of the analysis of contribution, community changes can be assigned a rating for high intensity, medium intensity, and low intensity. For example, a community change that is ongoing is rated as high intensity; occurs more than once as medium intensity; and occurring only once as low intensity. A basic intensity score can be calculated by multiplying the intensity of duration by the intensity of behavioral change strategy. With this formula, the maximum possible intensity score for a given community change is nine and the minimum is one. The mean intensity score for all 655 community changes was 3.769. There was a range of one to nine. The most frequent intensity score was six (31% of 655 entries). Only 62 community changes (9.5%) scored the highest possible score, while close to a quarter scored the lowest score (n=160).

A Population-Goal Intensity Score was calculated to help understand how the community changes may contribute to specific outcomes among specific populations. For this study, a total of six intensity scores were calculated: for the two prioritized populations, for each of the three goal areas of nutrition, physical activity, and access to health care. The formula for this calculation is: goal x (target+duration+strategy+geographic level). Using this formula, the minimum score possible is four and the maximum is 36. Table 5 below displays the mean intensity scores by fiscal year and total mean score.

Table 5. Population –Goal Intensity Scores by fiscal year

	FY02	FY03	FY04	FY05	FY06	FY07	Total Mean
African American Nutrition	13.96	17.68	15.23	14.23	15.81	17.45	16.18
African American Physical Activity	12.58	15.43	14.12	12.09	15.75	19.03	15.21
African American Access to Care	14.45	11.45	10.52	10.71	10.30	9.97	11.11
Latino Nutrition	12.81	15.07	13.66	13.03	13.39	15.87	14.23
Latino Physical Activity	11.61	13.11	12.38	11.03	13.38	17.48	13.38
Latino Access to Care	13.77	10.13	9.45	10.06	8.90	9.23	10.04

These data reflect the intensity of community changes by population and targeted goal. Overall, activities prioritizing African Americans have a higher intensity score than Latinos. Within populations, the mean score for nutrition was highest (16.81 for African Americans and 14.23 for Latinos). Intensity scores varied substantially year by year. For most years, intensity scores related to access to care was lowest; it was higher than nutrition or physical activity only during the first year. Intensity scores

for physical activity and nutrition across prioritized populations were highest in 2003 and 2007.

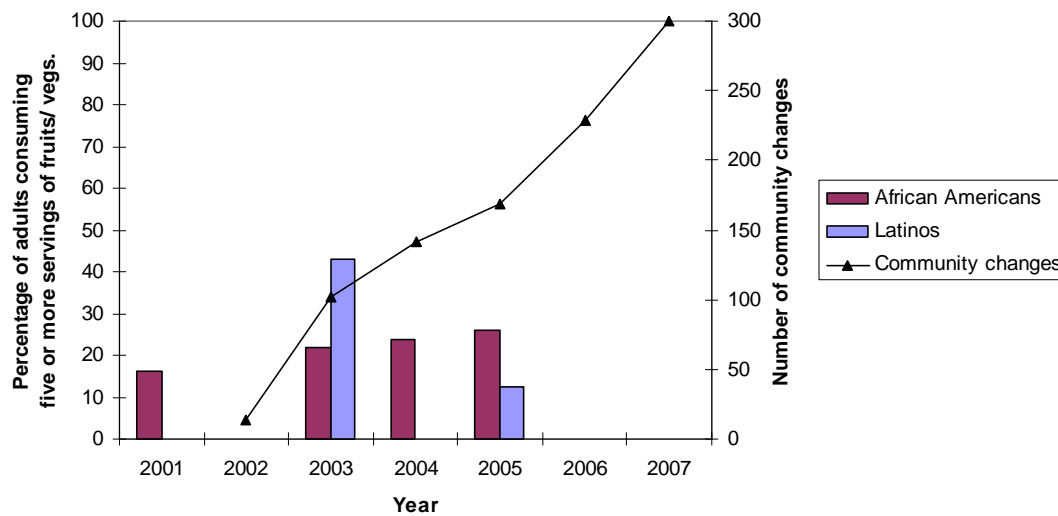
*Research question four: How were changes in population-level outcomes associated with implementation of community/ system changes?* Data from random-digit dial surveys implemented by an independent CDC contractor were used to answer this question. Surveys were patterned after the CDC's Behavioral Risk Factor Surveillance System (BRFSS) and were administered in 2001, 2003, 2004, and 2005. Because of sample sizes and sampling strategy used, there are no adequate data available for Latinos from the 2001 survey. Table 6 displays the number of respondents by self-identified racial or ethnic group. Tests of statistical significance were done to compare 2001 (pre-intervention) and 2005 data only (during intervention condition). Comparisons were conducted to determine if the samples for each study appeared to come from the same population. There were no significant differences between the samples for 2001 and 2005 in any variable tested (i.e., gender, age, income, and education), suggesting that the samples were representative of the same population.

Table 6. Number of respondents to the BRFSS/ REACH population-level behavioral surveys by self-identified racial or ethnic group per year

Prioritized Group	2001	2003	2004	2005
African Americans in target area	175	728	748	788
Latinos in target area	3	7	4	8

Figures 12-14 display selected population-level outcomes related to KCCDC's efforts.

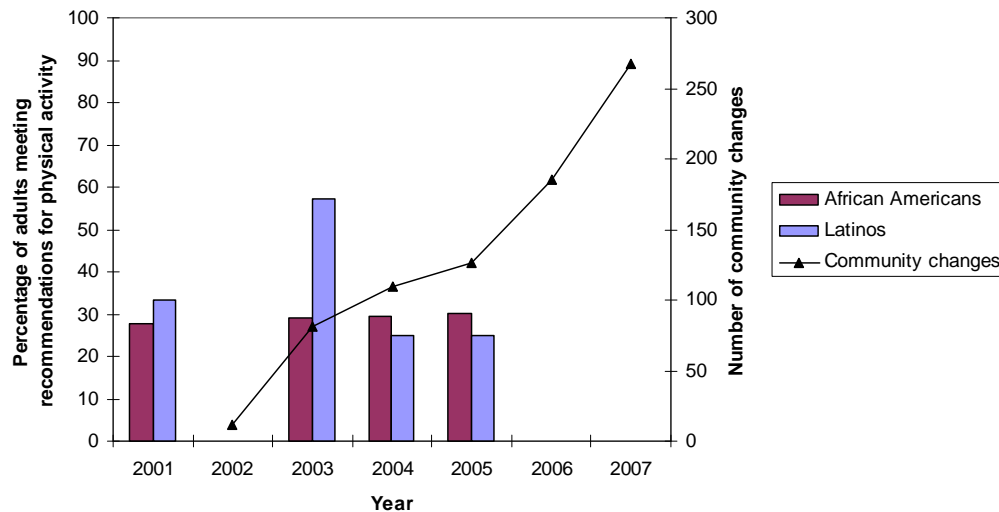
Figure 12. Percentage of participants reporting that they consume five or more servings of fruits and vegetables daily



Between 2001 and 2005, the percentage of African Americans reporting they consumed five or more servings of fruits and vegetables a day increased steadily from 16.4% to 26%. Far fewer survey respondents participated from the Latino community. The percentage of Latinos reporting they consumed five or more servings of fruits and vegetables was much more variable; it varied between 0 (2001 and 2004) to 42.9% (2003) and 12.5% (2005). Between 2001 and 2007, 300 community changes targeting nutrition were facilitated. A chi-square was used to test the alternative hypothesis that there is a difference in intake of fruits and vegetables among African Americans between 2001 and 2005 (pretest and post-test). The proportion of adults reporting consumption of five or more servings of fruits and vegetables in 2005 was 0.26 whereas the proportion from the 2001 sample was only 0.164. The difference in proportions is significant,  $\chi^2(1, N = 878) = 6.265, p = 0.007$ .

A Fisher's exact test was used because the chi-square was a two-by-two table. A statistical difference was detected between the 2001 and 2005 data.

Figure 13. Percentage of participants reporting they meet recommendations for engagement in physical activity

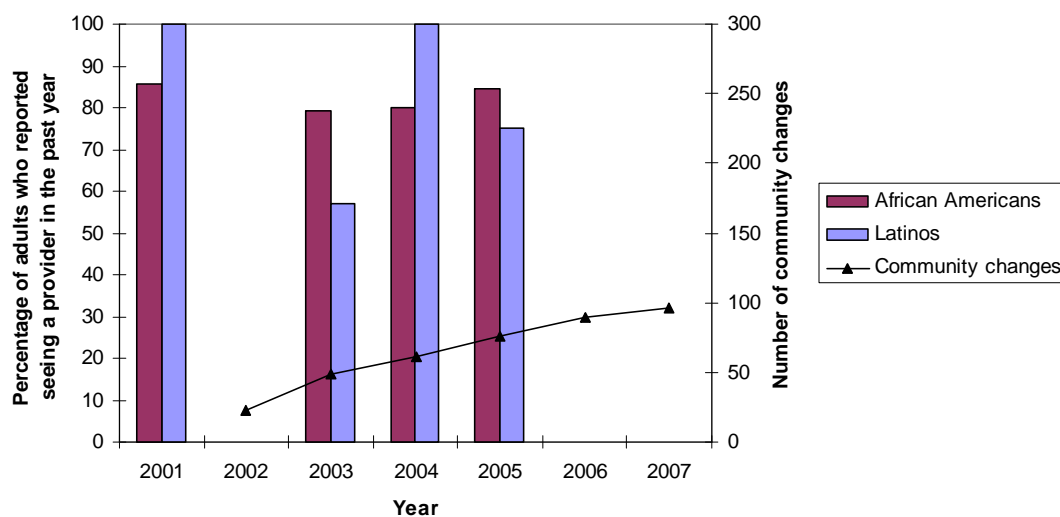


The percentage of African Americans reporting they had met recommendations for physical activity increased steadily between 2001 and 2005, from 27.8% to 30.3%. Far fewer Latinos responded, raising questions about the sample. The percentage of Latinos meeting recommendations for physical activity appears to have increased dramatically in 2003 from 33.3% to 57.1% and then remained at 25% for 2004 and 2005. Between 2001 and 2007, 267 community changes targeting physical activity were facilitated. A chi-square was used to test the alternative hypothesis that there was a difference in the proportion of adults meeting recommendation for physical activity among African Americans between 2001 and 2005 (pretest and post-test).



The proportion of adults reporting meeting recommendations for physical activity in 2005 was 0.303 whereas the proportion from the 2001 sample was only 0.278. The difference in proportions is not significant,  $\chi^2(2, N = 935) = .976, p = .614$ . The Pearson Chi-Square was used to statistically test the data. No statistical difference was observed.

Figure 14. Percentage of participants reporting they had visited a health care provider in the previous year



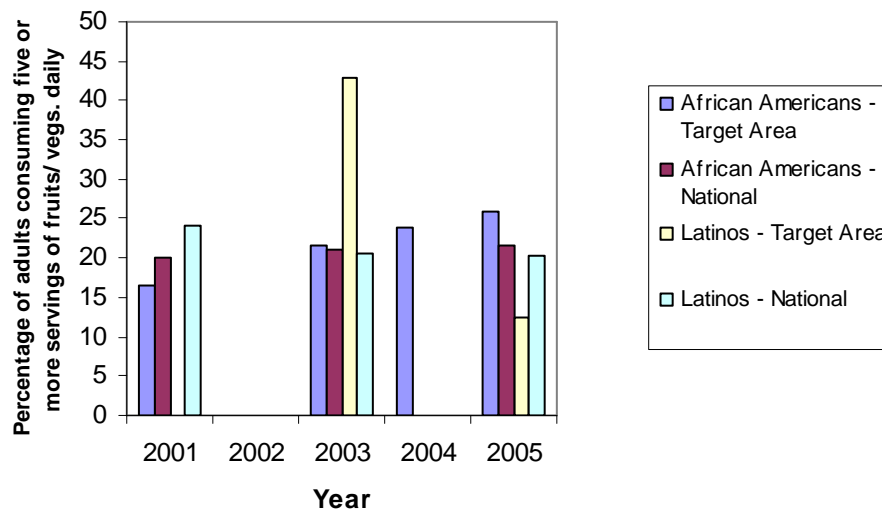
The percentage of African Americans reporting they had visited a health care provider in the previous 12 months decreased after a high value in 2001 (85.5%), but then increased from 2003 to 2005 (79.4% to 84.4%). Data from the sample (and perhaps a representative sample of) Latinos varied from 100% in 2001 and 2004 to 57% in 2004 and 75% in 2005. During the project period (2001-2007), 96 community changes focused on increasing access to care were facilitated. A chi-square was used to test the alternative hypothesis that there is a difference the

proportion of African American adults having seen the doctor in the previous 12 months between 2001 and 2005 (pretest and post-test). The proportion of adults reporting they had seen a health care provider in the previous 12 months in 2005 was 0.844 whereas the proportion from the 2001 sample was only 0.855. The difference in proportions is not significant,  $\chi^2(3, N = 967) = 2.602, p = .457$ .

Data from the national BRFSS was used as a non-equivalent control group.

Figure 15 displays the percentage of adults reporting they consumed five or more servings of fruits and vegetables daily in Kansas City and across the country.

Figure 15. Percentage of adults in the target area and across the country that reported they consume five or more servings of fruits and vegetables daily.

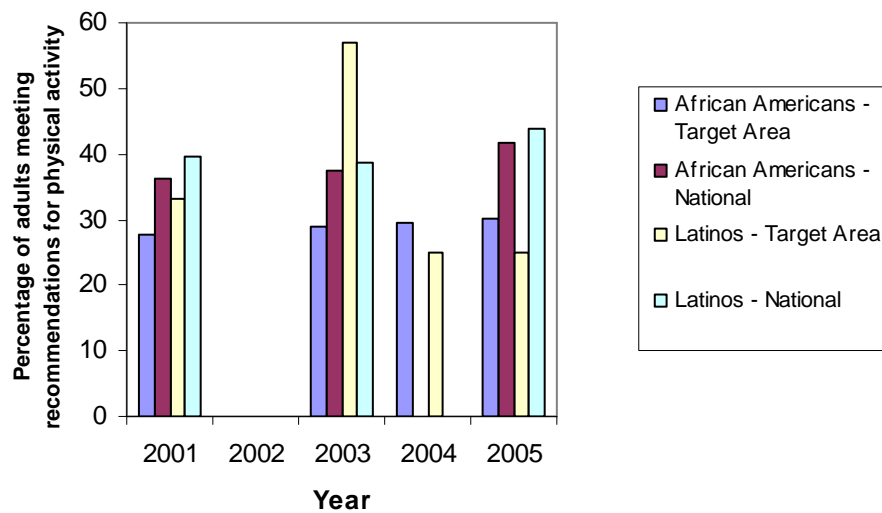


In 2001, the percentage of African Americans across the country reporting they consumed five or more servings of fruits and vegetables was higher than in the Kansas City target area (20.1% vs. 16.4%). While data about African Americans in the Kansas City target area appear to be trending upward with a 10% difference

between 2001 and 2005, an increase of 1.4% was observed among African Americans across the country. It appears that across the country the percentage of Latinos reporting they consume five or more servings of fruits and vegetables daily decreased from 24% in 2001 to 20.4% in 2005.

Figure 16 displays the percentage of adults that reported meeting recommendations for physical activity in the Kansas City target area and across the country. Between 2001 and 2005, data about African Americans in the Kansas City target area indicate that the percentage of those meeting recommendations for physical activity increased by 2.5%, while a more steep increase of 5.5% from 36.3% to 41.8% was observed among African Americans across the country. A similar increase (4.5%) was observed among Latinos across the country, although the percentage of Latinos in the target area meeting recommendations decreased between 2001 and 2005.

Figure 16. Percentage of adults in the target area and across the country that reported they meet recommendations for physical activity



*Additional research questions: How socially valid were the efforts of KCCDC?* A social validity survey (Wolf, 1978) was administered to partners to assess their satisfaction with and perceived importance of the dependent and independent variables (available in Appendix C). Questionnaires were sent to 295 people who represented partners of KCCDC. A total of 96 people responded to the survey, yielding a response rate of 32.5%. Of the total, 26% represented agencies or were identified as key informants and 74% represented neighborhood and faith organizations. Respondents were divided into these groups because slightly different questions were asked of the two groups. It should be noted that these results were reported to the Coalition in a report. Additionally, the results were used to inform a grant application to promote sustainability of the effort.

The first question asked participants to rate their satisfaction with and importance of the programs, practices, and processes (independent variable).

Participants were asked to rate only the services they had received. Table 7 displays the results.

Table 7. Ratings of importance and satisfaction with implementation of the coalition supports (independent variable)

Survey Items	Percentage of respondents who rated the activity as important or very important		Percentage of respondents who rated the item as well-implemented or very well-implemented	
	Agency	Neighborhood or faith	Agency	Neighborhood or faith
During the last year, have you or your organization, agreed to do a Pick Six Plan [strategy used for mobilization]? (N=36)	91.7	100	90.9	82.6
During the last year, have you or someone from your group participated in the Get Active physical activity training? (N=39)	74.97	96.2	72.7	92.6
During the last year, have you or someone from your group participated in the Eat Right nutrition training? (N=46)	55.6	94.6	75	94.3
During the last year, have you received resources to do a Pick Six Plan? (N=49)	78.5	94.3	91.7	81.2
During the last year, have you attended the regular coalition meetings? (N=50)	85.7	88.9	91.6	81.1
During the last year, have you used KC-CDC's resource room? (N=48)	93.8	87.5	93.3	87.5
During the last year, have you received a monthly newsletter with coalition updates and health education? (N=87)	60.9	82.7	80.9	82.1
Throughout the project, have you had opportunities to network and collaborate with types of groups other than your own? (N=64)	80	76.8	73.5	73.8
During the last year, have you received a contract to do a Pick Six plan or contract? (N=10)	90.9	0	90.9	0

For the most part, participants rated these Coalition activities highly. For ratings of importance, the resources room (a room filled with informational resources and supplies for conducting change activities) received the highest percentage of positive ratings (93.8% from agency representatives), while neighborhood or faith

representatives rated the Pick Six plan highest (100%). The Eat Right training (55.6%) received the lowest ratings for importance among agency representatives, while opportunities to network received the fewest high ratings among neighborhood and faith partners.

For satisfaction with implementation, the highest ratings by agency representatives was for resources for implementing Pick Six Plans (93.9%). The Eat Right training received the highest ratings for implementation by neighborhood and faith organizations (94.3%). The Get Active training received the lowest ratings for quality of implementation (72.7%), and the lowest ratings for quality of implementation by neighborhood and faith organizations were given to the activity of opportunities for implementation.

Participants were also asked to rate the community changes (the intermediate outcomes of their efforts) in a social validity assessment of the effects. The 655 community changes listed in the ODSS were reviewed to identify the most frequently occurring types of activities. These types of community changes were clustered by frequency. For example, many different churches and neighborhood groups used newsletters to promote healthy habits, which represented a cluster. Each cluster of activity (community change) was rated for importance, satisfaction, and perception of impact on community health. Table 8 displays the percentage of high scores (e.g., somewhat or very satisfied; four or five on a five-point scale) received by each item. Table 8. Ratings of importance, satisfaction with implementation, and perception of impact on community health for most frequently reported community changes

Types of community changes	Ratings by agency representatives			Ratings by neighborhood or faith organization representative		
	Percent rated somewhat or very important	Percent rated somewhat or very satisfied	Percent rated some or great impact	Percent rated somewhat or very important	Percent rated somewhat or very satisfied	Percent rated some or great impact
Healthy food and nutrition information provided at regular events (e.g., meetings)	71.5	68.4	61.9	90.3	77.1	80
Water intake campaigns to increase water intake.	85.7	66.7	76.2	86.7	81.6	78.3
Nutrition classes or information about healthy cooking and smart substitutes.	90.5	75	70	85	74.6	75.9
Neighborhood or faith group health fairs or events	84.2	70.4	80	66.7	55	70
Physical Activity classes or information on physical activity	85.7	70	80	82.7	67.9	78.9
Walkers on Watch or other walking groups.	88.2	50	56.3	80.7	61.8	67.3
Creation and promotion of walking paths	77.3	61.9	52.3	80.3	67.8	71.6
Use of guidelines on how doctors and patients should manage diabetes and cardiovascular diseases.	89.4	63.2	73.9	80	69.3	67.3
Local, one-time campaigns that promote healthy eating, physical activity, and information about chronic diseases.	72.7	52.4	30.5	78.7	67.2	62.1
Community-level health fairs or events (such as Taste of the Westside)	65	52.7	63.2	75.9	70.3	73.3
Health education information in	75	57.9	63.2	72.9	65.6	72.4

newsletters or church bulletins						
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For neighborhood and faith partners, healthy food and nutrition information received the highest ratings across all three dimensions [i.e., importance (90.3%), satisfaction (77.1%), and impact (80%)]. Water intake campaigns also received high ratings for importance (86.7%) and satisfaction (81.6%). Among agency representatives, nutrition classes or information about health cooking received the highest ratings for importance (90.5%) and satisfaction with implementation (75%). Physical activity classes also received higher ratings for satisfaction (70%), as well as potential impact (80%). Use of physician guidelines (89.4%; 73.9%) and water intake campaigns (85.7%; 76.2%) received many high ratings for importance and impact, respectively. Conversely, local one-time campaigns to promote health received the lowest ratings for potential impact on community health by both groups (62.1%; 30.5%). Walkers on Watch also had lower scores for satisfaction with implementation among both groups (61.8%; 50%).

*Additional research question: What were KCCDC's strengths and challenges from the perspective of key stakeholders?* Qualitative interviews of key informants revealed several key strengths and challenges of KCCDC. Almost all of the participants' responses focused on strengths, with several challenges noted. Many of the participants reported two challenges: implementing efforts in the Latino community and the relationship between the Coalition and its parent organization, the Missouri Primary Care Association (MPCA). Participants recognized that, although the Coalition had been very successful operating in the African-American



community, the Coalition had failed to implement changes to benefit the Latino community. The following are direct quotes from the interviews.

*Reaching out to the Hispanic Population – approach could not be the same – and there was not enough time to adjust the effort.*

*Among Latinos, we could not find the same level of organization that we could find in the African American community, and we could not get a stable bi-lingual mobilizer that was recognized by the community. The community was more fractured and mobile, so our efforts were not accepted in the same way. So we were not as effective as in the African American community.*

*They [KCCDC] did not have relationships with one of the populations [Latinos] they were supposed to be serving. They were not upfront about it, and so their comfort with one population [African Americans] over the other led to ignoring one population [Latinos].*

Another challenge identified was the relationship between KCCDC staff and MPCA (the “parent” organization).

*The ability to develop its own base in KC under the leadership of MPCA was a challenge. The challenge was to bring recognition to MPCA. MPCA in Jefferson City did not have the same goals as KCCDC.*

*Tension between MPCA and the leadership was a challenge. I don’t think the MPCA communicated the importance of community members.*

Another challenge identified was staffing, particularly of community organizers.

*They did not choose their community organizers well. Community organizers were not necessarily qualified or enabled to be effective because of interpersonal relationships.*

Finally, planning and securing means for sustainability were identified as challenges.

*Not developing its own funding base. Opportunities for funding that were not used properly – the funding from the Health Care Foundation of Greater Kansas City– the funding was too specific and did not strengthen the base of KCCDC.*

*We did not go after other sources of funding from the beginning. We should have looked for diversified funding streams. There are things that the coalition could have been creating and selling. We never did a fundraising effort. We did not ask the steering committee to seek other sources of funding. We went from more than \$800,000 [a year] to less than \$100,000 [a year]. We did not have the staffing and resources, incentives, etc. While the partners have stayed with us, their support is waning because there is nothing new that we have to offer.*

Participants were asked to comment on what they believed to be the future of the initiative. Almost all of the participants relayed that the future of KCCDC is “not bright”.

*The reality is that if we do not find funding for staff within the next six months, the coalition is likely to go dark. Volunteers cannot make it withstand.*

*They did planning, but it did not move fast enough. If it survives, I will be surprised. Personalities came before principles. Just do not have a plan and did not make good choices.*

Several of the many identified strengths referred to KCCDC's approach, including use of the Pick Six program to mobilize partners to implement the action plan, use of the multi-sector model of change, the use of coalition meetings to convene partners, and the branding of a message, "We practice healthy habits." The strengths of the approach were characterized by respondents in many different ways:

*The community felt like they were in charge. They were not dictated to, it was a bottom up approach.*

*People could be empowered. They ran with it. They realized they did not have to do everything... I think it helped people realize they were a part of something. It was really about community empowerment.*

*Nine-sector model was critical – because it allowed you to look at the community broader than neighborhood and faith [communities] – let you develop a comprehensive approach. Like integrating health and safety, rather than approaching them separately.*

Related to approaches used for community mobilization, several participants indicated that the initial Pick Six approach was strengthened by operating within established networks (e.g., the neighborhood and church networks within the African American community). This was possible since the original project manager had

strong ties with these networks. Another strength mentioned by most participants was the availability of “stable federal funding over a long period of time.”

## **DISCUSSION**

KCCDC clearly served as a catalyst for change to reduce health disparities related to cardiovascular disease and diabetes. The facilitation of 655 discrete community changes over a six-year period provides evidence of success in changing the environment. Although the success of the coalition in facilitating change was fairly consistent, the rate of change did seem to falter between 2004 and 2005, which was associated with two key factors. First, the support for Pick Six implementation (i.e., the program in which partners selected six action plan items to implement) through the mini-grants was very effective as a community mobilization strategy, and seems to have accelerated rates of change. The termination of that strategy seems to have compounded an already decreasing level of community change. Second, changes in leadership approach and leadership overall seem to have led to a decrease in the rate of change. Key informants indicated that the initial project manager’s approach shifted from the local level to the national level. The project manager became more involved in promoting KCCDC at the national level and trying to negotiate collaborations across REACH 2010 projects. In 2005, tension between the project manager and the parent organization, MPCA, increased. These two elements combined to detract from consistently high rates of community change. Leadership is often identified as a factor that contributes to facilitation of community change (Roussos & Fawcett, 2000). In this instance, the change in focus by the initial leader

and eventual departure of that key leader appears to have contributed to a decrease in facilitation of community change.

Changes in organizational structure near the end of the coalition did not appear to improve the rate of community change. Organizational structure is also thought to be an important factor contributing to community change since it frames opportunities for how to be involved (Kegler, Steckler, McLeroy, & Malek, 1998; Parker et al., 1998). During the last two years of the initiative, the Coalition developed coalition by-laws and installed a coalition-elected steering committee. Yet, neither activity was temporally associated with increases in rates of community change. Perhaps focus on these internal Coalition activities may have competed for time to bring about change in the community. An alternative and plausible explanation is that these changes in organizational structure occurred after the Coalition lost much of its momentum and loss of funding was either known or anticipated.

The analysis of contribution of the documented changes facilitated by KCCDC and its partners make it possible to characterize a typical community change. Most community changes targeted cardiovascular disease and diabetes, largely because most of the community changes targeted nutrition and physical activity, common risk factors for both disease processes. Further, most changes occurred more than once but were not ongoing, perhaps decreasing the likelihood of continued exposure and related sustained effects on behavior. They more often used the strategy of providing information or enhancing skills or modifying access,

opportunities, and barriers. Finally, a typical community change was likely to prioritize African Americans and take place in one or more of the target (primarily African American) neighborhoods. Although this characterization of community changes is descriptive of the whole intervention period, there was some variation over the multi-year history of KCCDC.

Community changes varied year to year on almost all characteristics of analysis of contribution except goal and prioritized population. During the first year of KCCDC activities, almost one-third of the community changes targeted the risk factor “access to quality care,” the largest percentage that this risk factor would receive during the study period. Correspondingly, over one-fifth of the changes took place in health care organizations or providers, also the largest amount of change that took place in that sector. This is likely attributable to partners from Federally Qualified Health Centers that provided the foundation for the early coalition’s membership. Despite receiving more resources than any sector, representatives in this sector did not contribute as many changes once other sectors became involved. The switch to nutrition and physical activity as primary risk factors to be targeted corresponded to increased involvement of neighborhood and faith organizations; the latter had the capacity to create change related to these risk factors, but had less influence over access to health care.

Change in the duration of events and strategies used seemed to correspond to shifts in the agents or implementers of change. FY02 had the highest percentage of policy changes (28.6%) and ongoing events (38.6%). Never again would KCCDC

implement that level of sustainable change. This pattern might also be associated with changes within the healthcare provider and health organizations sector. Most of these changes were changes to policies and practices intended to enhance access to care; for instance, expansion of clinic hours. Changes in policy were non-existent in the final two years of the study period. This might be explained by the shift away from implementing the broader action plan to implementing a select set of “evidence-based” programs, such as the Eat Right and Get Active programs identified by Coalition staff.

The switch from a focus on the Kansas City target neighborhoods to a broader geographic focus identified by key informants is validated by data from the analysis of contribution. Between in 2004 and 2006, between 24% and 34% of community changes took place outside the target area. Although data for FY02 indicated that about 46% of community changes took place outside the target area, this is likely attributable to efforts by the Federally Qualified Health Centers and private organizations to improve quality of care in clinics (which serve the target area and beyond) and support for quality care by health plans (a broader important effort of one key partner).

The intensity scores resulting from the analysis of contribution also enhances understanding of how changes in the environment may contribute to changes in population-level outcomes. Notably, the changes prioritizing African Americans had higher intensity scores than those prioritizing Latinos. In addition to simply having fewer community changes focused on Latinos, the changes that were facilitated had

weaker intensity. One can also see a change in intensity over time by goal area. During the first year, strong involvement by partners in health care settings led to more intense community changes directed at the goal of access to care; however this level of intensity was not observed after the first year. Importantly, environmental changes directed at African Americans targeting nutrition had the strongest intensity scores. This information helps identify the goals and populations for which KCCDC's efforts were strongest and can most likely anticipate changes in population-level outcomes.

Intensity scores were modest across most years, goals, and populations. The highest combined score was for changes targeting physical activity among African Americans in 2006. This score of 19.03 is over half the maximum score. This suggests that more could have been done to increase the overall intensity of efforts. Also notable is that the intensity score was positively associated with the total number of changes brought about during that time period. The lower intensity scores were observed in years in which rates of change decreased. For KCCDC, periods in which fewer changes in the environment were occurring were even more problematic since these relatively fewer changes may also be less likely to have an impact on population-level behavioral change.

This analysis of contribution was intended to help predict how the cumulative efforts of the Coalition might be contributing to changes in population-level outcomes. The most significant changes occurred among African Americans and with behaviors related to nutrition. About 45.8% of the community changes targeted



nutrition, entirely or in part; the highest proportion of changes. Changes in engagement in physical activity among African Americans were also observed. Community changes targeting physical activity accounted for 40.7% of the overall community changes. These were associated with increased rates of physical activity, although not to statistically significant levels. This finding provides some validation of the analysis of contribution as predictive of longer-term changes in population-level outcomes. Most changes through KCCDC's history targeted African Americans and targeted the protective factors of healthy eating and engagement in physical activity. In addition, as intensity scores suggest, these changes were of longer duration and using more powerful behavior change strategies. The association between accumulated community changes, intensity scores, and corresponding improvements in population-level behavior change provides modest evidence of the effects of a comprehensive community initiative's effort to improve health behavior.

Although it is clear that there is a statistically significant difference between the pre-intervention and during-intervention data points related to consumption of fruits and vegetable among African Americans in the Kansas City target area, this evidence may be seen as somewhat questionable in light of data regarding the consumption of fruits and vegetables among African Americans across the country. That the percentage of African Americans in the target area was lower than across the country to begin with suggest that regression to the mean may be a possible explanation for the observed effects. In addition, the national data suggest a small upward trend also. Although the use of comparison data is beneficial for

strengthening the design and evidence available, it is not clear that this data negates findings of KCCDC's success. The sample of national data likely includes more affluent African Americans and rural African Americans, which conceivably have more access to fruits and vegetables. Additionally, the upward trend observed in the target area is substantially greater (10% vs. 1.5%) than in the national data. The data presented about African Americans nationally reflect a preliminary analysis. More analysis is needed to assess if the national sample is an appropriate comparison, in that it is reflective of a sample similar to KCCDC's target area.

Social validity assessments were used to examine partners' satisfaction with the procedures and effects of the initiative. It provided an opportunity for the partners to provide feedback about activities in a way that had not happened previously. The scores from coalition partners were quite high overall. Partners overwhelmingly felt that the supports put in place to enable their work were important and well-implemented. They also indicated that the community changes implemented the most frequently were well-implemented and important. This type of information pinpoints strengths and areas for improvement.

Despite its contributions, several weaknesses or limitations of KCCDC's approach can be noted. The primary limitation was the Coalition's failure to promote health improvement among Latinos, one of its prioritized populations. The Coalition effectively used existing networks within the African American community. Although the Coalition's ability to recognize and engage strong support structures within the African American community, this was not demonstrated with the Latino

community. The Pick Six-Mobilization approach was not working in the Latino community and needed cultural adaptations to be effective in the Latino community. Coalition staff in the critical position of community mobilizer were disconnected from and ineffective in the Latino community. At the steering or executive committee level, there was only one Latino representative until 2005. By 2007, failure to have an impact in the Latino community was apparent and representation of Latinos on a more empowered steering committee led to a qualitative study to examine how KCCDC's could enhance accomplishments in this area.

Another prominent limitation of KCCDC's approach was managing implementation of the Pick Six mini-grant strategy. In terms of catalyzing community change, this strategy was successful. It was ended in 2004, however, because of continuing problems with implementation and accountability for funds given out as part of the initiative (Collie-Akers et al., in press). Perhaps if better implemented, the strategy could have continued to help sustain more effective change efforts. This limitation led to another challenge: the shift to "evidence-based programs." In 2006, a new strategy was implemented that provided resources in the form of trainings and supplies to partner organizations implementing a Pick Six plan. The trainings, Eat Right and Get Active, were purported to be evidence based, however no evidence base could be identified for either training approach. In addition, rather than serving as a catalyst for community change, this strategy led to more service provision and a shift of focus for the coalition from changing the environment to service provision.

Another limitation was the highly centralized leadership. Despite a shift late in the study period to a more empowered steering committee, decision-making authority was largely with Coalition staff. This prevented a full implementation of the Community-Based Participatory Research (CBPR) approach. Influence over activities, research methods, and other elements was not shared among community members and research partners; but rather held relatively closely by one to three staff members. Perhaps noted limitations, such as the failure to reach the Latino population, may have been avoided if members of the community had more influence on the approaches used to reach the community.

A final limitation is sustainability of KCCDC and its efforts. The Coalition relied almost entirely on the large federal grant for its resources. Only between 2005 and 2007 did the Coalition pursue other sources of funding. In addition, the funding that they did pursue seemed to detract from their overall effort. For example, despite always focusing on adults in a specific geographic region, the Coalition staff accepted a grant from a local foundation to conduct work in schools across the entire Kansas City metropolitan area. This seemed inconsistent with the mission of the Coalition and redirected staff time from seeking funding from other sources. KCCDC engage in intensive planning for sustainability only after it became clear that the large federal funding would not be renewed.

KCCDC's approach was also characterized by a number of strengths. Foremost among them was the Coalition's very successful approach to mobilizing community partners. Within the African American community, Coalition leadership

identified strong networks that could be active in creating community change, reflecting another strength of the Coalition to recognize and respond to a unique feature of this underserved population. Over 50 different neighborhood associations and faith organizations partnered with KCCDC. The provision of resources, whether monetary between 2002 and 2004 or direct resources beginning in 2006, was critical to this strategy. It should be noted that the mini-grant strategy was by far the most successful element in increasing the rate of community change. The Pick Six plan, the idea that any and all partner organizations should select just six items to implement from the community-determined action plan, made the implementation of the action plan seem more feasible and accessible. It also concentrated focus on implementing the community-determined action plan, which was another strength of KCCDC's approach. Time developing the action plan in 2000 was well-spent as the resulting document provided the foundation for KCCDC's efforts throughout the study period. Qualitative data suggest that the action plan assisted with the sense of ownership over the initiative's effort.

A final strength of the approach was a move toward greater Coalition ownership and shared influence in operation. For the first several years of operation, decision-making was highly centralized under the leadership of the project manager. Although an executive and steering committee existed, all members were appointed; and meetings were largely an opportunity for the project manager to share what activities were occurring. Late in the Coalition's lifespan, greater effort was made to

shift decision-making to members of the Coalition. This reflects greater adherence to principles of community empowerment and shared influence with the community.

Community-based participatory research was a relative strength of KCCDC. The research partners (KU Work Group) were committed to implementation of CBPR principles and approaches. It supported KCCDC's efforts by facilitating action planning, preparing data for the steering committee, engaging the steering committee in making sense of the data. It also sought their review and approval of all complementary research efforts (e.g., implementation of a capacity-building project, conducting surveys). Yet, the highly concentrated decision-making authority limited the full implementation of CBPR.

There are several notable limitations of this study. First, a weak study design, a case study design, was used to examine the effort. This study does not minimize key threats to internal validity, such as history or other correlated events that could explain observed effects. Nor does it maximize generalizability, or the ability to replicate to other settings. On the other hand, Yin (1994) indicates an advantage of this design is that it helps build hypotheses to be used in future research and action. This is quite appropriate for the REACH 2010 initiatives that were intended to be demonstration projects. As a first step in a series of REACH initiative phases, the use of this design seems adequate to the context of the study.

Several limitations are related to the measurement system used in the study. The data on community changes relied on self-reports, by coalition members, which has implications for completeness and accuracy. It is possible that people forgot to

report some activities or they selected the best of all their activities to report. To account for this, partners were asked to submit regular monthly reports to prompt them to remember activities. The community mobilizers also prompted partners to report their activities. At the end of the REACH funding period, Coalition staff attempted to verify completeness of the data, but were challenged to reach partners who were no longer involved in KCCDC's efforts. More effort could have been devoted to assessing the completeness and accuracy by validating instances of community changes by examining resulting products (e.g., pictures, documents).

A protocol for ensuring accurate and complete documentation may help minimize this limitation. The following protocol might be considered for maximizing the quality (i.e., accuracy and completeness) of data documented:

- Require documenters complete a comprehensive training that includes: written and oral descriptions of coding definitions, examples and non-examples, and opportunities to practice scoring of hypothetical entries.
- Conduct practice scoring with hypothetical entries for documenters-in-training. Interobserver reliability should be provided as ongoing feedback ensure progress towards an acceptable level of reliability (greater than or equal to 80%).
- Once a documenter achieves at least 80% agreement with the independent coder, a lower number of entries will be secondarily scored.
- When possible, the documenter will be required to attach a permanent product of the activity to ensure that the activity occurred. Examples might include:

pictures of their events, newsletters describing the event or activity, receipts for services provided related to the community change (e.g., a fitness instructors time), or meeting minutes describing the outcome of their actions.

- Make lists of activities publicly available (e.g., at coalition meetings, in coalition newsletters) so that coalition partners are able to review the documented activities for accuracy and completeness.
- Regularly distribute lists of entries recorded on their behalf to partner organizations. Request that they review the lists for completeness and accuracy. Update the entries in the documentation system based on feedback received.
- Consider randomly-selecting entries to be validated by review of products related the described community changes.

This protocol may enhance the data and ensure stakeholders of its reliability and validity.

Other research challenges were associated with the collection of the population-level outcome data. First, although beneficial to understanding the possible impact of KCCDC, the 2001 data point was problematic since the Missouri Department of Health and Senior Services was unable to provide a description of sampling procedures. Representatives did indicate that Kansas City, Missouri was oversampled, but could provide no description of how the population was sampled. Second, as part of the cooperative agreement the CDC hired independent contractors to conduct the REACH 2010 survey in each REACH project community. However,



in Kansas City (and several other REACH communities), survey data collection did not begin until 2003, a full two years after the beginning of the initiative. Third, the last data point for population-level outcome was collected in 2006, despite the fact that the initiative did not end until 2007. The CDC contracted to private organizations for completion of the survey, and they changed contractors between 2005 and 2006. Unfortunately, the sampling procedures between the two organizations differed, and REACH 2010 projects were advised to not use the 2006 data. Finally, REACH 2010 projects were assured that power analyses had been conducted to identify the needed sample size for each population; however, the sample size of Latinos across all years that the surveys were administered was quite small.

There were also limitations due to the absence of suitable data for comparison communities. Notably, most of Missouri was not asked about fruit/ vegetable intake, and only 13 other states asked about fruit/ vegetable intake. This limits the possible comparisons that can be made. It would seem that St. Louis could be a comparison because of availability of data from the oversampling, however, data are not available for the 2005 data point. Although the State asked the related questions, they did not sample enough African Americans or Latinos to make available sub-population analyses. There were enough African Americans or Latinos to analyze across the state of Missouri, but that data point was not available in 2001. More exploration is ongoing in an effort to identify a comparison community. Despite the fact that assessment is a core function of public health and monitoring health status is one of

the 10 essential services of public health (Institute of Medicine, 2003), it does seem that consistently assessing the health behaviors of minority population is a gap.

A final limitation of this study was the lack of evaluation of discrete interventions at the program level. Like other REACH 2010 projects, multiple programs were implemented but none were evaluated separately. For example, one question frequently asked by stakeholders is about reach: how many people participated or how many people in the target area were involved? Specifically, information from a program evaluation of promising interventions would have been helpful.

This study has a number of strengths. First, as suggested in the introduction, participatory research of comprehensive initiatives to reduce health disparities are exceedingly rare. This study provides one of the first or only descriptions of the activities implemented by an initiative and the resulting changes to the environment. Further, very few studies about health disparities connect community intervention activities to intermediate outcomes then to subsequent population-level outcomes. Second, use of the Online Documentation and Support System resulted in data about the activities and events facilitated by the Coalition and its partners. The focus on an intermediate outcome – reported community change -- helped the Coalition assess its progress with implementation of the community-determined action plan and how their efforts might be contributing to longer-term changes in population-level outcomes. In addition, it provides important, comprehensive information about what

the Coalition actually did (implementation of the independent variable) that can assist with dissemination and replication of the model.

Another strength is the availability of population-level outcome data. Despite the design limitations, the data helped the Coalition provide plausible evidence of success. In addition, being able to integrate intermediate outcome data (community change) and longer-term outcome data (behavior change) provides an indication of how the efforts of the Coalition are associated with changes in population-level outcomes. Since measurement of population-level outcomes by the REACH 2010 office did not begin until 2003, the Coalition and this study greatly benefitted from the partnership that led to the availability of pre-intervention data from the Missouri Department of Health and Senior Services.

Measurement of social validity is an important strength of this population health study. Although other accounts of REACH 2010 initiatives provide an indication of participants' satisfaction with a particular program's implementation, the social validity assessment conducted for this study is more comprehensive. Community members were asked not only about implementation but also about the significance of the results of implementation. In addition, rather than being asked to assess a program within the broader effort, community members were asked to assess this comprehensive initiative as a whole. A related strength is that this study provides an examination of the entire initiative. Rather than presenting data on a single program and its results within the initiative, this study provides a comprehensive

assessment of the initiative's efforts to change the environment throughout the entire REACH 2010 funding period.

There are many lessons learned that support recommendations for research and practice. First, KCCDC's effort to mobilize all sectors to implement a comprehensive, community-determined action plan holds promise for practitioners and researchers aiming to promote health equity. In particular, the partnerships developed between neighborhood and faith organizations and the resulting engagement of community members, as opposed to just professionals, is an important attribute of public health initiatives. This study provides evidence that participatory research can be effectively carried out by community and scientific partners in the context of a comprehensive community initiative. Second, documentation of community change was critical to understanding the unfolding of environmental changes that KCCDC and its partners implemented. Online supports helped to make documentation easier and more effective in facilitating adjustments along the way. For researchers, the use of such an information system enables a more accurate, complete, and therefore possibly replicable independent variable. For practitioners, this type of system, with its real-time graphs and analyses, yields information that can contribute to adjustment and improvement.

Finally, our challenges with study design and related outcome data suggest several important lessons and recommendations. Although, a case study is limited in ruling out other explanations of observed effects and generality, it does provide empirical evidence of success that can be used to inform future studies of

comprehensive approaches for addressing health disparities. This is a typical design used to examine comprehensive community initiatives. Future research should consider the use of time-series designs with staggered implementation. This type of design allows for examination of individual coalitions, but researchers could examine multiple coalitions beginning at different times, thus ruling out alternative explanations for observed changes.

### **CONCLUSIONS**

This study provides empirical evidence that “change driven by communities” (Satcher, 1999, 284) can be effective in creating environments that could ultimately promote widespread behavior change and reduce health disparities. KCCDC worked to promote healthy equity by working toward its vision of “excellent health for all.” Benefitting from key strategies, in particular mobilization of key sectors, KCCDC was able to implement key programs, policies, and practices that did have an impact on the health behavior of one population. Their success can be seen through the observation of changes in a key population-level outcomes toward which many of the environmental changes were addressed.

The pursuit of health equity is grounded in social justice; that is the value that all live in environments that assure opportunities to be healthy. In pursuit of this goal, KCCDC demonstrated effectiveness in changing community conditions and improving health behaviors of a minority population suffering severe health disparities. Yet, a follow-up to the report on minority health indicators that set the stage for KCCDC’s development finds that health disparities exist on the same scale

as they did in 2000 (Kansas City, Missouri Department of Health, 2008). So, much is left to be done. The pursuit of this vision of health equity belongs to us all in Kansas City, Missouri and throughout the world.

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**Appendix A: Selected changes to be sought in KCCDC's Action Plan**

- A-1. Develop an "individualized" water intake campaign to promote drinking adequate amount of water daily
- A-2. Promote exercise/walking to and from locations as a natural way of getting from place to place
- A-3. Promote healthy options for food choices while "on the run"
- A-4. Implement a campaign that focuses upon hypertension and simple ways to reduce/control stress
- B-5. Develop consumer skills in making wise food choices tailored to their family size and needs
- B-6. Offer community cooking classes with options for healthy lifestyles and recipe conversions
- B-7. Promote walking or biking as natural ways of getting from place to place and sharing benefits of increased physical activity
- C-8. Offer classes, informational materials and other means to introduce healthy cooking and food preparations; optional ways to prepare traditional recipes
- C-9. Promote the KCMO Health Department Walkers on Watch Program throughout the target area
- C-10. Use health service and social service networks to model healthy and nutritious snacks and beverages for meetings and events
- C-11. Prepare a healthy lifestyles tool kit of resources to assist individuals to incorporate healthy habits for daily use
- C-12. Survey/inventory existing programs and target audiences in your area to determine which programs should be expanded, combined or eliminated



C-13. Compile and promote a listing of safe walking locations (that allow for a minimum 20 minute walk) throughout the target area (both indoor and outdoor venues)

C-14. Do Report Cards on neighborhoods that promote healthy habits and to grade healthy environments in the target area as one means to increase walking areas (e.g. crime, walkable sidewalks, traffic signals, etc.)

C-15. Implement a health component for Welcome Wagons and offer it at the neighborhood level

C-16. Make use of neighborhood newsletters as a mean of promoting healthy habits and in-place services

C-17. Pilot neighborhood-based project to implement outreach campaigns at the block level (Every Block a Village; Every One a Caregiver)

C-18. Disseminate information about the risk factors for and consequences of having CVD and Diabetes as well information on local resources that assist with treatment and support

D-19. Implement an “I didn’t know that” campaign as a way of promoting the range of services already offered at the clinics

D-20. Prepare informational materials (modeling a restaurant menu) to outline the range of service offerings that promote health and wellness

D-21. Develop promotional campaigns on healthy lifestyles for implementation throughout the calendar year

D-22. Media campaign re: adopting behaviors to reduce CVD/Diabetes risk factors and available community resources

D-23. Implement a promotional campaign that involves a cross-section of local officials and celebrities making healthy choices daily and why it’s important to them

D-24. Partner with media sponsor(s) to promote campaign in the community

- D-25. Promote campaigns that offer consumers to food journal their meal choices and offer healthful alternatives/substitutes that promote more healthful item choices
- D-26. Promote education about relationship between food choices, physical activity and development of chronic diseases (CVD and Diabetes)
- D-27. Develop a community-wide Memorandum of Understanding that promotes healthy lifestyle choices and get partners to sign it; and promote the agreement throughout the community
- D-28. Make use of campaign techniques used in anti-tobacco campaigns as a means to defer other unhealthy habits practiced by society today
- D-29. Work with recreational outlets to tailor and promote offerings around healthy lifestyles
- D-30. PR campaign to increase awareness of existing health related services, eligibility, and how to access them
- E-31. Prepare Report Cards on grocery store chains (and their weekly ads) to assess their role in promoting nutritious food options for cost-conscious consumers
- E-32. Seek out and recognize commercial intersections/shopping centers that promote one or more healthy habit vendors
- E-33. Provide consumers with incentives (e.g. from private sector) to promote the purchase of nutritious fruit and vegetable food choices
- E-34. Go national to target food suppliers who use the Kansas City market to promote healthy nutrition using their products
- E-35. Promote the use of signage in barber shops/beauty salons, etc. Ask me about Healthy Habits
- E-36. Prepare a Report Card of sorts to rank fast food choices and providers

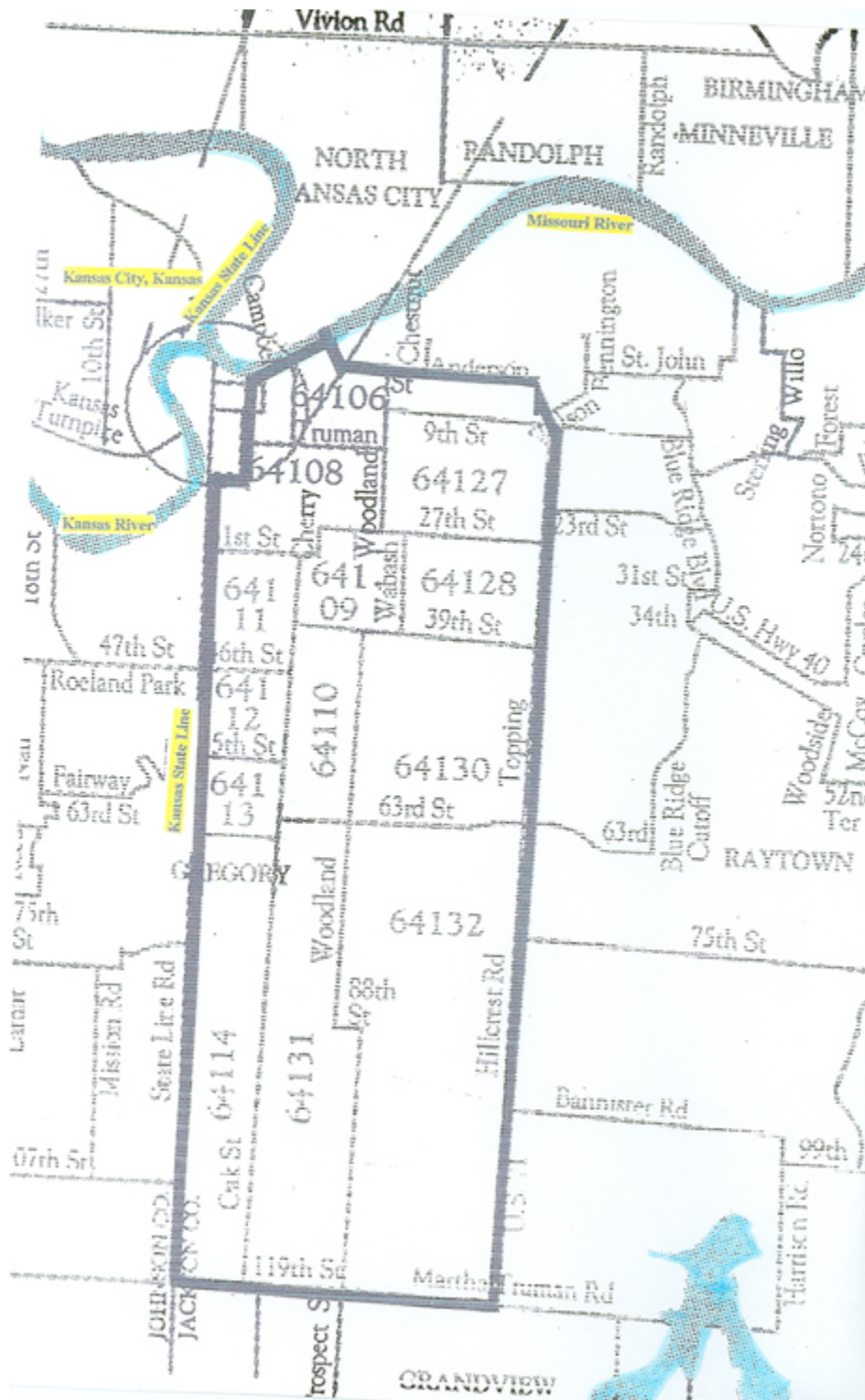
- E-37. Set up a range of support/partnering options for individuals to improve their healthy choices for daily applications (e.g. advocates, support groups, coaches, [Weight Watcher] buddies)
- E-38. Promote a healthy habits culture among the different segments within the community
- F-39. Offer more salad bars/potato bars at schools other meal offering settings
- F-40. Integrate audience-appropriate health education in schools/other congregate settings
- F-41. Work with the school district (also private schools) to promote nutritious school lunches, breakfasts, snacks and vending machine offerings and align this to other healthy choice options
- F-42. Promote a range of existing curricula/programs that promote healthy habits (e.g. AHA Heart Power program)
- F-43. Implement a Teachable Moments campaign that makes use of events in the news and incidents affecting individuals and groups as one means of offering health-related information and skill-building techniques pertinent to the issue at hand
- F-44. Promote healthy nutritious rewards with preschoolers
- F-45. Prepare Report Cards for rating school-based and community-based nutrition programs
- F-46. Use Hi-STEP programming in school settings in which older students teach younger students about healthy habits and why they are important habits to practice daily
- F-47. Partner with the KC Star - Star in Education program to develop and distribute healthy habits tabloids among elementary and preschool audiences
- F-48. Examine avenues for young persons to tell about what they're learning about healthy habits and how it impacts their daily activities
- F-49. Create curricula for culturally specific communities regarding link between food choices and physical activity and development of chronic disease

- F-50. Utilize extended daycare and caring community programs to educate participating parents about relationship between diet/exercise and risk for CVD-Diabetes
- F-51. Ensure adequacy of fruits and vegetables in public school menus and use of fat-reduced foods
- F-52. Policy to require physical education classes in public schools
- G-53. Increase access by creating mobile health facility
- G-54. Create patient health service navigators to work with area residents
- G-55. Make use of “waiting room” in a variety of venues to promote educational information exchange, exercise activities/equipment and healthy food preparation demonstrations
- G-56. Extend hours of service for health care and related healthy habit choices and offer transportation support options that empower this expanded usage
- G-57. Implement a campaign that promotes a community-wide sense of “welcoming atmosphere/glad you’re here” to patients and visitors of health settings
- G-58. Develop/promote alternatives to visits to emergency rooms after hours, doing this as a multi-clinic, multi-site campaign
- G-59. Promote the varied services offered by health clinics after hours
- G-60. Offer diversity/human respect training for health care professionals
- G-61. Align public health programming with other health-focused initiatives/collaborative; offer a seamless healthy system/continuum of care model
- G-62. Integrate healthy habits approaches into WIC program implementation
- G-63. Strengthen communications networks among health providers (e.g. hospitals, nursing homes, clinics, etc.)
- G-64. Implement cross training program - Parents as Teachers, Healthy Start, Meals on Wheels

- G-65. Acknowledge the importance of receiving feedback from hospitals/emergency rooms about services provided to patients
- G-66. Educate healthcare providers about cultural, gender, and age-specific sensitivity with clients
- G-67. Develop common protocols and best practices for treating diabetes and CVD and promote adoption by all local health care providers
- H-68. Do cooking demonstrations in a variety of settings that promote use of more nutritious/economical food choices/combinations for daily use
- H-69. Use the marketing of products for family units of one (meals preparation for one)
- H-70. Develop a promotional campaign that tailors its messages to specific life stages of development and the “hooks” that focus upon those age groupings
- H-71. Offer senior citizens with exercise options to use in the home/around the house setting
- I-72. Market to businesses the cost benefits/employers’ savings by implementing healthy habits at work
- I-73. Mark off parking lots/other walk areas at work, using 1/8 mile increments to promote walking while at the work site and offer incentives/chart efforts to promote healthy habits at work
- I-74. Promote water intake in a variety of settings (work, school, community events, etc.) such as ice machines, free water bottles
- I-75. Promote within the private sector markets incentives for packing nutritious lunches to eat on the job as an alternative to fast foods
- I-76. Partner with the Mid-America Health Coalition to model and promote healthy habits options in work and community settings

- I-77. Role model healthy habit alternatives at work/school/community events (especially worst offender target groups in the industry) [e.g. late shift nursing staff]
- I-78. Promote the offering of flex-time at work settings so employees can exercise while at work
- J-79. Increase access by expanding clinic hours/ Medicaid and Public Aid health care providers and provide transportation supports to clients
- J-80. Promote a multi-sector system approach to promote healthy lifestyle choices
- J-81. Expand voucher system to incorporate other allowable services and expenses
- J-82. Support use of tax resources for subsidizing cost of fresh produce
- J-83. Align KC-CDC with newly formed Mayor's Health Commission and existing minority task force to coordinate resources and avoid duplication of services
- J-84. Align public health programming with other health-focused initiatives and collaborate to provide a more integrated Community Health System
- J-85. Promote policy that requires nutritional information distributed with food products and ed campaign around reading food labels
- J-86. Continue to expand KC-CDC partnerships with local organizations

Appendix B: Map of KCCDC Target Area



**Appendix C: Surveys used to assess social validity of KCCDC efforts  
KC-CDC Assessment of Current and Future Activities  
(NEIGHBORHOOD/FAITH)**

Please fill in the whole survey. Your answers are important to KC-CDC. They will help to improve the program. Do remember – your responses will be kept completely confidential.

1. The following are a list of KC-CDC activities to support partners' efforts to build a healthier community.

Activity			How important is this activity to help you improve the health of your community?	How well was this done?
<b>During the last year, have you attended the regular coalition meetings?</b>	Yes	If yes →	1 2 3 4 5 Not Very Important	1 2 3 4 5 Not Very Well Well
<b>During the last year, have you received resources to do a Pick Six Plan?</b>	Yes	If yes →	1 2 3 4 5	1 2 3 4 5
<b>During the last year, have you or your organization, agreed to do a Pick Six Plan?</b>	Yes	If yes →	1 2 3 4 5	1 2 3 4 5
<b>During the last year, have you or someone from your group participated in the Eat Right nutrition training?</b>	Yes	If yes →	1 2 3 4 5	1 2 3 4 5
<b>During the last year, have you or someone from your group participated in the Get Active physical activity training?</b>	Yes	If yes →	1 2 3 4 5	1 2 3 4 5
<b>During the last year, have you received a monthly newsletter with coalition updates and</b>	Yes	If yes →	1 2 3 4 5	1 2 3 4 5



health education												
<b>During the last year,</b> have you used KC- CDC's resource room?	Yes	If yes	1	2	3	4	5	1	2	3	4	5
	No	→										
<b>Throughout the project,</b> have you had opportunities to network and collaborate with types of groups other than your own?	Yes	If yes	1	2	3	4	5	1	2	3	4	5
	No	→										

2. Have KC-CDC's support activities listed above helped you...?

Effect of the activity	Please rate these efforts on their helpfulness:
Made others more aware of diabetes and cardiovascular risk factors	1 2 3 4 5 Not helpful Very helpful
Create more opportunities to be physically active.	1 2 3 4 5
Create more opportunities to eat more healthy foods.	1 2 3 4 5
Provide free information about diabetes, cardiovascular diseases, and related risk factors.	1 2 3 4 5
Build skills among local residents and organizations about physical activity and nutrition	1 2 3 4 5
Change policies among organizations to increase healthy eating and physical activity	1 2 3 4 5

3. What are KC-CDC's strengths?

4. What are areas KC-CDC might seek to improve?

5. When thinking about what should be included on the next grant application, what new or expanded supports or programs would help you promote health? Please check 2-4 of the items you would like to see implemented or expanded:

- Greater collaboration between partners, such as health care centers
- More options on children’s health issues, such as obesity, inactivity, poor nutrition
- \_\_\_\_\_More options to reduce diabetes and cardiovascular risk factors such as cooking classes, organized walking clubs, etc.
- A list of speakers who could come to your meetings and talk about health issues
- Trainings on how to maintain and strengthen community groups
- Trainings on how to make policy changes
- \_\_\_\_\_ More resources to create and conduct our own programs
- 
- Other\_\_\_\_\_

6. For the last year, how would you rate KC-CDC’s staff:

Please rate KC-CDC staff on this aspect:	Please circle the best rating:				
Helpful	1	2	3	4	5
	Not			Very	
	Very				
Responsive	1	2	3	4	5
Available	1	2	3	4	5
Respectful	1	2	3	4	5

7. When Pick 6 partners fill out their activity reports, KC-CDC collects information about community changes that result from partners’ activities. Below are the most frequently mentioned changes. Please circle the number that tells how important that change is to the community, how satisfied you are with the way the change happened, and how much of an impact that change has on the health of community members.

Community Change	How important was this change	How satisfied are you with	How much of an impact

	to KC-CDC's goals of reducing risk for CVD and diabetes?	way this change happened?	does this community change have on the health of community members?
Use of guidelines on how doctors and patients should manage diabetes and cardiovascular diseases.	1 2 3 4 5 Not Very Important Important	1 2 3 4 5 Not Very Satisfied Satisfied	1 2 3 4 5 No Great Impact      Impact
Local, one-time campaigns that promote healthy eating, physical activity, and information about chronic diseases.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
Nutrition classes or information about healthy cooking and smart substitutes.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
Water intake campaigns to increase water intake.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
Neighborhood or faith group health fairs or events	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
Health education information in newsletters or church bulletins	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
Creation and promotion of walking paths	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
Healthy food and nutrition information provided at regular events (e.g., meetings)	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
Walkers on Watch or other walking groups.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5

Community-level health fairs or events (such as Taste of the Westside)	1 5	2	3	4	1 5	2	3	4	1	2	3	4	5
Physical Activity classes or information on physical activity	1 5	2	3	4	1 5	2	3	4	1	2	3	4	5

8. What best describes your racial and ethnic makeup?

White            Black            Latino            Asian, Pacific Islander  
American Indian

9. What is your age? \_\_\_\_\_

10. In what zip code do you live? \_\_\_\_\_

11. What is the highest grade or year of school you completed?

Elementary            Some high school            High School Graduate  
Some college            College graduate

Preferred gift certificate

\$10 \_\_\_\_\_ WalMart            \$10 \_\_\_\_\_ Price Chopper

\_\_\_\_\_ Yes, I would like a copy of the survey summary. \_\_\_\_\_ No I do not want a copy of the survey summary.

Thank you for filling out this survey. Please return it in the enclosed stamped envelope or mail to KU Work Group, 1000 Sunnyside Ave, 4082 Dole Center, Lawrence, KS, 66045. Your gift certificate will be mailed to you in approximately 3 weeks after we receive your survey results.

If you have any questions or need more information, please do not hesitate to contact Vicki Collie-Akers at [vcollie@ku.edu](mailto:vcollie@ku.edu) or phone 785-864-0533.

### KC-CDC Assessment of Current and Future Activities (AGENCY)

Please fill in the whole survey. Your answers are important to KC-CDC. They will help to improve the program. Do remember – your responses will be kept completely confidential.

1. The following are a list of KC-CDC activities to support partners' efforts to build a healthier community.

Activity			How important is this activity to improve the health of those you serve ?	How well was this done?
<b>During the last year, have you attended the regular coalition meetings?</b>	Yes	If yes →	1 2 3 4 5 Not Very Important	1 2 3 4 5 Not Very Well
<b>During the last year, have you received a contract to do a Pick Six plan or contract ?</b>	Yes	If yes →	1 2 3 4 5	1 2 3 4 5
<b>During the last year, have you received resources to do a Pick Six Plan?</b>	Yes	If yes →	1 2 3 4 5	1 2 3 4 5
<b>During the last year, have you or your organization, agreed to do a Pick Six Plan?</b>	Yes	If yes →	1 2 3 4 5	1 2 3 4 5
<b>During the last year, have you or someone from your group participated in the Eat Right nutrition training?</b>	Yes	If yes →	1 2 3 4 5	1 2 3 4 5
<b>During the last year, have you or someone from your group participated in the Get Active physical activity training?</b>	Yes	If yes →	1 2 3 4 5	1 2 3 4 5
<b>During the last year, have you received a</b>	Yes	If yes →	1 2 3 4 5	1 2 3 4 5

monthly newsletter with coalition updates and health education?	No											
<b>During the last year, have you used KC-CDC's resource room?</b>	Yes	If yes →	1	2	3	4	5	1	2	3	4	5
	No											
<b>Throughout the project, have you had opportunities to network and collaborate with types of groups other than your own?</b>	Yes	If yes →	1	2	3	4	5	1	2	3	4	5
	No											

7. Have KC-CDC's support activities listed above helped you...?

Effect of the activity	Please rate these efforts on their helpfulness:				
Made others more aware of diabetes and cardiovascular risk factors	1	2	3	4	5
	Not helpful			Very helpful	
Create more opportunities to be physically active.	1	2	3	4	5
Create more opportunities to eat more healthy foods.	1	2	3	4	5
Provide free information about diabetes, cardiovascular diseases, and related risk factors.	1	2	3	4	5
Improve the practices of local health care providers and social service agencies.	1	2	3	4	5
Build skills among local residents and organizations about physical activity and nutrition	1	2	3	4	5
Change policies among organizations to increase healthy eating and physical activity	1	2	3	4	5

8. What are KC-CDC's strengths?

9. What are areas KC-CDC might seek to improve?

10. When thinking about what should be included on the next grant application, what new or expanded supports or programs would help you promote health? Please check 2-4 of the items you would like to see implemented or expanded:

----- Greater collaboration between partners, such as health care centers

-----More options on children’s health issues, such as obesity, inactivity, poor nutrition

\_\_\_\_\_More options to reduce diabetes and cardiovascular risk factors such as cooking classes, organized walking clubs, etc.

-----A list of speakers who could come to your meetings and talk about health issues

-----Trainings on how to maintain and strengthen community groups

----- Trainings on how to make policy changes

\_\_\_\_\_ More resources to create and conduct our own programs

-----  
Other \_\_\_\_\_  
\_\_\_\_\_

11. For the last year, how would you rate KC-CDC’s staff:

Please rate KC-CDC staff on this aspect:	Please circle the best rating:				
Helpful	1	2	3	4	5
	Not				Very
	Very				
Responsive	1	2	3	4	5
Available	1	2	3	4	5
Respectful	1	2	3	4	5

7. When Pick 6 partners fill out their activity reports, KC-CDC collects information about community changes that result from partners' activities. Below are the most frequently mentioned changes. Please circle the number that tells how important that change is to the community, how satisfied you are with the way the change happened, and how much of an impact that change has on the health of community members.

Community Change	How important was this change to KC-CDC's goals of reducing risk for CVD and diabetes?	How satisfied are you with way this change happened?	How much of an impact does this community change have on the health of community members?
Use of guidelines on how doctors and patients should manage diabetes and cardiovascular diseases.	1 2 3 4 5 Not Very Important Important	1 2 3 4 5 Not Very Satisfied Satisfied	1 2 3 4 5 No Impact Great Impact
Local, one-time campaigns that promote healthy eating, physical activity, and information about chronic diseases.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
Nutrition classes or information about healthy cooking and smart substitutes.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
Water intake campaigns to increase water intake.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
Neighborhood or faith group health fairs or events	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
Health education information in newsletters or church bulletins	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
Creation and promotion of walking paths	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
Healthy food and	1 2 3 4	1 2 3 4	1 2 3 4 5



nutrition information provided at regular events (e.g., meetings)	5	5	
Walkers on Watch or other walking groups.	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
Community-level health fairs or events (such as Taste of the Westside)	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
Physical Activity classes or information on physical activity	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5

8. What best describes your racial and ethnic makeup?

White            Black            Latino            Asian, Pacific Islander  
American Indian

9. What is your age? \_\_\_\_\_

10. In what zip code do you live? \_\_\_\_\_

11. What is the highest grade or year of school you completed?

Elementary            Some high school            High School Graduate

Some college            College graduate

Preferred gift certificate

\$10 \_\_\_\_\_ WalMart

\$10 \_\_\_\_\_ Price Chopper

\_\_\_\_\_ Yes, I would like a copy of the survey summary. \_\_\_\_\_ No I do not want a copy of the survey summary.

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If you have any questions or need more information, please do not hesitate to contact Vicki Collie-Akers at [vcollie@ku.edu](mailto:vcollie@ku.edu) or phone 785-864-0533.

**Appendix D: Questions used for key informant surveys**  
**Interview Protocol for Documenting and Analyzing**  
**Contributions of the Kansas City- Chronic Disease Coalition**

**Introduction to the interview:** The purpose of the interview is to learn about the history and future of the Kansas City-Chronic Disease Coalition from your perspective.

**Overall Themes:** What worked? What didn't work? How do we get to the next phase of success?

**Mission of the Initiative: (What were you trying to accomplish?)**

1) Describe your involvement with the Kansas City-Chronic Disease Coalition.

2) What was it you were trying to accomplish? (Intended Outcomes)

**Context of the Initiative: (In what context were you working?)**

1) What brought about your involvement in the organization?

2) How involved are other members of the community with the organization?

3) What factors have contributed to the success of the organization?

4) What features/aspects of the community affected this project?

**Critical Events of the Initiative: (What activities influenced the success of the organization?)**

1) What events were critical to the success of the initiative?

2) What were the consequences of the events for the initiative?

**Assessment of Strengths and Challenges: (What worked? What didn't work?)**

1) What worked especially well for the organization?

2) What are the particular strengths of the organization?

3) What were the most significant achievements of the organization?

4) What has not worked well for the organization?

5) What specific challenges has the organization faced?

**Key Resources & Support:**

1) What key resources and supports (e.g., people, financial resources, political influences, etc...) were particularly helpful to the initiative?

2) What additional support, if available, would have further contributed to success?

**Consequences:**

1) What have been the positive consequences/benefits of the organization?

2) Were there any negative consequences?

**Overall Lessons Learned:**

1) What lessons have you learned from the experience?

2) What was discovered, or surprising?

**Future Plans and Recommendations.**

- 1) What is the future of the organization/initiative?
- 2) What was done that should be continued or enhanced?
- 3) What improvements would you suggest?