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Improving actions to control high blood pressure in Hispanic communities — Racial and Ethnic Approaches to Community Health Across the U.S. Project, 2009–2012☆

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ABSTRACT

Background. Compared with the general population in the United States (U.S.), Hispanics with hypertension are less likely to be aware of their condition, to take antihypertensive medication, and to adopt healthy lifestyles to control high blood pressure. We examined whether a multi-community intervention successfully increased the prevalence of actions to control hypertension among Hispanics.

Methods. Annual survey from 2009–2012 was conducted in six Hispanic communities in the Racial and Ethnic Approaches to Community Health (REACH) Across the U.S. project. The survey used address based sampling design that matched the geographies of intervention program.

Results. Age- and sex-standardized prevalences of taking hypertensive medication, changing eating habits, cutting down on salt, and reducing alcohol use significantly increased among Hispanics with self-reported hypertension in REACH communities. The 3-year relative percent increases were 5.8, 6.8, 7.9, and 35.2% for the four indicators, respectively. These favorable (healthier) trends occurred in both foreign-born and U.S.-born Hispanics.

Conclusion. This large community-based participatory intervention resulted in more Hispanic residents in the communities taking actions to control high blood pressure.

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Introduction

Hispanics, the nation's largest and fastest growing minority group, comprised 16% of the United States (U.S.) population in 2010 and are expected to comprise 30% by 2050 (Ortman and Guarneri, 2009). Hispanics bear a disproportionate burden of disease, injury, death, and disability when compared with non-Hispanic whites (Centers for Disease and Prevention, 2004). If Hispanics continue to experience poorer health status, the projected demographic change in the population will magnify the nation's economic, social, and health disparities (Centers for Disease and Prevention, 2004). The Healthy People 2020 goal of achieving health equity cannot succeed without eliminating Hispanic health disparities.

As in some other ethnic groups (e.g., non-Hispanic white, non-Hispanic black, or American Indian), cardiovascular disease is the leading cause of death in Hispanics (Centers for Disease and Prevention, 2004). Hypertension is a major risk factor for cardiovascular disease and is a significant predictor of premature death and disability. In 2010, the prevalence of hypertension was similar or somewhat lower in Hispanics than that in non-Hispanic whites (Go et al., 2014; Yoon et al., 2012), but as data from the National Health and Nutrition Examination Survey (NHANES) showed, Hispanics with hypertension were less likely to be aware of their condition than were non-Hispanic whites and non-Hispanic blacks (Yoon et al., 2012). Hispanics were also less likely to be instructed by their physicians or other health professionals to take antihypertensive medication or adopt lifestyle modifications to control their blood pressure, or to follow the medical advice once given (Wang and Wang, 2004). Among persons with hypertension, Hispanics were less likely to have their blood pressure adequately controlled than non-Hispanic whites and non-Hispanic blacks (Wang and Wang, 2004; Yoon et al., 2012).

Racial and Ethnic Approaches to Community Health Across the U.S. (REACH U.S.), funded by the Centers for Disease Control and Prevention (CDC), was launched in 2007 (Liburd, 2011). This project supported the development and implementation of innovative approaches to working with racial and ethnic minority populations to eliminate health disparities. The 40 funded communities targeted one or more racial and ethnic groups, including African American/black, Hispanic/Latino, Asian, Native Hawaiian/Other Pacific Islander, and American Indian/Alaska Native. The health priority areas included cardiovascular disease, diabetes mellitus, breast and cervical cancer, adult/older adult immunization,

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hepatitis B, asthma, and infant mortality. Six of the 40 communities chose cardiovascular disease as the only or one of the priority areas in their intervention of Hispanics residents. These six communities are the focus of this report. The purpose of this study was to examine whether REACH U.S. interventions resulted in favorable 4-year trends of actions to control high blood pressure among residents with self-reported hypertension in Hispanic communities.

Methods

REACH U.S. community interventions

REACH U.S. included 40 communities in the nation (Liburd, 2011). The six REACH U.S. Hispanic communities in this report were located in California, Illinois, Massachusetts, and New York (see Acknowledgement). Local strategies varied according to local needs; however, interventions in all communities had three major common approaches: building strong community-based coalitions; focusing on policy, systems, and environmental (PSE) changes; and cultural and linguistic tailoring of interventions.

Community-based coalitions

Community coalitions were established, which included community-based organizations, local or state health departments, universities, health care providers, and organizations or groups with primary missions unrelated to health, such as faith-based groups, YMCA, social service agencies, volunteer groups, and various advocacy groups. These coalitions were primarily driven by residents of the community at every stage of the program, including planning, implementation, and evaluation. The coalitions met regularly to discuss the context, causes, and solutions for health disparity and to take actions outlined in coalition-developed community action plans.

Policy, systems, and environmental changes

REACH U.S. focused on PSE change approaches that addressed “upstream” factors that impact health disparities. The coalitions assessed disparities in health care access and outcomes and advocated for equitable health care access, service delivery, and quality (Golub et al., 2011). Some communities worked with clinical partners to provide medical interpreting, translation, and cultural broker services to Latino clients; some created patient-centered medical home initiatives; and some utilized electronic health record systems to promote patient-provider communication and patient self-management (Calman et al., 2007). Educational approaches focused on provider knowledge and beliefs about cultural competence and health disparities. The project also made efforts to increase awareness and utilization of public health insurance programs and community health services for those without health insurance.

REACH U.S. also promoted community and environmental changes regarding food security and access to healthy foods (Castillo et al., 2013). The Neighborhood Food Watch program was such an example. The coalitions worked with local food businesses and vendors to increase healthy food options at neighborhood grocery stores and to develop new full service grocery stores in underserved areas. Some communities supported the production of locally grown food, such as community gardens, school gardens, and home gardens. To increase the available opportunities to engage in physical activity, REACH U.S. implemented a variety of worksite wellness policies (Maxwell et al., 2011) and revitalized the community environment to include more accessible recreational areas.

Culturally tailored intervention

REACH implemented an extensive range of strategies to tailor their interventions to the needs as well as the characteristics of the Hispanic population. Hispanic community leaders were invited to serve as coalition members and to act as catalysts for change in the community. Education initiatives to improve blood pressure control took account of cultural factors, such as inadequate cardiovascular disease knowledge, lack of familiarity with medical care systems, and poor access to quality health care.

In addition, health promotion materials (including newsletters and posters), talk shows on local radio stations, educational classes, and workshops were culturally and linguistically appropriate and tailored to the target population's health literacy level. The church community was an important source of social support and community leadership (Kaplan et al., 2009). Churches were the active sites for a series of health promotion, blood pressure screening, disease prevention, and education activities. The switching from offering traditional to healthier foods in churches and other gatherings facilitated the establishment of a healthier eating norm in Hispanic communities.

Many communities recruited and trained local, bilingual lay health workers (i.e., Promotoras) to provide culturally relevant and appropriate education, counseling, and social support (Cosgrove et al., 2014). These grass-roots health workers had well-established ties and a good reputation in the community. They responded to the needs of patients and families, particularly new immigrants, provided health education on cardiovascular disease, delivered direct or indirect assistance related to blood pressure control, and served as mediators between participants and the healthcare system.

Hispanic cultures are predominantly family-oriented. When a family member is experiencing a chronic disease, such as cancer, diabetes, or hypertension, typically the entire family acts to take care of this member. REACH projects involved all family members across multiple generations through various sectors such as worksites, churches, senior service facilities, and schools. The Massachusetts program was able to form cohesive units of care through active engagement with the major senior center and through provision of family-centered activities that focused on improving the health outcomes of participants.

REACH U.S. Risk Factor Survey

As part of the REACH U.S. project evaluation, the CDC conducted annual Risk Factor Surveys from 2009 through 2012 in 28 communities that targeted cardiovascular diseases, diabetes, breast and cervical cancer, adult immunization, or hepatitis B (Liao et al., 2011). This report includes data from six Hispanic communities where cardiovascular disease is the only or one of primary foci in their intervention.

An address-based sampling design was used in the survey to reduce the potential coverage bias of traditional landline random-digit-dialing (Liao et al., 2011). Geographic information systems technology was used to construct an address frame that matched the intervention geographies of the REACH program. The survey was conducted by telephone for sampled addresses that matched to telephone numbers. Self-administered questionnaires were mailed to households without a phone match and to those who did not respond by telephone. Participants had the choice of using English or Spanish for the telephone interview and for self-administration of questionnaire. On average 76% cooperated with the screening interview to determine the age and racial/ethnic eligibility of the household members over the survey years among all households successfully contacted by telephone. The completion rate of detailed household member interviews was 50% for eligible household members. For the mailed questionnaire, the return rate was on average 28%. Of respondents in this report, 51% were from telephone interviews, and 49% were from questionnaire mailings.

A uniform questionnaire was used in all communities and in all survey years. Respondents were asked “Have you ever been told by a doctor, nurse, or other professional that you have high blood pressure?” Adults who reported prehypertension or borderline high blood pressure were not considered as having hypertension. Those who reported having high blood pressure were further asked: “Are you currently taking medicine for your high blood pressure?” and other questions related to actions to control high blood pressure. These questions began with a general probe, “Are you now doing any of the following to help lower or control your high blood pressure?” followed by four questions about: (1) changing your eating habits? (2) cutting down on salt? (3) reducing alcohol use? and (4) exercising? Other information presented in this report included the highest grade or year of school completed, the annual household income from all sources, and birth place of the respondent (U.S.-born or foreign-born).

The study was approved by the Office of Management and Budget (OMB 0920-0805) and the Institutional Review Board of the Centers for Disease Control and Prevention (#5337).

Data analysis

Prevalences of actions to control high blood pressure among those reported having high blood pressure were calculated for each survey year and were age- and sex-standardized by the direct method to the distribution of adults with self-reported hypertension in the U.S. based on the 2009 Behavioral Risk Factor Surveillance System (BRFSS) (Mokdad et al., 2003). The prevalences were also stratified by place of birth (foreign-born vs. U.S.-born) for Hispanics in REACH communities. Logistic regression was performed on personal level data to examine the temporal trend through testing the year term in the prevalence from 2009 through 2012. Age (categorized into four groups), and sex were

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