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Preventive Discussions with Health Care Providers: exploring Differences by race/ethnicity and Place

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Abstract

The goal of the current investigation was to explore differences in discussions of health topics with health care providers by race/ethnicity and place to identify who is receiving this preventive care and where it is being received in a low-income urban area in which people are at increased risk of chronic disease. 1,147 adults responded to a health survey in New Haven, Connecticut. Black and Latino participants reported that their health care providers discussed more topics with them than White participants reported. Participants who received care at community health centers and hospital primary care centers discussed more topics than participants who received care at hospital emergency departments and private doctors' offices. Findings suggest that community health centers are important sources of preventive care in low-income urban settings, thereby supporting the goals of the Patient Protection and Affordable Care Act and the community health center model of care delivery.

Keywords

Prevention; race/ethnicity; community health centers; health disparities; Patient Protection and Affordable Care Act

Approximately one-half of adults in the United States are living with at least one chronic disease,¹ with rates even higher among populations at risk of health disparities such as Blacks, Latinos, and people of low socioeconomic status.² Discussions between health care providers and patients about important health topics such as maintaining a healthy weight, eating a healthy diet, engaging in physical activity, and smoking cessation represent cornerstones of preventive care to curb rates of chronic disease, particularly among those most vulnerable to adverse health outcomes. These discussions influence patient adoption of health-promoting behaviors relevant to chronic disease prevention, including the adoption of healthy diets^{3,4,5} and physical activity,^{4,5} as well as smoking cessation.⁶ Even brief discussions with health care providers can increase adoption of important health behaviors by patients.⁶ Although evidence supports the efficacy of such discussions, it remains less clear *who* is receiving this preventive care and *where*. Knowing about this is especially critical in low-income urban areas in which residents are at increased risk of chronic disease.⁷

Considering *who* is engaging in health discussions with their health care provider in low-income urban areas, it is important to examine differences by race and ethnicity. Individuals in ethnic and racial minority groups in the United States experience an increased burden of chronic disease. For example, 10.4% of Black adults and 11.1% of Latinos have been diagnosed with diabetes compared with 7.3% of Whites,⁸ and 42.0% of Blacks have been diagnosed with hypertension compared with 28.8% of Whites⁹ in 2008. Contributing to health disparities are differences in the quality of health care received, including preventive care.¹⁰ For example, a nationwide study found that health care providers are less likely to provide smoking cessation advice to current smokers who are Black and Latino than to those who are White.¹¹

Turning to *where* health topics are being discussed in low-income urban areas, it is important to examine usual sources of care that are more likely to be used by low-income patients. Low-income patients, who are also at increased risk of disparities in many health outcomes,⁷ obtain non-urgent care at a variety of delivery sites including community health centers, hospital-based clinics, private doctors' offices, and hospital emergency departments.^{12,13} The community health center model was created to address the health care needs of vulnerable and underserved populations, and therefore community health centers are particularly likely to provide services to low-income patients: 72% of community health center patients were below the poverty line in 2010.¹⁴ However, limited research has examined differences in quality of care received by low-income patients at community health centers versus other delivery sites.¹²

The objective of this study is to explore differences in preventive discussions with health care providers regarding important health topics (i.e., weight, diet, physical activity, smoking) by race/ethnicity of patient (i.e., Black, Latino, White) and usual source of care (i.e., community health center, hospital emergency department, hospital primary care center, private doctor's office) to identify differences in who is more likely to receive this type of preventive care and where it is more likely to be received in low-income urban areas. Research was conducted in a low-income urban area predominantly of Black and Latino residents at high risk for chronic disease.

Methods

Procedure and participants

Data are drawn from an interviewer-administered, cross-sectional adult health survey conducted in English and Spanish with adults aged 18 to 65 in six low-income neighborhoods in New Haven, Connecticut in the fall of 2009. Households were randomized from a complete list of addresses in each neighborhood provided by the City of New Haven. Each selected address was approached three times until: 1) an eligible adult resident answered and consented to be surveyed, 2) an eligible resident answered and refused, or 3) no one answered and another address was randomly selected. Participants received a \$10 voucher to a local grocery store, and were entered into a \$500 raffle. Surveys took 30–40 minutes, and data were collected *via* handheld computers containing field survey software to collect information about mapped points (Snap Survey Software, V9). Study procedures were approved by the Yale University Institutional Review Board. Results from this study are reported elsewhere.¹⁵

Survey efforts yielded 1,205 interviews (73% participation rate). These analyses focus on the 95% of the sample (1,147 participants) who identified as Black, Latino, or White. Participant characteristics are described in the Results section.

Measures

Unless otherwise cited, measures were developed for use in the current survey. Several measures were developed by the global Community Interventions for Health initiative,¹⁶ of which New Haven was a site, and adapted for use in the current study context.

Participant demographic characteristics—Participants reported their race/ethnicity, age, gender, and highest level of education.

Participant health characteristics—Participants responded to the item “How would you rate your overall health?” on a scale from *excellent* (1) to *poor* (5).¹⁶ Participants were asked to indicate whether they had ever been told by a doctor or health professional that they had any of seven chronic conditions, including high blood pressure, high cholesterol, diabetes, heart disease or heart attack, stroke, asthma, chronic bronchitis, or emphysema. Participants could answer *yes* (1) or *no* (0) to each.¹⁷ The number of *yes* responses was summed to create a count of chronic conditions. Participants were also asked whether they had ever been told by a doctor or health professional that they were overweight or clinically obese. Participants could answer *yes* (1) or *no* (0) to this question.¹⁸ Participants responded to the item “Do you currently smoke tobacco products daily?” by answering *yes* (1) or *no* (0).¹⁹ Participants responded to the question “Do you have any health insurance?” Responses included *none*, *partial*, or *full coverage*, and were coded such that full health coverage (1) was compared with no and partial coverage (0).

Usual source of care—Participants’ usual source of medical care was determined based on their responses to a series of questions. Participants were first asked “Where do you go to most often—a clinic, doctor’s office, emergency room, or some other place?” when they are sick or in need of advice about their health. Participants could indicate that they usually went to one of two local community health centers, two local hospitals, the VA hospital, a private doctor’s office, or another facility. If participants indicated that they usually went to one of the two local hospitals, they were also asked “Do you go to the Emergency Room or the Primary Care Center?” Responses were then coded to reflect usage of four primary health care facilities: Community Health Center, Hospital Emergency Room, Hospital Primary Care Center, Private Doctor’s Office. Participants who indicated the VA hospital

($n=17$, 1.5%) or other facility ($n=94$, 8.2%) were treated as missing because their sample size was too small for comparison or it was impossible to characterize their usual source of care. These items were adapted from the National Health Interview Survey.¹⁷

Visited health care provider in past year—Participants responded to the question “Have you seen a doctor or other health care provider in the past 12 months for health advice or treatment?” Participants could answer *yes* (1) or *no* (0).¹⁶

Number of health topics discussed—Questions on the number of health topics health care providers discussed with participants were prefaced by an initial question: “Did a doctor or health care provider do any of the following at any time during the past 12 months?” Following this question, participants were asked four questions including “Discuss your current ... weight status/diet/level of physical activity/smoking status?” Participants could answer *yes* (1) or *no* (0) to each question, and responses were summed to create a variable representing number of topics discussed.¹⁶

Data analysis

Descriptive statistics were used to characterize the participant sample. Differences in participant characteristics by race/ethnicity were examined using ANOVAs and Chi-squared tests. Participant characteristics associated with having visited a health care provider in the past year were examined using logistic regression. Because racial/ethnic differences were of particular interest, participant demographic characteristics (excluding race/ethnicity) and health characteristics were entered in step 1 and race/ethnicity was entered in step 2 of the analysis. Associations between participant characteristics and usual source of care with the number of health topics discussed were examined using linear regression. Only participants who had visited a health care provider in the past year were included in the analysis of health topics discussed. Because racial/ethnic differences and site of care differences were of particular interest, participant demographic characteristics (excluding race/ethnicity) and health characteristics were entered in step 1, race/ethnicity was entered in step 2, site of care was entered in step 3, and interactions between race/ethnicity and health care facility type were entered in step 4 of this analysis. All analyses were conducted with SPSS 17.0.

Results

Participant characteristics

Participant characteristics are described in Table 1, and results of inferential statistics testing for racial/ethnic differences are included. The sample consisted of more females than males, and this gender difference was most pronounced among Black participants. Black participants were older and less likely to be male than Latino and White participants. There were wide disparities in educational achievement by race/ethnicity, with approximately one-quarter of Latino participants having achieved some college or more followed by close to half of Black participants and well over half of White participants.

There were also racial/ethnic differences in health status and health insurance status. Black and Latino participants reported worse overall self-rated health than White participants. Black participants reported an average of 1.19 ($SD=1.33$) chronic health conditions, which was not statistically significantly different than the average of 0.94 ($SD=1.18$) reported by White participants but was greater than the average of 0.89 ($SD=1.23$) reported by Latino participants. More Black participants were overweight or obese than Latino or White participants. Fewer Latino participants had full health insurance than Black or White participants.

Usual source of care

Results also demonstrated racial/ethnic differences in usual source of care. Latino and Black participants were more likely than White participants to receive care from community health centers. In contrast, White participants were more likely than Black and Latino participants to receive care from private doctors' offices. White participants were also less likely than Black and Latino participants to receive care from a hospital emergency department. The pattern for hospital primary care centers was slightly different with White and Black participants being more likely than Latino participants to have received care from hospital primary care centers.

Visited health care provider in past year

As shown in Table 1, 82.1% of participants had visited a health care provider in the past year. Results of the logistic regression are shown in Table 2. The first step of the analysis demonstrates that participants who were older, female, had more than a high school education, had more chronic conditions, and had full health insurance were more likely to have visited a health care provider in the past year. The second step of the analysis demonstrates that once these variables were controlled, race and ethnicity were not statistically significantly associated with having visited a health care provider in the past year. That is, Black and Latino participants were not more or less likely than White participants to have visited a health care provider in the past year.

Number of health topics discussed

As shown in Table 1, health care providers discussed an average of 2.24 ($SD=1.33$) of the four health topics with participants in the past year. Results of the linear regression including only participants who saw a health care provider in the past year are shown in Table 3 ($n=943$). The first step of the regression demonstrated that participants who were younger, had a high school education or less, reported lower overall health, had more chronic conditions, were overweight, and smoked daily discussed more topics with their health care providers. The second step of this analysis demonstrates that even controlling for these risk factors, Black participants discussed an average of 0.27 ($SE=0.14$) more topics with their health care providers than White participants, and Latino participants discussed an average of 0.31 ($SE=0.16$) more topics than White participants. Finally, the third step shows that participants who received care at community health centers discussed an average of 0.42 ($SE=0.14$) more topics with their health care providers than participants who received care at hospital emergency departments. Participants who received care at hospital primary care centers discussed an average of 0.35 ($SE=0.14$) more topics with their health care providers than participants who received care at hospital emergency departments. However, there was no difference in number of topics discussed between participants who received care at private doctors' offices and hospital emergency departments. Even after including site of care in the third step, Black participants reported discussing 0.27 ($SE=0.14$) more topics with their health care providers than White participants. Importantly, the percent of variance accounted for in number of topics discussed by the third step is larger than that of the second step, meaning that the site of care had a greater bearing on the number of health topics discussed than participants' race/ethnicity. A fourth step, not included in Table 3, demonstrated no significant interactions between race/ethnicity and site of care variables, $R^2=.16$, $\Delta R^2=.007$, $F(6,842)=1.27$, $p=.27$. This suggests that Black and Latino participants did not discuss more or fewer topics than White participants depending on site of care.

Discussion

Who engages in preventive discussions of important health topics with health care providers and *where* do these discussions occur in low-income urban areas in which residents are at

high risk of chronic disease?⁷ Considering *who*, results demonstrate that Black and Latino participants reported discussing a greater number of health topics with their health care providers in the past year than White participants. Given that overall health, number of chronic conditions, and overweight status were controlled, these findings are not explained by these health differences. It is possible that these differences exist due to concordance in race and ethnicity between health care providers and patients in this particular urban area, which is related to improved patient care in previous studies.²⁰ Alternatively, it is possible that these differences are driven by bias. A growing body of research suggests that prejudice and stereotypes endorsed by health care providers towards racial and ethnic minorities, even if unintended or implicit, result in differences in physician-patient interactions.²¹ For example, health care providers may discuss more topics with Black and Latino patients due to stereotypes that members of these groups are likely to engage in unhealthy behaviors. Future work should continue to explore preventive care in low-income urban settings better to understand counseling and other health promotion differences experienced by members of health disparity populations and why these differences occur in these settings.

Considering *where*, results demonstrate that respondents whose usual source of care sites included either community health centers or hospital-based clinics reported discussing as many or more topics with their health care providers as participants whose usual source of care included private physicians' offices. Additionally, regarding the utilization rates of the different sources of usual care, the findings showed that community health centers and hospital-based clinics were utilized to a greater degree by Black and Latino respondents than White respondents. These findings are particularly important given recent healthcare reforms that support community health centers. For example, the Patient Protection and Affordable Care Act provides \$11 billion to renovating and building new community health centers.²² The current results suggest that community health centers and hospital-based clinics may play important roles in providing preventive care to health disparity populations.

Beyond issues of race/ethnicity and place, the results highlight several areas of concern regarding the provision of preventive care in low-income urban areas. First, participants of this study reported that their health care providers discussed an average of two out of four of the measured health topics with them in the past year. Given the high rates of smoking, percentage of overweight individuals, and prevalence of chronic conditions, this number should arguably be higher in this context. Indeed, the U.S. Preventive Services Task Force recommends screening and counseling in these areas.²³ Ideally, health care providers should discuss weight, diet, physical activity, and smoking with every patient every year. These discussions are especially important to monitor changes in health behaviors that may occur over time. This finding suggests the need to ensure more regular and comprehensive preventive counseling to residents of low-income urban settings. Achieving this goal may necessitate structural changes. For example, health care providers who are reimbursed based on salary rather than number of patients seen may be more willing and/or able to spend greater time with patients discussing health behavior and prevention. For sites of care where time with patients is necessarily constrained, such as hospital emergency departments, skilled health educators may be employed specifically to hold preventive discussions with patients.

Second, although the majority of participants had full health insurance coverage, Latino participants were less likely than Black and White participants to report having full health insurance coverage. This may explain why Latino participants were less likely to report having visited a health care provider in the past year in preliminary analyses (see Table 1) before full health insurance coverage was controlled (see Table 2). Thus, barriers to care persist for Latinos in this setting. Additionally, Latinos who speak Spanish may face additional barriers within care settings. This finding underscores the importance of

examining specific barriers to care experienced by members of individual racial and ethnic minority groups within the same setting.

Although the current study provides important insight into preventive counseling in low-income urban settings, it has several limitations. It was conducted in one setting, New Haven, Connecticut. Although New Haven is a low-income urban area in which residents are at increased risk of chronic disease, it may not be representative of all low-income urban areas. For example, some racial and ethnic minorities (e.g., Asian, Native Hawaiian or Other Pacific Islander) are underrepresented in New Haven. This methodology limits the generalizability of the current work to other low-income urban settings. Future research should continue to explore issues of race/ethnicity and place among more diverse settings, populations, and care sites to better understand the provision of preventive care in urban areas nationwide. In light of recent health care reforms, this research is especially important to determine the strengths and limitations of community health centers in a variety of urban settings. Further, the survey methodology relied on self-report measures of health characteristics and discussions with health care providers, which are subject to recall bias. Although many of these measures are drawn from nationally validated surveys and can be compared to nationwide data, future research should replicate findings using objective measures of health, weight, and counseling. Based on our survey methodology, we cannot know if physicians discussed health topics with participants at participants' usual source of care site or at another site that they visited in the past 12 months. Future research employing objective measures of counseling might better record where these discussions occur—at the participants' usual source of care site or another site.

In summary, findings suggest that racial/ethnic disparities in discussions of health topics relevant to chronic disease with health care providers may be minimal in this low-income, urban setting. *Where* participants received care had a greater bearing on such discussions than *who* participants were in the current study. Community health centers, which are important sources of care for low-income patients, seem to represent important venues of preventive care for health disparity populations thereby supporting the goals of the Patient Protection and Affordable Care Act and the community health center model of care delivery.

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Table 1
PARTICIPANT CHARACTERISTICS AND OUTCOMES: MEANS (STANDARD DEVIATIONS) OR N (%), AND RESULTS OF ANOVA OR CHI-SQUARE TEST (COMMUNITY INTERVENTIONS FOR HEALTH, NEW HAVEN, CT 2009)

Characteristic or Outcome	Total (n = 1147)	Black (n=758)	Latino (n=244)	White (n=147)	ANOVA or Chi-Square Results
Age	40.42 (14.00)	42.00 (14.24) ₁	37.01 (12.55) ₂	37.95 (13.78) ₂	$F(2, 1146)=14.67^a$
Male Gender	445 (38.7%)	268 (35.4%)	110 (45.1%)	67 (45.6%)	$\chi^2(2)=10.69^b$
Education: Some College or More	488 (42.8%)	327 (43.5%)	64 (26.2%)	97 (66.4%)	$\chi^2(2)=60.87^a$
Overall Health	2.76 (1.11)	2.79 (1.06) ₁	2.78 (1.10) ₁	2.54 (1.06) ₂	$F(2, 1148)=3.28^c$
Total Chronic Conditions	1.09 (1.29)	1.19 (1.33) ₁	.89 (1.23) ₂	.94 (1.18) ₁₂	$F(2, 1148)= 5.63^b$
Overweight	347 (30.2%)	248 (32.7%)	61 (25.0%)	38 (25.9%)	$\chi^2(2)=6.73^c$
Smokes Daily	362 (31.5%)	240 (31.7%)	75 (30.7%)	47 (32.0%)	$\chi^2(2)=0.09$
Full Health Insurance Coverage	820 (71.4%)	550 (72.6%)	157 (64.3%)	113 (76.9%)	$\chi^2(2)=8.60^c$
Usual Source of Care					$\chi^2(6)=62.39^a$
Hospital Emergency Department	183 (17.6%)	115 (16.5%)	55 (24.7%)	13 (10.9%)	
Community Health Center	206 (19.8%)	118 (17.0%)	75 (33.6%)	13 (10.9%)	
Hospital Primary Care Center	274 (26.4%)	195 (28.0%)	44 (19.7%)	35 (29.4%)	
Private Doctor's Office	375 (36.1%)	268 (38.5%)	49 (22.0%)	58 (48.7%)	
Visited Health Care Provider in Past Year	943 (82.1%)	651 (85.9%)	171 (70.1%)	121 (82.3%)	$\chi^2(2)=31.33^a$
Number of Health Topics Discussed	2.24 (1.33)	2.30 (1.32) ₁	2.33 (1.24) ₁	1.81 (1.41) ₂	$F(2, 942)=7.49^a$

Results of ANOVA post-hoc tests are indicated with numerical subscripts. Data that are not statistically significantly different at $p < .10$ share a numerical subscript. In regards to Overall Health, higher scores indicate worse health.

^a $p < .001$

^b $p < .01$

^c $p < .05$

Table 2
LOGISTIC REGRESSION PREDICTING VISITED HEALTH CARE PROVIDER IN PAST YEAR (COMMUNITY INTERVENTIONS FOR HEALTH, NEW HAVEN, CT 2009)

	Model 1			Model 2		
	B (SE)	OR (95% CI)	Wald	B (SE)	OR (95% CI)	Wald
Step 1						
Age	.01 (0.01)	1.01 (1.00–1.03)	3.42 ^d	.01 (0.01)	1.01 (0.99–1.02)	2.13
Gender	.74 (0.17)	2.09 (1.50–2.91)	18.98 ^d	.71 (0.17)	2.04 (1.46–2.85)	17.38 ^d
Education	.37 (0.18)	1.45 (1.03–2.04)	4.46 ^c	.29 (0.18)	1.33 (0.93–1.90)	2.50
Overall Health	.10 (0.08)	1.10 (0.94–1.29)	1.36	.11 (0.08)	1.11 (0.95–1.31)	1.64
Chronic Conditions	.35 (0.10)	1.42 (1.18–1.72)	13.14 ^d	.33 (0.10)	1.39 (1.15–1.69)	11.42 ^d
Overweight	.24 (0.22)	1.27 (0.83–1.94)	1.17	.22 (0.22)	1.25 (0.81–1.92)	1.02
Smokes Daily	-.07 (0.18)	.94 (0.66–1.33)	.13	-.10 (0.18)	.91 (0.64–1.30)	.28
Health Insurance	1.19 (0.17)	3.30 (2.36–4.61)	48.61 ^d	1.18 (0.17)	3.24 (2.31–4.55)	46.25 ^d
Step 2						
White						
Black				.26 (0.26)	1.30 (0.78–2.16)	1.04
Latino				-.42 (0.29)	.66 (0.38–1.15)	2.19
Percent of participants correctly classified		83.1%			83.8%	
χ^2 statistic		$\chi^2(8) = 146.50^a$			$\chi^2(2) = 12.24^b$	

^a p .001

^b p .01

^c p .05

^d p .10

Table 3
LINEAR REGRESSION PREDICTING NUMBER HEALTH TOPICS DISCUSSED (COMMUNITY INTERVENTIONS FOR HEALTH, NEW HAVEN, CT 2009)

	Model 1			Model 2			Model 3		
	B (SE)	β	t	B (SE)	β	t	B (SE)	β	t
Step 1									
Age	-.01 (.01)	-.07	-1.99 ^c	-.01 (.01)	-.07	-1.96 ^c	-.01 (.01)	-.04	-1.26
Gender	.09 (.09)	.03	.97	.08 (.09)	.03	.83	.03 (.09)	.01	.32
Education	-.16 (.09)	-.06	-1.87 ^d	-.12 (.09)	-.05	-1.36	-.06 (.09)	-.02	-.66
Overall Health	.08 (.04)	.07	1.87 ^d	.07 (.04)	.06	1.77 ^d	.06 (.04)	.05	1.52
Chronic Conditions	.11 (.04)	.11	3.03 ^b	.12 (.04)	.12	3.08 ^b	.11 (.04)	.11	2.89 ^b
Overweight	.78 (.09)	.28	8.36 ^a	.77 (.09)	.28	8.30 ^a	.80 (.09)	.29	8.65 ^a
Smokes Daily	.43 (.09)	.15	4.69 ^a	.44 (.09)	.16	4.82 ^a	.41 (.09)	.14	4.41 ^a
Health Insurance	.12 (.10)	.04	1.22	.13 (.10)	.04	1.30	.14 (.10)	.04	1.32
Step 2									
White									
Black				.27 (.14)	.09	1.98 ^c	.27 (.14)	.09	1.99 ^c
Latino				.31 (.16)	.09	1.94 ^c	.26 (.16)	.08	1.63
Step 3									
Hospital Emergency Department									
Community Health Center							.42 (.14)	.12	2.90 ^b
Hospital Primary Care Center							.35 (.14)	.12	2.59 ^b
Private Doctor's Office							-.02 (.13)	-.01	-.15
R^2		.14			.14			.16	
ΔR^2		.14			.00			.02	
F statistic			$F(8, 853) = 18.92^a$			$F(2, 851) = 2.20$			$F(3, 848) = 6.93^a$

^a p .001

^b p .01

01' d
p
50' d
c

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