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Melody S. Goodman

Washington University School of Medicine in St. Louis

Maria Gonzalez

Latino Health Initiative of Suffolk County

Sandra Gil

Latino Health Initiative of Suffolk County

Xuemei Si

Washington University School of Medicine in St. Louis

Judith L. Pashoukos

Latino Health Initiative of Suffolk County

See next page for additional authors

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Authors

Melody S. Goodman, Maria Gonzalez, Sandra Gil, Xuemei Si, Judith L. Pashoukos, Jewel D. Stafford, Elsa Ford, and Dennis A. Pashoukos



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Brentwood Community Health Care Assessment

Melody S. Goodman, PhD¹, Maria Gonzalez, BA², Sandra Gil², Xuemei Si, MPH, MS¹, Judith L. Pashoukos, MSN, RN², Jewel D. Stafford, MSW¹, Elsa Ford, BS², and Dennis A. Pashoukos, BS²

(1) Washington University in St. Louis School of Medicine; (2) Latino Health Initiative of Suffolk County

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Abstract

Background: The Community Alliance for Research Empowering Social Change (CARES) is an academic–community research partnership designed to train community members on research methods and develop the infrastructure for community-based participatory research (CBPR) to examine and address racial/ethnic health disparities. The Brentwood Community Health Assessment (BCHA) was developed through a CBPR pilot project grant from CARES.

Objectives: The purpose of the BCHA is to assess health care utilization and identify existing barriers to health care access among a multi-ethnic community in the Hamlet of Brentwood, New York.

Methods: Using CBPR approaches, the community–academic research partnership develop the study design and survey instrument. Trained Bilingual (English/Spanish) data collectors verbally administered surveys door-to-door to residents of Brentwood from October 2010 to May 2011. Inclusion criteria required participants to be at least 18 years of age and speak either English or Spanish.

Results: Overall, 232 residents completed the BCHA; 49% were male, 66% Hispanic, 13% non-Hispanic White, 13% non-Hispanic Black, 29% had less than a high school education, and 33% were born in United States. The assessment results revealed that most residents are able to access health care when needed and the most significant barriers to health care access are insurance and cost.

Conclusions: We describe the community–academic partnered process used to develop and implement the BCHA and report assessment findings; the community-partnered approach improved data collection and allowed access into one of Suffolk County's most vulnerable communities.

Keywords

Community-based participatory research, community–academic partnerships, Latino health, community health assessment, community engaged research, CBPR, suburban health, health care utilization

CBPR is an approach in which academic faculty and community members work collaboratively throughout the research process with the understanding that the most effective method of improving health in communities is to engage the community as a collaborator in the research process.^{1–6} Traditional research approaches and community-level interventions aimed at addressing and/or reducing health disparities have often neglected the complex relationships between race, class, and public health that lead to social, lifestyle, and behavioral risk factors that disproportionately

impact communities of color.^{6–8} Therefore, a new paradigm that includes these communities as fully engaged research partners to identify, explore, and address their needs will prove beneficial to reducing health disparities. CBPR, through its collaborative and interdisciplinary approach, provides the infrastructure necessary to examine public health issues and provide a framework for the development of evidence-based interventions.⁷

The CARES Fellows training was designed to train community members on research and develop the infrastructure for CBPR. The CARES leadership team (two community and

two academic partners) selected 19 CARES Fellows to participate in the training program. The majority of fellows were members of community-based organizations and community health workers.⁹ Results suggest that the training increased research literacy, prepared community members for collaborative work with academic researchers, and empowered them to utilize scientific research methods to examine and address health disparities in their communities. Information about the CARES training is presented elsewhere.^{9,10} A crucial measure of the training's success was the fellows' ability to develop their own pilot projects. Fellows who completed the training program were eligible to apply for CBPR pilot project grants in collaboration with academic faculty to address health disparities in their community. This grant writing process provided a unique opportunity for fellows to demonstrate their understanding of research concepts and apply new research skills.⁹

The BCHA is a CBPR pilot project developed by four CARES Fellows who are board members of the Latino Health Initiative of Suffolk County (LHISC). LHISC is a grassroots organization composed of concerned community members, advocates, and health professionals dedicated to improving health outcomes for Hispanic populations in Brentwood, New York. All LHISC board members are Brentwood residents dedicated to the provision of health information, access to health services, and health care providers for the underserved, underprivileged, and those persons with limited English-language proficiency. The purpose of the BCHA was to assess health care utilization and identify barriers to health care access within the multi-ethnic community in the Hamlet of Brentwood in Suffolk County, New York.

Long Island (Nassau and Suffolk counties), a mature suburb east of New York City, has a population of approximately 3 million residents. Suffolk County, the larger of the two counties, is a unique region with urban, suburban, and rural features, and an ethnically diverse population of approximately 1.5 million. It is among the most affluent suburbs in the nation with a high cost of living. Suffolk is composed of separate towns, villages, and hamlets that have their own governance structure. This infrastructure further isolates communities creating ethnic enclaves. Blacks and Hispanics in Suffolk County, New York, tend to live in segregated communities regardless of their income and these neighborhoods tend to have higher poverty rates, lower median income, poorer schools, older

housing stock, and lower home ownership rates.¹¹

The demographics of Brentwood are different than that of Suffolk County with respect to ethnicity/race, education, country of birth, main language spoken, unemployment, and uninsured rates. Suffolk County is predominately (81%) White, with Hispanics and Blacks representing 17% and 7% of the population, respectively. Brentwood is more diverse; 69% Hispanic, 48% White, and 16% Black. Although education levels are high overall, in Brentwood 77% of residents have at least a high school education compared with 88% of Suffolk County residents. Almost half of Brentwood residents (47%) reported being born outside of the United States compared with 15% of Suffolk County residents. The majority (80%) of Suffolk County residents primary spoken language is English, compared with 35% of Brentwood residents. Suffolk County has low unemployment (6%) and uninsured (10%) rates, compared with that of Brentwood where there is 9% unemployment and 24% are uninsured (Table 1).

The built environment of Brentwood is greatly influenced by geographic location and income. However, this community possesses strengths (e.g., social networks, community-based assets, solid partnerships) that serve as beacons of hope. Eliminating disparities requires community support and comprehensive, multilevel, culturally appropriate strategies.¹² We describe the community-academic partnered process used to develop and implement the BCHA and report the assessment findings.

METHODS

LHISC recruited data collectors through social networks, flyers distributed at community events, and postings on public community bulletin boards, community-based organization, and university websites. The diverse team of 13 data collectors included CARES Fellows and faculty, Brentwood residents, and undergraduate and graduate students. The majority of data collectors were female (92%), bilingual (62%), and Hispanic (54%); 38% White and 8% Black. All data collectors completed the online Collaborative Institutional Training Initiative course in human subjects' research and attended an 8-hour, in-person data collection training held at the Brentwood Public Library. Topics covered in the training include health literacy, ethics, cultural competency, research methods, conducting research with human subjects, informed consent, HIPPA, field safety,

and survey administration. Trained teams of two data collectors (at least one bilingual English/Spanish speaking) went door to door and verbally administered surveys (in English or Spanish depending on respondents' preference) to residents in the Brentwood community from October 2010 to May 2011. The survey included 20 questions about demographics, disease status, family history of disease, health care utilization, and identified barriers to health care access. The survey was created in English by the president of the LHISC, two board members translated into Spanish and then backtranslated to English to obtain approval for bilingual (English/Spanish) survey administration. The random sample of Brentwood residents was generated using a participant recruitment algorithm developed by one of the CARES Fellows.

Demographics

Gender (male/female), age groups (18–25, 26–35, 36–45, 46–64, ≥65 years), ethnicity (Hispanic/non-Hispanic), race (Asian/Pacific Islander, African-American/Black, Native American, White, other), highest level of education completed (elementary school, junior high school or some high school, high school diploma, GED, some college or associates degree, bachelor degree, masters or graduate degree), country of birth (Columbia, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Jamaica, Mexico, Peru, Portugal, Puerto Rico, United States, Other), and main language spoken (Creole, English, French, Spanish, Portuguese, other) were recorded. Participants were asked if they could read and write in their primary language (yes/no). Participants reporting a primary language other than English were asked if they could speak, write and read in English (yes/no/some).

Participants were asked if they were employed (yes/no). Those who reported working were asked about type of employment (full time, part time, per diem, contract) and were asked to report information for up to three jobs if they had more than one place or type of employment. Participants were asked their income for the last year (in \$10,000 categories ranging from less than \$9,999 to \$75,000 or more) and whether they currently have health insurance (private, public, uninsured).

Personal and Family History of Disease

Participants were asked if they had ever been diagnosed with or had a family history of asthma, diabetes, cancer, heart

Table 1. Demographic Characteristics of the Survey Brentwood and Suffolk County, NY

| 2010 Census Suffolk County, NY, <i>n</i> = 1,493,350 | | | |
|--|------|-------|-------|
| 2010 Census Brentwood, NY, <i>n</i> = 60,664 | | | |
| LHISC Sample, Brentwood, NY, <i>n</i> = 232 (%) | (%) | (%) | |
| Male gender | 48.7 | 50.9 | 49.2 |
| Age (y) | | | |
| 18–25 | 9.5 | — | — |
| 26–35 | 20.4 | — | — |
| 36–45 | 26.0 | — | — |
| 46–64 | 30.3 | — | — |
| 20–24 | — | 11.5 | 8.2 |
| 25–34 | — | 24.0 | 15.2 |
| 35–44 | — | 21.4 | 19.5 |
| 45–64 | — | 31.2 | 38.7 |
| ≥65 | 13.8 | 11.9 | 18.4 |
| Ethnicity—Hispanic | 65.9 | 68.5 | 16.5 |
| Race | | | |
| White | 24.1 | 48.4 | 80.8 |
| African American or Black | 14.5 | 16.4 | 7.4 |
| Asian / Pacific Islander | 4.0 | 2.0 | 3.4 |
| Native American | 2.2 | 1.2 | 0.4 |
| Other | 51.3 | 26.4 | 5.6 |
| Mixed | 4.0 | 5.7 | 2.4 |
| Education | | | |
| HS + (18–25y) | 77.3 | — | — |
| HS + (>26 y) | 70.2 | — | — |
| 18–24 y | — | 76.9* | 87.8* |
| ≥25 y | — | 69.1* | 89.4* |
| County of Birth Outside US | 67.2 | 47.2* | 15.4* |
| Main Language Spoken | | | |
| English | 41.4 | 34.9* | 80.2* |
| Spanish/Creole | 52.1 | 57.0* | 11.6* |
| Bilingual (English/Spanish) | 3.9 | ‡ | ‡ |
| French | 0.9 | ‡ | ‡ |
| Other | 1.7 | 0.3* | 0.4* |
| Unemployment rate | 30.9 | — | — |
| ≥16 y | — | 8.5* | 5.8* |
| Uninsured | 30.2 | 23.6† | 10.3† |

* 2010 ACS 5-year estimates.

† 2010 ACS 3-year estimates.

‡ Census data unavailable.

disease, Alzheimer's/dementia, anxiety, depression, stroke, arthritis, or hypertension; indicator variables were created for each outcome.

Health Care Utilization and Barriers to Care

Validated questions on health care utilization are from the Agency for Healthcare Research and Quality Medical Expenditure Panel Survey.¹³ Participants were asked if they have a primary health care provider, number of emergency room (ER) visits in the last 12 months, number of doctors' visits in the last 12 months, if anyone in their family needed to buy prescription drugs but could not because of cost, and where they usually go when they need health care (doctor's office, health center, hospital outpatient department, ER, no action taken, other). Question about number of visits were categorized into three groups (0, 1, ≥ 2). Females were asked if they had pap smear, mammogram, colonoscopy, or colposcopy in the past 12 months. Males were asked if they had a prostate screening or colonoscopy in the last 12 months. Indicators were created for each screening. President of LHISC created a question that asked participants, "What things keep you from getting medical care?" Response options include: does not take my insurance, cost too much, I am afraid of needles, I am afraid they will find something wrong with my health, no one to watch my kids, hard to get time off work, they do not speak my language, lack of transportation, and other.

Participant Recruitment Algorithm

The participant recruitment algorithm provided geographic boundaries for the Brentwood community and divided the recruitment area into four quadrants. Teams of two data collectors began each shift diametrically opposed to each other in one of the quadrants. Data collectors recruited survey participants from every second house on every fourth street, returning on the opposite side of the street until each residential block was completed. Respondents who completed the health assessment received an incentive of their choice including a key chain, pad and pen, or magnet. If the respondent was not available or declined participation, the data collectors followed the recruitment algorithm to the next house. Exceptions to the algorithm included inaccessibility to homes, particularly street signs indicating "no trespassing" or homes with "beware of the dog" signs. Inclusion criteria for

the BCHA required participants be at least 18 years of age and speak either English or Spanish.

The study was approved by the Stony Brook University Committee on Research Involving Human Subjects. SAS 9.3 (SAS Institute Inc., Cary, NC) was used to conduct statistical analyses. Significance was assessed at $p < 0.05$. All survey data were categorical; univariate analysis was conducted using frequencies and percentages and chi-square test were used to examine bivariate associations between demographics and ER utilization (< 2 , ≥ 2 visits), have a primary care physician (yes/no), insurance status (insured/uninsured), reported cost as a barrier to care (yes/no), and someone in family could not buy prescription owing to cost in the last 12 months (yes/no).

RESULTS

We approached 344 Brentwood residents to participate in the BCHA; 232 (67%) completed the survey, 103 (30%) refused to participate, and 9 (3%) were ineligible (2 did not speak English or Spanish and 7 were under age 18).

Demographic Characteristics of the Study Sample

Of the 232 participants who completed surveys, 49% were male, 66% were Hispanic, 13% were non-Hispanic White (White), and 13% were non-Hispanic Black (Black). In addition, 29% had less than a high school education, 27% had a high school education or GED, and 44% had some college or more education. Of participants, 33% were born in the United States, 67% were born in 26 other countries, with the greatest percentage of these respondents born in El Salvador (28%); 51% reported Spanish as main language, 4% were bilingual English/Spanish. Thirty-one percent were unemployed, 37% had income of less than \$20,000, and 30% did not have any health insurance. The majority of respondents (56%) were between 36 and 64 years of age; approximately 30% of respondents were between 18 and 35 years of age, and 14% were 65 years or older (Table 1).

The sample demographics are similar to hamlet of Brentwood with respect to gender, ethnicity, education, and age. However, our sample contained greater proportions of respondents who were born outside of the United States, speak English as a main language, uninsured, and unemployed (Table 1). Data collectors recorded the gender, race/ethnicity (perceived), and language spoken of those who refused to

participate; 51% were male, 21% Black, 49% Hispanic, 31% White, 5% other; 61% spoke in English and 37% spoke in Spanish. There were significant differences in the proportions of Hispanics and Whites among participants and refusals; however, some of this difference may be attributable to the data collectors' perception of the race/ethnicity of a nonparticipant compared with participants' self-reported response.

Chronic Disease Prevalence and Family History of Chronic Disease

The most prevalent chronic diseases among survey respondents were diabetes (13%) and hypertension (13%); 7% reported diagnosis of asthma, 3% cancer, 4% heart disease, and 7% reported an arthritis diagnosis. More than one quarter of respondents (27%) reported a family history of diabetes, 15% reported family history of asthma, 20% cancer, 12% heart disease, 7% arthritis, and 18% reported family history of hypertension (Table 2).

Health Care Utilization

Among females, 64% reported having a pap smear test within the last 12 months and among those over age 45, 70% reported having a mammogram within the last 12 months. Among men over age 45, 31% reported having a prostate screening within the last 12 months. Fewer than one quarter of respondents (21%) reported one ER visit in the past 12 months and 9% reported two or more ER visits during the past 12 months. The majority (73%) of respondents reported having a primary care provider (Table 2).

Respondents who reported income of less than \$19,999 annually were more likely to have visited the ER two or more times in the last 12 months (19%) compared with those in the \$20,000 to 39,000 income group (4%) and the \$40,000 or higher income group (2%). Unemployed respondents were more likely to report two or more visits to the ER in the past 12 months (16%) compared with employed respondents (6%; $p = 0.01$; Table 3).

There is a significant trend ($p < 0.01$) between age and having a primary care provider; older age groups had higher proportions of respondents with a primary care provider, 94% for those in the 65 and older group, 81% for the 46 to 64 age group, 68% for 36 to 45 age group, 66% for the 26 to 35 age group, and 41% for the 18 to 25 age group. There was also a significant trend between income and percentage of

Table 2. Insurance, Health Status, Family History of Disease, and Health Care Utilization

| Characteristic | <i>n</i> (%) |
|---|--------------|
| Insurance | |
| Private | 109 (47.0) |
| Public | 42 (18.1) |
| Both Private and Public | 11 (4.7) |
| None | 70 (30.2) |
| Chronic Disease Prevalence | |
| Asthma | 17 (7.3) |
| Diabetes | 29 (12.5) |
| Cancer | 7 (3.0) |
| Heart Disease | 10 (4.3) |
| Anxiety | 5 (2.2) |
| Depression | 15 (6.5) |
| Stroke | 3 (1.3) |
| Arthritis | 17 (7.3) |
| Hypertension | 31 (13.4) |
| Family History of Disease | |
| Asthma | 34 (14.7) |
| Diabetes | 63 (27.2) |
| Cancer | 47 (20.3) |
| Heart Disease | 27 (11.6) |
| Alzheimer's/Dementia | 8 (3.5) |
| Anxiety | 5 (2.2) |
| Depression | 11 (4.7) |
| Stroke | 20 (8.6) |
| Arthritis | 17 (7.3) |
| Hypertension | 41 (17.7) |
| Health Care Utilization | |
| Have primary health care provider | 169 (72.8) |
| <i>ER visit in the last 12 months</i> | |
| 1 | 48 (20.8) |
| ≥2 | 20 (8.6) |
| <i>In the last 12 months Female had</i> | |
| PAP smear ($n = 117$) | 75 (64.1) |
| Mammogram (age > 45; $n = 53$) | 37 (69.8) |
| <i>In the last 12 months Male had</i> | |
| Prostate screening (age > 45; $n = 48$) | 15 (31.3) |
| Anyone in family could not buy prescription drugs owing to cost in last 12 months | 64 (27.8) |

respondents that reported having a primary care provider ($p < 0.01$); 65% for less than \$19,999 income group, 70% for the \$20,000 to 39,999 income group, and 88% for the \$40,000 and greater group. Uninsured respondents (33%) were less likely to have a primary care provider when compared with respondents with insurance (90%; $p < 0.01$; Table 3).

Barriers to Health Care

Of the 230 respondents to the question, “Was there a time during the last 12 months when anyone in your family needed to buy prescription drugs, but could not because of the cost?”, 64 (28%) replied “yes” (Table 2). Significant associations existed between reporting cost as barrier and race/ethnicity, country of birth, primary language spoken, and English proficiency. Hispanics (34%) were more likely to report this barrier compared with Whites (13%), Blacks (17%), and other races (16%; $p = 0.03$). A larger proportion of respondents born outside of the United States (32%) reported this barrier (19% born in the United States; $p = 0.03$) and a smaller proportion of respondents that reported English as their primary language reported this barrier (19%) compared

with those that speak Spanish (33%) or some other (47%) primary language ($p = 0.02$; Table 4).

When asked, “What things keep you from getting medical care?”, 23 respondents (10%) reported does not take my insurance, 63 (27%) reported costs too much, 8 (3%) reported “I am afraid of needles,” 5 (2%) reported “I am afraid they will find something wrong with my health,” 3 (1%) reported “no one to watch my kids,” 18 (8%) reported “hard to get time off work,” 6 (3%) reported “they do not speak my language,” 20 (9%) reported “lack of transportation,” 11 (5%) reported “lack of insurance,” 4 (2%) reported “busy, lazy, don’t want to go,” 4 (2%) reported “the waiting time is too long” and 6 (3%) reported other reasons (Figure 1).

There were significant age ($p < 0.01$) and racial/ethnic ($p < 0.05$) differences in the proportion of respondents who reported “costs too much” as a barrier: 10% of Whites, 17% of Blacks, 31% of Hispanics, and 37% of the other race group (37%). The 26 to 35 age group had the highest percent (43%), and the 65 and older group had the lowest percent (6%) of respondents to report “costs too much” as a barrier to medical care. A larger proportion of those born outside of the United

Table 3. Bivariate Associations for Emergency Room (ER) Visits and Having a Primary Care Physician (PCP) With Participants’ Characteristics ($N = 232$)

| Characteristic | Overall | ≥2 ER Visits | | Have a PCP | |
|---|--------------|--------------|----------|--------------|----------|
| | <i>n</i> (%) | <i>n</i> (%) | <i>p</i> | <i>n</i> (%) | <i>p</i> |
| Age, y (<i>n</i> = 231) | | | | | |
| 18–25 | 22 (9.5) | 3 (13.6) | 0.49 | 9 (40.9) | <0.01 |
| 26–35 | 47 (20.4) | 3 (6.4) | | 31 (66.0) | |
| 36–45 | 60 (56.0) | 4 (6.7) | | 41 (68.3) | |
| 46–64 | 70 (30.3) | 5 (7.1) | | 57 (81.4) | |
| ≥65 | 32 (13.8) | 5 (15.6) | | 30 (93.8) | |
| Income, US\$ (<i>n</i> = 222) | | | | | |
| <19,999 | 81 (36.5) | 15 (18.5) | <0.01 | 53 (65.4) | <0.01 |
| 20,000–39,999 | 76 (34.2) | 3 (4.0) | | 53 (69.7) | |
| ≥40,000 | 65 (29.3) | 1 (1.5) | | 57 (87.7) | |
| Employment status (<i>n</i> = 230) | | | | | |
| Unemployed | 71 (30.9) | 11 (15.5) | 0.01 | 52 (73.2) | 0.96 |
| Employed | 159 (69.1) | 9 (5.7) | | 116 (73.0) | |
| Health insurance status (<i>n</i> = 232) | | | | | |
| Insured | 162 (69.8) | 16 (9.9) | 0.30 | 146 (90.1) | <0.01 |
| Uninsured | 70 (30.2) | 4 (5.8) | | 23 (32.9) | |

Table 4. Bivariate Associations for Barriers (Insurance Status, Cost) With Participants' Characteristics (N = 232)

| Characteristic | Overall | Uninsured | | Barrier: Cost Too Much | | Could Not Buy Prescriptions in the Last 12 Months Owing to Cost | |
|----------------------------|------------|-----------|-------|---------------------------|-------|---|------|
| | n (%) | n (%) | p | n (%) | p | n (%) | p |
| Age, y (n = 231) | | | | | | | |
| 18–25 | 22 (9.5) | 10 (45.4) | <0.01 | 7 (31.8) | <0.01 | 4 (18.2) | 0.10 |
| 26–35 | 47 (20.4) | 22 (46.8) | | 20 (42.6) | | 9 (19.2) | |
| 36–45 | 60 (56.0) | 18 (30.0) | | 20 (33.3) | | 18 (30.5) | |
| 46–64 | 70 (30.3) | 20 (28.6) | | 14 (20.0) | | 26 (37.7) | |
| ≥65 | 32 (13.8) | 0 (0.0) | | 2 (6.3) | | 6 (18.8) | |
| Race/Ethnicity (n = 229) | | | | | | | |
| Non-Hispanic White | 30 (13.1) | 4 (13.3) | <0.01 | 3 (10.0) | <0.05 | 4 (13.3) | 0.03 |
| Non-Hispanic Black | 29 (12.7) | 3 (10.3) | | 5 (17.2) | | 5 (17.2) | |
| Hispanic | 151 (65.9) | 57 (37.8) | | 47 (31.1) | | 51 (34.2) | |
| Other | 19 (8.3) | 5 (26.3) | | 7 (36.8) | | 3 (15.8) | |
| Income, US\$ (n = 222) | | | | | | | |
| <19,999 | 81 (36.5) | 33 (40.7) | <0.01 | 25 (30.9) | <0.01 | 27 (33.3) | 0.43 |
| 20,000–39,999 | 76 (34.2) | 28 (36.8) | | 29 (38.2) | | 22 (29.0) | |
| ≥40,000 | 65 (29.3) | 6 (9.2) | | 8 (12.3) | | 15 (23.4) | |
| Education (n = 231) | | | | | | | |
| Less than high school | 67 (29.0) | 28 (41.8) | 0.01 | 19 (28.4) | 0.81 | 23 (34.9) | 0.11 |
| High school or more | 164 (71.0) | 41 (25.0) | | 44 (26.8) | | 40 (24.5) | |
| County of Birth | | | | | | | |
| United States | 76 (32.8) | 13 (17.1) | <0.01 | 12 (15.8) | <0.01 | 14 (18.7) | 0.03 |
| Not United States | 156 (67.2) | 57 (36.5) | | 51 (32.7) | | 50 (32.3) | |
| Main Language Spoken | | | | | | | |
| English | 96 (41.4) | 18 (18.8) | <0.01 | 18 (18.8) | <0.05 | 18 (18.8) | 0.02 |
| Spanish | 118 (50.9) | 48 (40.7) | | 38 (32.2) | | 38 (32.5) | |
| Other | 18 (7.7) | 4 (22.2) | | 7 (38.9) | | 8 (47.1) | |
| Speak English Proficiently | | | | | | | |
| Yes | 162 (69.8) | 38 (23.5) | <0.01 | 42 (25.9) | 0.12 | 39 (24.4) | 0.06 |
| No | 25 (10.8) | 15 (60.0) | | 4 (16.0) | | 6 (24.0) | |
| Some | 45 (19.4) | 17 (37.8) | | 17 (37.8) | | 19 (42.2) | |
| Write English Proficiently | | | | | | | |
| Yes | 153 (66.0) | 38 (24.8) | <0.01 | 40 (26.1) | 0.84 | 37 (24.5) | 0.02 |
| No | 40 (17.2) | 22 (55.0) | | 11 (27.5) | | 9 (22.5) | |
| Some | 39 (16.8) | 10 (25.6) | | 12 (30.8) | | 18 (46.2) | |
| Read English Proficiently | | | | | | | |
| Yes | 153 (65.9) | 36 (23.5) | <0.01 | 39 (25.5) | 0.13 | 37 (24.5) | 0.04 |
| No | 35 (15.1) | 20 (57.1) | | 7 (20.0) | | 8 (22.9) | |
| Some | 44 (19.0) | 14 (31.8) | | 17 (38.6) | | 19 (43.2) | |

States (33%), compared with born in the United States (16%; $p < 0.01$), and those who reported lower incomes (31% for less than \$19,999, 38% for \$20,000 to \$39,999, 12% for income \$40,000 or higher; $p < 0.01$) reported this barrier (Table 4).

Insurance Status

There were significant differences in insurance status by age ($p < 0.01$), race/ethnicity ($p < 0.01$), income ($p < 0.01$), education level ($p < 0.05$), country of birth ($p < 0.01$), main language spoken ($p < 0.01$), and English proficiency ($p < 0.01$). Hispanics (38%) reported higher uninsured rates than Whites (13%) and Blacks (10%). Respondents with lower income were more likely to be uninsured: 41% of those with reported income of less than \$19,999, 37% of those with reported income of \$20,000 to \$39,999, compared with 9% of those with income of \$40,000 or more. Survey participants who reported less than high school education were more likely to be uninsured (42%) compared with respondents with a high school diploma /GED or higher education (25%). Respondents born outside

of the United States were more likely to be uninsured (37%) compared with those born in the United States (17%), and those that reported English as their primary spoken language were less likely to be uninsured (19%) compared with those who speak Spanish (41%) or some other (22%) language. Respondents who reported not being able to speak English (60%) and those who reported an inability to write in English (55%) were more likely to be uninsured compared with those who reported English speaking (24%) and writing (25%) proficiency. The majority (57%) of respondents that reported the inability to read English were uninsured compared with fewer than one quarter of those (24%) with English reading proficiency (Table 4).

DISCUSSION

Community Perspective

Community partners describe their community from a strengths perspective describing a vibrant, resilient, cultur-

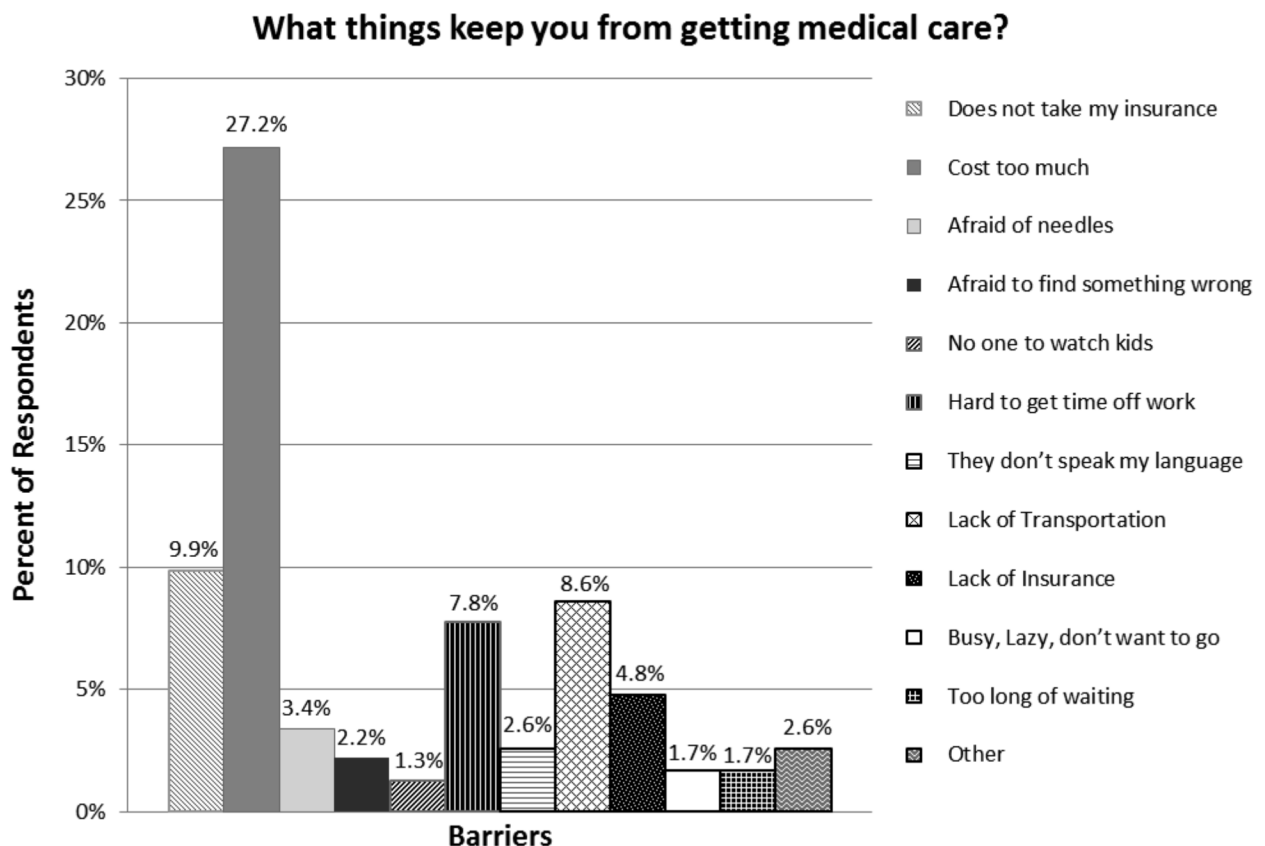


Figure 1. Barriers to Obtaining Medical Care

ally diverse community composed primarily of working class people, many of whom are immigrants; the community has undergone an increase in population and ethnic mixture over the last couple of decades. LHISC acknowledged challenges documenting community issues in access to care, combating the perception that all of Suffolk County is high income, and working with limited resources. LHISC conducted door-to-door surveys to assess health care access and barriers in the Regis Park section of Brentwood in 2004. They did not consider what they were doing research, rather they just wanted to demonstrate that their community is overshadowed by the surrounding communities that have greater wealth, more resources, and fewer barriers to health care. The previous data were not released owing to lack of scientific rigor.

With the initial impression that research is something done by scientists, community partners noted that research can be accessible with the right partnerships and training of community members so they are able to participate in research projects on an equal level with academic partners. Community members trained in research provide a bridge between both worlds (community and research), giving authenticity to both creating the foundation necessary to address health disparities.

The purpose of the BCHA is to assess health care utilization and identify existing barriers to health care access among the multi-ethnic community in the Hamlet of Brentwood, New York. The assessment results revealed that most residents are able to access health care when needed and the most significant challenges are related to insurance and cost. Although the results of the BCHA seems similar to those of any other vulnerable and medically underserved community, these results are not apparent on the county level and for the first time provide some scientific evidence for health care disparities in Brentwood. Collaboration with academic researchers provided the scientific rigor, protection of human subjects, and validated measures to assess health care and develop the data need to develop effective health policies for this population.

Similar to urban areas of the United States, suburban communities are experiencing alarming disparities in health by race and ethnicity. Some of these health inequalities may be attributed to residential segregation, which in many cases means differences in the physical, built, and social environments in communities based on the racial composition of

residents.^{14–17} Residential segregation shapes socioeconomic conditions not only at the individual and household levels, but also at the neighborhood and community levels.¹⁸ Segregation is more than just physical isolation of people; it is isolation from opportunity or opportunity structures¹¹ and growing evidence demonstrates its contribution to racial and ethnic health disparities.^{18–26}

Dissemination of Study Results

Two CARES Fellows from the project team presented BCHA results during a scientific poster session at the 2011 American Public Health Association Annual Meeting and the project team recently hosted a Mini-summit on Latino Health where they disseminated BCHA results to community representatives and public health professionals. The Mini-Summit is a unique forum designed to engage community stakeholders, elicit community input, prioritize areas of concerns, and develop strategies to address social and behavioral risk factors that contribute to health disparities in the region. The summit findings will be disseminated through the Mini-Summit on Latino Health report.

Strengths and Limitations

The community–academic partnership that worked on the BCHA was developed 5 years before CARES. LHISC and the academic partners have been engaged in multiple community-based health improvement initiatives including mini-summits on minority health, the Suffolk County Minority Health Action, and community health fairs.²⁷ The community–academic research partnership that developed during CARES naturally extended an existing relationship.

The major strength of this work is the role played by the community partners in this research; LHISC developed the research question and conducted this research as equal partners throughout the entire research process. Community partners took leadership in survey development, study design, data collector training, data collection, and dissemination of study findings. Academic partners played leadership roles in data analysis and drafting the manuscript; however, all partners (community and academic) participated in all aspects of the research project. The research greatly benefited from the community–academic collaboration producing research synergy that enabled the partnership to conduct work that neither

partner could have done individually. An example of this is seen in the data collection, because the community partners are residents of Brentwood they are able to reach populations that are often of limited access to researchers (e.g., undocumented residents, non-English speakers, immigrants); many members of these populations are reluctant to engage in research but feel comfortable talking with neighbors. We believe we were able to reach the most vulnerable populations in the town of Brentwood given the high levels of unemployment and uninsured in our sample. Verbal administration of the survey allowed participation from residents with varying levels of literacy because no reading was required for participation.

This study is subject to the limitations of all survey data and pilot studies, namely issues with sample size, limited resources, and generalizability of results. We were able to detect significant differences in health care utilization and barriers to health care access by demographic sample characteristics despite the pilot sample size ($n = 232$). The use of deidentified, door-to-door data collection by community residents allowed us to collect a unique sample of Brentwood residents that is representative with respect to age, gender, ethnicity, and education. Our sample had larger proportions of respondents that were born outside of the United States and reported English as a main language when compared with census data for Brentwood. Although surveys were administered in English and Spanish based on respondents' preference and

each data collection team consisted of at least one bilingual (English/Spanish) data collector, an additional limitation is that we did not collect data on language of survey administration. Therefore, we do not know what proportions of surveys were administered in each language. However, we believe primary language spoken is a good proxy for this information. The primary reasons given for refusal to participate was too busy, no time, and just visiting not a Brentwood resident. Despite these limitations, we believe the use of CBPR and findings from BCHA were important to disseminate to both community and academic audiences.

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