Language and Regional Differences in Evaluations of Medicare Managed Care by Hispanics

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Objectives. This study uses the Consumer Assessments of Healthcare Providers and Systems (CAHPS[®]) survey to examine the experiences of Hispanics enrolled in Medicare managed care. Evaluations of care are examined in relationship to primary language (English or Spanish) and region of the country.

Data Sources. CAHPS 3.0 Medicare managed care survey data collected in 2002.

Study Design. The dependent variables consist of five CAHPS multi-item scales measuring timeliness of care, provider communication, office staff helpfulness, getting needed care, and health plan customer service. The main independent variables are Hispanic primary language (English or Spanish) and region (California, Florida, New York/New Jersey, and other states). Ordinary least squares regression is used to model the effect of Hispanic primary language and region on CAHPS scales, controlling for age, gender, education, and self-rated health.

Data Collection/Extraction Methods. The analytic sample consists of 125,369 respondents (82 percent response rate) enrolled in 181 Medicare managed care plans across the U.S. Of the 125,369 respondents, 8,463 (7 percent) were self-identified as Hispanic. The survey was made available in English and Spanish, and 1,353 Hispanics completed one in Spanish.

Principal Findings. Hispanic English speakers had less favorable reports of care than whites for all dimensions of care except provider communication. Hispanic Spanish speakers reported more negative experiences than whites with timeliness of care, provider communication, and office staff helpfulness, but better reports of care for getting needed care. Spanish speakers in all regions except Florida had less favorable scores than English-speaking Hispanics for provider communication and office staff helpfulness, but more positive assessments for getting needed care. There were greater regional variations in CAHPS scores among Hispanic Spanish speakers than among Hispanic English speakers. Spanish speakers in Florida had more positive experiences than Spanish speakers in other regions for most dimensions of care.

Conclusions. Hispanics in Medicare managed care face barriers to care; however, their experiences with care vary by language and region. Spanish speakers (except FL) have less favorable experiences with provider communication and office staff helpfulness than their English-speaking counterparts, suggesting language barriers in the

clinical encounter. On the other hand, Spanish speakers reported more favorable experiences than their English-speaking counterparts with the managed care aspects of their care (getting needed care and plan customer service). Medicare managed care plans need to address the observed disparities in patient experiences among Hispanics as part of their quality improvement efforts. Plans can work with their network providers to address issues related to timeliness of care and office staff helpfulness. In addition, plans can provide incentives for language services, which have the potential to improve communication with providers and staff among Spanish speakers. Finally, health plans can reduce the access barriers faced by Hispanics, especially among English speakers.

Key Words. CAHPS, patient experiences, Medicare managed care, Hispanics, language, ethnic disparities, geographic variations

The Medicare+Choice program was aimed at increasing the managed care options among Medicare beneficiaries. Although the program has not achieved the enrollment envisioned by policy makers, there were approximately 5 million (12 percent) Medicare beneficiaries enrolled in Medicare+Choice in 2004 (KFF 2005). This program has been particularly attractive to racial/ethnic minority beneficiaries. Thorpe, Atherly, and Howell (2002) found that 52 percent of Hispanic and 40 percent of African-American beneficiaries were enrolled in Medicare+Choice in 2002.¹ Furthermore, six markets (South California, North California, Philadelphia, South Florida, New Jersey, and New York City) with a high concentration of racial/ethnic minorities accounted for about 41 percent Medicare+Choice enrollment in 2002.

The popularity of Medicare managed care among racial/ethnic minorities may be due to the relatively lower out-of-pocket costs of managed care (especially HMOs) compared with the traditional fee-for-service program. This is particularly appealing to racial/ethnic minorities because they are overrepresented among the lowest income Medicare beneficiaries.

As more vulnerable populations enroll in managed care plans it becomes essential to assess their experiences with care. Restricted provider

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networks, utilization review, specialist referrals, and other cost-containment mechanisms may be particularly challenging for vulnerable populations. The Centers for Medicare and Medicaid Services (CMS) uses the Consumer Assessments of Healthcare Providers and Systems (CAHPS[®]) Medicare Managed Care Survey since 1997 to survey Medicare beneficiaries enrolled in managed care plans (Langwell and Moser 2002).

Studies contrasting Spanish- and English-speaking Hispanics have found Spanish speakers to be less satisfied with the care received and with provider communication (David and Rhee 1998; Carrasquillo et al. 1999; Morales et al. 1999). Similarly, Weech-Maldonado et al. (2001, 2003, 2004) found that among Hispanics, language barriers had a larger negative impact on assessments of Medicaid managed care than ethnicity. The extent to which there are regional variations in CAHPS scores may be indicative of geographic disparities in patient experiences with Medicare managed care. Prior studies have shown regional variations in the CAHPS scores (Zaslavsky et al. 2000, 2004), however, there have been no studies examining regional variations in Hispanic assessments of care.

To date only two studies have examined racial/ethnic differences in Medicare managed care CAHPS (Lurie et al. 2003; Fongwa et al. 2006). Lurie et al. (2003) study found that compared with whites, Hispanics had less positive assessments of getting needed care, timeliness of care, and staff helpfulness, but higher ratings for their health plan. However, this study did not analyze language or regional differences in Hispanic assessments of Medicare managed care. Fongwa et al. (2006) found higher missing data rates and lower plan-level reliabilities for African-American respondents when compared with white respondents. However, internal consistency reliability estimates were similar for both groups.

METHODS

Data

We analyzed the CAHPS[®] 3.0 Medicare managed care survey data collected in 2002. CMS mailed a questionnaire to a sample of 600 members (or the entire enrollment, if fewer) from each of the participating Medicare managed care plans (Zaslavsky, Zaborski, and Cleary 2004). The survey was made available in English and Spanish, and significant efforts were made to reach respondents in both languages. A presurvey notification letter was sent to all sample respondents with a postcard to request a Spanish version of the survey

and numbers of English and Spanish-language toll-free telephone hotlines. Operators answered beneficiaries' questions, and in the case of Spanish callers offered to conduct the survey by phone or mail the Spanish version of the survey. Nonrespondents received a reminder card, followed by a second survey mailing. Phone interviews were attempted with those individuals that did not respond to the mail survey and for which a telephone number could be obtained. Bilingual interviewers were available to conduct the survey in Spanish as needed. Nonrespondents for whom no telephone numbers were available received a third survey by Federal Express or Priority Mail (Goldstein et al. 2001; Zaslavsky, Zaborski, and Cleary 2002).

Eighty-four percent of the surveys were completed by mail and 16 percent by phone. The analytic sample consisted of 125,369 respondents (82 percent response rate) enrolled in 181 Medicare-managed care plans across the United States. Of the 125,369 respondents, 98,320 (78 percent) were self-identified as non-Hispanic white; 8,463 (7 percent) were Hispanic; and 18,586 (15 percent) were of another race/ethnicity. Among Hispanics, 1,353 Hispanics completed a survey in Spanish. The University of California, Los Angeles Institutional Review Board approved the study protocol (UCLA-IRB 02-450 of November 5, 2002).

Measures

The dependent variables consisted of CAHPS reports of care. The CAHPS surveys include two types of consumer evaluations of care: ratings of care and reports of care. Ratings of care ask consumers to provide summary evaluations of care whereas reports of care ask consumers about specific experiences of care in terms of what did or did not happen. Previous studies have suggested that ratings of care may be problematic for making group comparisons in culturally and linguistically diverse populations (Morales et al. 2001, Weech-Maldonado et al. 2001, 2003). To obviate these concerns, we only analyzed reports of care in this study.

The CAHPS 3.0 core survey includes five multi-item scales or composites measuring timeliness of care, provider communication, office staff helpfulness, getting needed care, and health plan customer service (for English survey items see Fongwa et al. 2006 and for Spanish survey items see online Appendix A). Items for the timeliness of care, provider communication, and staff helpfulness composites were administered using a four-point response scale (*never, sometimes, usually, always*) whereas items for the getting needed care and plan customer service composites were administered using a three-point

response scale (*a big problem, a small problem, not a problem*). A confirmatory factor analysis of the Medicare CAHPS survey data found that with few exceptions English- and Spanish-speaking respondents exhibit similar factor structures (Bann, Iannacchione, and Sekscenski 2005).

Internal consistency reliability (Cronbach's α) estimates for each of the five composites for Hispanic English speakers, Hispanic Spanish speakers, and whites were 0.70 or above, exceeding the standard threshold for adequate reliability (Nunnally and Bernstein 1994).² Each of the report items was transformed linearly to a 0–100 possible range (with a higher score representing more favorable perceptions of care) and items within each composite were averaged together.

There are two types of missing data in CAHPS surveys (Marshall et al. 2001). One type of missing data pertains to questions that respondents failed to respond to and is considered “inappropriately missing.” Another type of missing data refers to questions containing skip instructions when they are not relevant or applicable to the respondent. Missing data in this case are considered “appropriately missing.” Inappropriately missing data for white respondents ranged from 2.9 percent for provider communication to 9.3 percent for getting needed care, for Hispanic English respondents it ranged from 3.6 percent for provider communication to 10.2 percent for plan customer service, and Hispanic Spanish it ranged from 3.9 percent for staff helpfulness to 20.4 percent for plan customer service.

The main independent variables were Hispanic ethnicity/race, Hispanic primary language, and region. Respondents who self-identified as Hispanic or Latino were classified as Hispanic regardless of race. Respondents were provided five options to the question about race (white, black/African American, Asian, Native Hawaiian or other Pacific Islander, American Indian/Alaska Native), but could endorse more than one option if applicable, creating the possibility for mixed race/ethnicity (American Indian/white, black/white, other multiracial). Given the focus of this paper, we report results comparing Hispanics with non-Hispanic whites. Other studies have reported racial/ethnic comparisons in Medicare managed care CAHPS for other groups (e.g., Lurie et al. 2003; Fongwa et al. 2006).

Hispanics were further classified into language subgroups based on the survey language (English or Spanish). Those that completed an English survey were considered Hispanic English speakers, while those that completed a Spanish survey were classified as Hispanic Spanish speakers. Non-Hispanic respondents who completed a Spanish survey were dropped from the analysis ($n = 15$).

Based on an analysis of the percentage of Hispanic respondents by state, we determined four areas that could be used for regional analysis: California (CA), Florida (FL), New York/New Jersey (NY/NJ), and other states (OS). The interaction of ethnicity (Hispanic and white), language, and region resulted in 12 combinations: Hispanic Spanish—CA, Hispanic Spanish—FL, Hispanic Spanish—NY/NJ, Hispanic Spanish—OS, Hispanic English—CA, Hispanic English—FL, Hispanic English—NY/NJ, Hispanic English—OS, white—CA, white—FL, white—NY/NJ, and white—OS. Table 1 presents the number of respondents for each of the CAHPS composites for the 12 combinations.

For the smallest cell sizes (plan customer service comparison of Hispanic Spanish in NY/NJ versus OS), we can detect an effect size of 0.56 with 80 percent power.

An additional set of variables known to be related to systematic differences in survey responses was used as case-mix adjustors: gender, age, education, and health status (Elliott et al. 2000). Gender is a dichotomous variable: 0 = *male*, 1 = *female*. Age is a categorical variable consisting of three levels: 44 or younger, 45–64, 65–69, 70–74, 75–79, 80 or older. Education is a

Table 1: Number of Respondents for Each CAHPS Composite by Ethnicity, Language, and Region

	<i>Timeliness of Care</i>	<i>Provider Communication</i>	<i>Office Staff Helpfulness</i>	<i>Getting Needed Care</i>	<i>Health Plan Customer Service</i>
White non-Hispanic (<i>N</i> = 98,320)					
Florida	6,182	7,002	7,056	7,655	3,340
California	9,521	10,272	10,345	11,245	4,989
New York/New Jersey	6,422	7,273	7,317	7,588	3,510
Other state	50,150	55,357	55,817	58,741	24,337
Hispanic English (<i>N</i> = 7,110)					
Florida	958	1,083	1,093	1,194	481
California	1,322	1,501	1,512	1,682	697
New York/New Jersey	542	638	635	671	297
Other state	2,114	2,380	2,397	2,636	1,094
Hispanic Spanish (<i>N</i> = 1,353)					
Florida	406	542	541	598	154
California	131	157	156	193	63
New York/New Jersey	114	139	138	167	52
Other state	96	135	134	170	50

categorical variable with four levels: *eighth grade or less*, *some high school*, *high school graduate*, and *one or more years of college*. Self-rated health is a categorical variable measuring perceived overall health: *excellent*, *very good*, *good*, *fair*, and *poor*. Among the case-mix variables, only education had missing data with 2 percent of the cases missing for whites and Hispanic English and 3 percent for Hispanic Spanish.

Analytic Approach

Ordinary least squares regression was used to model the effect of Hispanic primary language (English or Spanish) and region on CAHPS reports composites (timeliness of care, provider communication, office staff helpfulness, getting needed care, and health plan customer service), controlling for age, gender, education, and self-rated health. Standard errors for all regressions were adjusted for correlation within health plans using the Huber/White correction (White 1980).

The first regression model examines whether there are significant differences in CAHPS reports of care for Hispanics by primary language compared with whites. *F*-tests are used to test the linear restriction that the coefficients for Hispanic Spanish are equal to the coefficients for Hispanic English. The second regression model examines whether there are regional variations in Hispanic assessments of care by including an interaction term of Hispanic primary language and region. *F*-tests are used to test the linear restriction that the coefficients for Hispanic Spanish and Hispanic English are equal across regions, and that the coefficients for Hispanic Spanish are equal to the coefficients for Hispanic English within regions.

We ran models excluding those respondents that were <65 years old (disabled) to evaluate the robustness of the results. Because racial/ethnic differences were similar whether or not those under 65 years old were included, we present only results for the full sample.

RESULTS

Table 2 presents the distribution of the case-mix and geographic location variables for whites and Hispanics (English- and Spanish-speaking). Compared with whites and Hispanic English speakers, Hispanic Spanish speakers were more likely to be less educated, to rate their health as fair and poor, and be located in Florida. Hispanics in general are more likely to be younger (less than 74 years) than whites.

Table 2: Case Mix Variables by Race/Ethnicity and Language

	<i>White Non-Hispanic</i> (<i>N</i> = 98,320)	<i>Hispanic English</i> (<i>N</i> = 7,110)	<i>Hispanic Spanish</i> (<i>N</i> = 1,353)
Gender (%)			
Female	57	55	55
Age in years (%)			
44 or less	< 1	1	< 1
45–64	5	8	7
65–69	22	25	24
70–74	27	30	32
75–79	22	20	22
80 or more	23	16	15
Education (%)			
Eighth grade or less	8	30	60
Some high school	15	20	14
High school grade	38	25	14
Any college	37	22	10
Missing	2	3	2
Health status (%)			
Excellent	8	9	12
Very good	24	19	8
Good	38	34	31
Fair	24	30	41
Poor	6	8	8
Geographic location (%)			
Florida	9	18	53
California	13	28	18
New York/New Jersey	9	11	14
Other state	69	43	15

Table 3 presents the regression results for CAHPS reports of care by Hispanic primary language. Hispanic English speakers showed less favorable reports of care than whites for timeliness of care ($p < .001$ and effect size = 0.22), staff helpfulness ($p < .001$ and effect size = 0.12), getting needed care ($p < .001$ and effect size = 0.23), and plan customer service ($p < .001$ and effect size = 0.10). Hispanic Spanish speakers reported more negative assessments than whites for timeliness of care ($p < .001$ and effect size = 0.32), provider communication ($p < .01$ and effect size = 0.16), and staff helpfulness ($p < .001$ and effect size = 0.20), but better reports of care for getting needed care ($p < .01$ and effect size = 0.15). *F*-tests show that Hispanic Spanish speakers had worse experiences than Hispanic English speakers with provider communication ($p < .01$) and timeliness of care ($p < .05$) but higher scores for getting needed care ($p < .001$).

Table 3: Regression Results for CAHPS Reports of Care by Hispanic Primary Language, β Coefficients (Standard Error)[†]

	<i>Hispanic English</i>	<i>Hispanic Spanish</i>	<i>Hispanic English– Hispanic Spanish</i>	<i>F-test (Hispanic English– Hispanic Spanish)</i>
Timeliness of care	– 5.24**** (0.48)	– 7.71**** (1.13)	– 2.47	4.43**
Provider communication	0.08 (0.33)	– 2.92*** (1.04)	– 3.00	9.00***
Office staff helpfulness	– 2.08**** (0.33)	– 3.47**** (0.94)	1.39	2.61
Getting needed care	– 5.56**** (0.58)	3.33**** (0.95)	8.89	80.91****
Health plan customer service	– 2.68**** (0.79)	– 0.80 (1.79)	1.88	1.14

[†] Compared with whites and controlling for age, gender, education, and self-rated health.

** $p < .05$,

*** $p < .01$,

**** $p < .001$.

Table 4 shows the regression results for CAHPS reports by Hispanic primary language and region. Compared with whites, Hispanic English speakers had less favorable experiences with timeliness of care in FL ($p < .001$ and effect size = 0.29), CA ($p < .001$ and effect size = 0.28), NY/NJ ($p < .001$ and effect size = 0.23), and OS ($p < .001$ and effect size = 0.16); with getting needed care in FL ($p < .001$ and effect size = 0.35), CA ($p < .001$ and effect size = 0.26), NY/NJ ($p < .001$ and effect size = 0.26), and OS ($p < .001$ and effect size = 0.18); with staff helpfulness in CA ($p < .10$ and effect size = 0.08) and NY/NJ ($p < .01$ and effect size = 0.11); and with provider communication in CA ($p < .05$ and effect size = 0.08). Hispanic Spanish speakers had worse experiences than whites with timeliness of care in FL ($p < .001$ and effect size = 0.24), CA ($p < .001$ and effect size = 0.48), NY/NJ ($p < .001$ and effect size = 0.46), and OS ($p < .05$ and effect size = 0.26), with provider communication in CA ($p < .001$ and effect size = 0.35), NY/NJ ($p < .05$ and effect size = 0.30), and OS ($p < .05$ and effect size = 0.28), with staff helpfulness in CA ($p < .01$ and effect size = 0.23), NY/NJ ($p < .01$ and effect size = 0.36), and OS ($p < .01$ and effect size = 0.29), and with plan customer service in NY/NJ ($p < .05$ and effect size = 0.27). On the other hand, Hispanic Spanish speakers had more favorable experiences than whites with getting needed care in FL ($p < .01$ and effect size = 0.16) and OS ($p < .001$ and effect size = 0.35), and with plan customer service in FL ($p < .10$ and effect size = 0.18) and OS ($p < .05$ and effect size = 0.30).

Table 4: Regression Results for CAHPS Reports of Care by Hispanic Primary Language and Region, β Coefficients (Standard Error)[†]

	<i>Timeliness of Care</i>	<i>Provider Communication</i>	<i>Office Staff Helpfulness</i>	<i>Getting Needed Care</i>	<i>Health Plan Customer Service</i>
Hispanic English					
Florida	- 7.23**** (1.66)	0.18 (1.11)	- 1.16 (1.17)	- 8.85**** (1.29)	0.04 (1.48)
California	- 6.95**** (0.76)	- 1.48**** (0.54)	- 1.37* (0.70)	- 6.70**** (1.41)	- 1.95 (1.92)
New York/ New Jersey	- 5.51**** (1.06)	0.34 (0.58)	- 2.12**** (0.81)	- 6.59**** (1.20)	- 2.19 (2.17)
Other state	- 3.82**** (0.96)	0.28 (0.59)	- 0.45 (0.67)	- 4.49**** (0.99)	1.44 (1.60)
Hispanic Spanish					
Florida	- 5.85**** (1.51)	- 0.83 (1.36)	0.04 (1.14)	3.45**** (1.22)	4.82* (2.51)
California	- 12.22**** (2.37)	- 6.70**** (1.41)	- 4.17**** (1.29)	0.58 (2.17)	- 2.67 (3.34)
New York/ New Jersey	- 11.64**** (2.82)	- 6.06** (2.35)	- 7.00**** (2.42)	- 1.24 (2.34)	- 7.40** (3.49)
Other state	- 6.04** (2.75)	- 5.42** (2.35)	- 5.47**** (1.97)	7.04**** (1.92)	7.13** (3.43)

[†]Compared with whites NY/NJ and controlling for age, gender, education, and self-rated health.

* $p < .10$,

** $p < .05$,

*** $p < .01$,

**** $p < .001$.

Table 5 presents the differences in regression coefficients for CAHPS reports by Hispanic primary language and region. Spanish speakers across all regions except Florida had less favorable scores than Hispanic English speakers in the same region for provider communication ($p < .001$ for CA, $p < .05$ for NY/NJ and OS; effect sizes: 0.25 for CA, 0.31 for NY/NJ, and 0.29 for OS) and staff helpfulness ($p < .01$ for CA and OS, and $p < .05$ for NY/NJ; effect sizes: 0.14 for CA, 0.23 for NY/NJ, and 0.25 for OS). In addition, Spanish speakers in NY/NJ ($p < .05$, effect size = 0.23) and CA ($p < .05$, effect size = 0.19) had lower scores for timeliness of care than their English-speaking counterparts in those regions. In contrast, Spanish speakers across all regions had more positive assessments than Hispanic English speakers in the same region for getting needed care ($p < .001$ for FL, CA, and OS, $p < .05$ for NY/NJ; effect sizes: 0.53 for FL, 0.27 for CA, 0.20 for NY/NJ, and 0.52 for OS). Spanish speakers in Florida ($p < .05$, effect size = 0.17) and other states ($p < .10$, effect size = 0.23) had more positive experiences than Hispanic English speakers in those regions for plan customer service.

Tables 6 and 7 show differences for Hispanics by language across regions. There were greater regional variations in CAHPS scores among

Table 5: β Coefficient Differences (F -tests) for Hispanics within Regions (English–Spanish)

	<i>Timeliness of Care</i>	<i>Provider Communication</i>	<i>Office Staff Helpfulness</i>	<i>Getting Needed Care</i>	<i>Health Plan Customer Service</i>
Florida	– 1.4	1.0	– 1.2	– 12.3****	– 4.8**
California	5.3**	5.2****	2.8***	– 7.3****	0.7
New York/ New Jersey	6.1**	6.4**	4.9**	– 5.4**	5.2
Other state	2.2	5.7**	5.0***	– 11.5****	– 5.7*

* $p < .10$,
** $p < .05$,
*** $p < .01$,
**** $p < .001$.

Hispanic Spanish speakers than among Hispanic English speakers. Spanish speakers in FL had more positive experiences than Spanish speakers in NY/ NJ for all dimensions of care: timeliness of care ($p < .10$, effect size = 0.22), provider communication ($p < .05$, effect size = 0.26), staff helpfulness ($p < .01$, effect size = 0.35), getting needed care ($p < .10$, effect size = 0.21), and plan customer service ($p < .001$, effect size = 0.44). Compared with Spanish speakers in CA, those in FL had more favorable assessments than those in CA for

Table 6: β Coefficient Differences (F -tests) for Hispanic English across Regions

	<i>Timeliness of Care</i>	<i>Provider Communication</i>	<i>Office Staff Helpfulness</i>	<i>Getting Needed Care</i>	<i>Health Plan Customer Service</i>
Florida–California	– 0.3	1.7	0.2	– 2.2	2.0
Florida–New York/New Jersey	– 1.7	– 0.2	1.0	– 2.3	2.2
Florida–Other state	– 3.4*	– 0.1	– 0.7	– 4.4***	– 1.4
California–New York/ New Jersey	– 1.4	– 1.8****	0.8	– 0.1	0.2
California–Other state	– 3.1****	– 1.8****	– 0.9	– 2.2	– 3.4*
New York/New Jersey– Other state	– 1.7	0.1	– 1.7**	– 2.1	– 3.6

* $p < .10$,
** $p < .05$,
*** $p < .01$,
**** $p < .001$.

Table 7: β Coefficient Differences (F -tests) for Hispanic Spanish across Regions

	<i>Timeliness of Care</i>	<i>Provider Communication</i>	<i>Office Staff Helpfulness</i>	<i>Getting Needed Care</i>	<i>Health Plan Customer Service</i>
Florida–California	6.4**	5.9***	4.2***	2.9	7.5*
Florida–New York/New Jersey	5.8*	5.2**	7.0***	4.7*	12.2***
Florida–Other state	0.2	4.6*	5.5**	– 3.6*	– 2.3
California–New York/ New Jersey	– 0.6	– 0.6	2.8	1.8	4.7
California–Other state	– 6.2*	– 1.3	1.3	– 6.5**	– 9.8**
New York/ New Jersey– Other state	– 5.6	– 0.6	– 1.5	– 8.3***	– 14.5***

* $p < .10$,

** $p < .05$,

*** $p < .01$.

timeliness of care ($p < .05$, effect size = 0.24), provider communication ($p < .01$, effect size = 0.30), office staff helpfulness ($p < .01$, effect size = 0.23), and plan customer service ($p < .10$, effect size = 0.25). In addition, Spanish speakers in FL had more positive assessments than those in OS for provider communication ($p < .10$, effect size = 0.24), staff helpfulness ($p < .05$, effect size = 0.28), and getting needed care ($p < .10$, effect size = 0.20). Finally, Spanish speakers in NY/NJ and CA had less favorable assessments for getting needed care ($p < .05$ for CA and $p < .001$ for NY/NJ; effect sizes = 0.29 for CA and 0.37 for NY/NJ) and health plan customer service ($p < .05$ for CA and $p < .01$ for NY/NJ; effect sizes = 0.36 for CA and 0.57 for NY/NJ) than Spanish speakers in other states.

CONCLUSIONS

Hispanics in Medicare managed care face barriers to care in general, but there are language and regional differences in their assessments of care. While Hispanics share similar concerns for office staff helpfulness, Spanish speakers have more difficulties with provider communication and timeliness of care, and English speakers have more problems with getting needed care. However, these language differences in Hispanic experiences with Medicare managed care vary by region. Spanish speakers in FL have similar or better

experiences with care than their Hispanic English-speaking counterparts for all dimensions of care. Furthermore, Spanish speakers in FL have more favorable experiences than Spanish speakers in other regions for most dimensions of care. On the other hand, Spanish speakers in NY/NJ and CA have less favorable experiences than their English-speaking counterparts for most dimensions of care. Moreover, Spanish speakers in NY/NJ and CA report less favorable experiences than Spanish speakers in other states for most dimensions of care. The size of these effects ranged from a small to medium effect according to Cohen's (1988) guidelines in which 0.20 is considered a small effect, 0.50 is a medium effect, and 0.80 or above a large effect. These findings underscore the importance of examining variations in Hispanic experiences with care by both language and region.

Spanish speakers (except FL) have less favorable experiences with provider communication and office staff helpfulness than their English-speaking counterparts, suggesting language barriers in the clinical encounter. On the other hand, Spanish speakers reported more favorable experiences than their English counterparts with the managed care aspects of their care (getting needed care and plan service). A recent study by Stepanikova and Cook (2004) showed similar results where managed care policies had a greater negative effect on assessments of care of Hispanic English speakers than among Hispanic Spanish speakers. They speculated that the level of acculturation as measured by English proficiency may affect Hispanics' response to managed care environments. Less acculturated Hispanics may be less familiar with the U.S. health care system, and as a result may be more tolerant of managed care policies. Another possible explanation is that Hispanic Spanish speakers participating in a study like this may be different than other Spanish speakers. Although significant efforts were made to reach the Spanish speaking population, there were still some barriers for Spanish speakers' participation in the survey. Spanish speakers had to request a Spanish survey to be mailed to them. Perhaps Spanish-speaking Hispanics who participate in a study like this tend to have better access than those who do not, and this may partly account for the unexpected finding about access. Further research is needed to shed more light on this paradoxical finding.

Medicare managed care plans need to address the observed disparities in patient experiences among Hispanics as part of their quality improvement efforts. For example, plans can work with their network providers to address issues related to timeliness of care and office staff helpfulness. In addition, plans can provide incentives for language services, which have the potential to improve communication with providers and staff among Spanish speakers.

Finally, health plans can reduce the access barriers faced by Hispanics, especially among English speakers. A recent study by the Commonwealth Fund shows that racial and ethnic disparities in quality of care are reduced or even eliminated when patients have timely, well-organized care and enhanced access to providers (Beal et al. 2007).

This study has shown that language differences in Hispanic assessments of Medicare managed care vary by region. Spanish speakers in Florida fare better than Spanish speakers in other areas, particularly with respect to provider communication and office staff helpfulness. One possible explanation for this finding is that Spanish speakers in Florida have access to provider networks that are more accommodating to their needs compared with other areas. Eighty-six percent of Spanish survey respondents in Florida resided in Miami-Dade County. Miami is the U.S. city with the highest proportion of Hispanic residents 65.8 percent (U.S. Census, 2000), and where Spanish is widely used in the workplace, government, and business (Lynch 2000). As such the Spanish-speaking population in Miami has traditionally been well served by Spanish-speaking and bilingual health care providers (Siddharthan 1990). Another potential explanation may be that Medicare health plans in FL promote linguistically and culturally competent care to a greater extent than plans in other areas. Further research is needed to examine the source of these regional differences in Hispanic assessments of care.

This study presents several limitations and suggestions for future research. First, the CAHPS survey seeks information from Medicare managed care member that have been continuously enrolled in managed care plans. Therefore, it does not capture information on those that disenroll from Medicare managed care, who may have had more negative experiences (Zaslavsky et al. 2000; Lynch et al. 2003). Second, enrollment into Medicare managed care is on a voluntary basis. The extent to which there may be racial/ethnic differences in Medicare managed care enrollment may lead to selection bias. For example, Hispanics enrolling in Medicare managed care plans may be different than whites on unmeasured factors. To the extent that selection bias is present, it may account for some of the observed racial/ethnic differences in patient experiences with Medicare managed care. Third, Hispanic Spanish speakers had higher missing data rates than other groups for the CAHPS composites, especially plan customer service. Fongwa et al. (2006) had similar results where African Americans had higher missing data rates than whites for the CAHPS composites. They found data missing rates to be particularly higher for the mail mode of the CAHPS survey, and suggested the use of multiple methods of data collection to improve data collection among racial/

ethnic minority groups, those with less education, and older persons. Fourth, future research is needed to examine the Hispanic differences in patient experiences with Medicare managed care for enrollees with various chronic illness conditions by language and region. Finally, future research should examine whether health plan organizational characteristics influence Hispanic differences in Medicare managed care assessments of care. While most of the health plans represented in this study were HMOs, there is great diversity among these plans. HMOs differ on various dimensions, such as size, for-profit status, model type, methods of provider reimbursement, accreditation status, availability of language services, and cultural competency.

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NOTES

1. This calculation does not include beneficiaries enrolled in employer-sponsored insurance, Medicaid, or other public insurance programs.
2. Item 30 in the "timeliness of care" composite ("In the last 6 months, how often did you see the person you came to see within 15 minutes of your appointment?") was dropped to improve the reliability of the composite across Hispanic Spanish, Hispanic English, and white respondents.

REFERENCES

- Bann, C. M., V. G. Iannacchione, and E. S. Sekscenski. 2005. "Evaluating the Effect of Translation on Spanish Speakers' Ratings of Medicare." *Health Care Financing Review* 26 (4): 51-65.
- Beal, A. C., M. M. Doty, S. E. Hernandez, K. K. Shea, and K. Davis. 2007. *Closing the Divide: How Medical Homes Promote Equity in Health Care: Results from The Commonwealth Fund 2006 Health Care Quality Survey*. New York: The Commonwealth Fund.

- Carrasquillo, O., E. J. Orav, T. A. Brennan, and H. Burstin. 1999. "Impact of Language Barriers on Patient Satisfaction in an Emergency Department." *Journal of General Internal Medicine* 14: 82-7.
- Cohen, J. 1988. *Statistical Power Analysis for the Behavioral Sciences*, 2d Edition. Hillsdale, NJ: Lawrence Erlbaum Associates.
- David, R. A., and M. Rhee. 1998. "The Impact of Language as a Barrier to Effective Health Care in an Underserved Urban Hispanic Community." *Mount Sinai Journal of Medicine* 65 (5-6): 393-7.
- Elliott, M. N., R. Swartz, J. Adams, K. L. Spritzer, and R. D. Hays. 2000. "Case-Mix Adjustment of the National CAHPS Benchmarking Data 1.0: A Violation of Model Assumptions?" *Health Services Research* 36 (3): 555-73.
- Fongwa, M. N., W. Cunningham, R. Weech-Maldonado, P. R. Gutierrez, and R. D. Hays. 2006. "Comparisons of Data Quality for Reports and Ratings of Ambulatory Care by African American and White Medicare Managed Care Enrollees." *Journal of Aging and Health* 18 (5): 707-21.
- Goldstein, E., P. D. Cleary, K. M. Langwell, A. M. Zaslavsky, and A. Heller. 2001. "Medicare Managed Care CAHPS: A Tool for Performance Improvement." *Health Care Financing Review* 22 (3): 101-7.
- Kaiser Family Foundation (KFF). 2005. *Medicare Advantage: Fact Sheet*. Menlo Park, CA: The Henry J. Kaiser Family Foundation.
- Langwell, K. M., and J. M. Moser. 2002. "Strategies for Medicare Health Plans Serving Racial and Ethnic Minorities." *Health Care Financing Review* 23 (4): 131-47.
- Lurie, N., C. Zhan, J. Sangl, A. Bierman, and E. S. Sekscenski. 2003. "Variation in Racial and Ethnic Differences in Consumer Assessments of Health Care." *American Journal of Managed Care* 9 (7): 502-9.
- Lynch, A. 2000. "Spanish-Speaking Miami in Sociolinguistic Perspective: Bilingualism, Recontact, and Language Maintenance among the Cuban-Origin Population." In *Research on Spanish in the United States: Linguistic Issue and Challenges*, edited by A. Roca, pp. 271-83. Somerville, MA: Cascadilla Press.
- Lynch, J., A. Kenyon, S. Scheffler, B. Booske, L. McCormack, B. Rudolph, and R. Bender. 2003. "Implementation of the 2000 Medicare CAHPS[®] Disenrollment Survey" [accessed on May 7, 2007]. Available at http://www.chsra.wisc.edu/chsra/projects/reports/cahps_disenroll_final_2000.pdf
- Marshall, G. N., L. S. Morales, M. N. Elliott, K. Spritzer, and R. D. Hays. 2001. "Confirmatory Factor Analysis of the Consumer Assessment of Health Plans Study (CAHPS) 1.0 Core Survey." *Psychological Assessment* 13 (2): 216-29.
- Morales, L. S., W. E. Cunningham, J. A. Brown, H. Liu, and R. D. Hays. 1999. "Are Latinos Less Satisfied with Communication by Health Care Providers?" *Journal of General Internal Medicine* 14: 409-17.
- Morales, L. S., M. N. Elliott, R. Weech-Maldonado, K. Spritzer, and R. D. Hays. 2001. "Differences in CAHPS Adult Survey Reports and Ratings by Race and Ethnicity: An Analysis of the National CAHPS Benchmarking Data 1.0." *Health Service Research* 36 (3): 595-617.
- Nunnally, J. C., and I. H. Bernstein. 1994. *Psychometric Theory*, 3d Edition. New York: McGraw-Hill.

- Siddharthan, K. 1990. "HMO Enrollment by Medicare Beneficiaries in Heterogeneous Communities." *Medical Care* 28 (10): 918–27.
- Stepanikova, I., and K. S. Cook. 2004. "Insurance Policies and Perceived Quality of Primary Care among Privately Insured Patients." *Medical Care* 42 (10): 966–74.
- Thorpe, K. E., A. Atherly, and K. Howell. 2002. *Medicare+ Choice: Who Enrolls?* Atlanta: Emory University.
- Weech-Maldonado, R., M. N. Elliott, L. S. Morales, K. Spritzer, G. N. Marshall, and R. D. Hays. 2004. "Health Plan Effects on Patient Assessments of Medicaid Managed Care among Racial/Ethnic Minorities." *Journal of General Internal Medicine* 19: 136–45.
- Weech-Maldonado, R., L. Morales, K. Spritzer, M. Elliott, and R. D. Hays. 2001. "Racial and Ethnic Differences in Parents' Assessments of Pediatric Care in Medicaid Managed Care." *Health Services Research* 36 (3): 575–94.
- Weech-Maldonado, R., L. S. Morales, M. Elliott, K. Spritzer, G. Marshall, and R. D. Hays. 2003. "Race/Ethnicity, Language, and Patients Assessments of Care in Medicaid Managed Care." *Health Service Research* 38 (3): 789–808.
- White, H. 1980. "A Heteroskedasticity-Consistent Covariance Matrix Estimator and a Direct Test for Heteroskedasticity." *Econometrica* 48: 817–30.
- Zaslavsky, A. M., B. E. Landon, N. D. Beaulieu, and P. D. Cleary. 2000. "How Consumer Assessments of Managed Care Vary within and among Markets." *Inquiry* 37 (2): 146–61.
- Zaslavsky, A. M., L. B. Zaborski, and P. D. Cleary. 2002. "Factors Affecting Response Rates to the Consumer Assessment of Health Plans Study Survey." *Medical Care* 40 (6): 485–99.
- . 2004. "Plan, Geographical, and Temporal Variation of Consumer Assessment of Ambulatory Health Care." *Health Services Research* 39 (5): 1467–86.

SUPPLEMENTARY MATERIAL

The following supplementary material for this article is available online:

Appendix A. 2002 Medicare CAHPS Reports of Care (Spanish Version).

This material is available as part of the online article from <http://www.blackwell-synergy.com/doi/abs/10.1111/j.1475-6773.2007.00796.x> (this link will take you to the article abstract).

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