A National Study of Problematic Care Experiences among Latinos with Diabetes

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Abstract: Despite the large disease burden of diabetes, little is known about the care experiences of Latinos with diabetes across diverse primary care settings. This study compares problematic care experiences among Latinos with diabetes across usual care sites (community health centers [CHCs], private physician practices, or without a usual source of care), using a national sample of Latino diabetic patients (N=583). Nearly half of the respondents reported at least one problematic care experience during their last clinician visit. Compared with respondents treated primarily by private physicians, respondents receiving care in CHCs or without a usual source of care reported more problematic care experiences. However, patient health insurance coverage and acculturation accounted for the highest proportion of explainable differences in problematic care experiences between CHCs and private physician offices. Initiatives should clarify the extent to which the care experiences of Latino diabetics, particularly uninsured and less acculturated patients who tend to be cared for by CHCs, can be improved through clinician communication and patient self-management interventions.

Key words: Patients' experiences of care, community health centers, diabetes care, Latino health.

When the Institute of Medicine outlined research priorities in its influential report, *Unequal Treatment*, they underscored the importance of clarifying the contribution of organizational factors to racial and ethnic disparities in chronic care quality.[1] To date, no studies have assessed the primary care organizational influences on Latino diabetic patients' experiences of care. Diabetes represents one of the largest documented health disparities between Latinos and non-Latino Whites (hereafter, *Whites*)[2] and Latinos often receive suboptimal treatment. For example, Latinos are less likely than Whites to receive appropriate hemoglobin A1c and lipid screening[3,4] and are less likely to achieve treatment goals, including glycemic, cholesterol, and blood pressure control.[5–8] Previous studies have underscored the importance of clinician-patient communication quality and patient participation in promoting treatment adherence.[9–13]

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Suboptimal adherence among diabetics can result in high-cost complications including retinopathy,[14] incident myocardial infarction (MI), stroke, congestive heart failure (CHF), and nontraumatic lower extremity amputation (LEA).[15]

Despite the large disease burden, very little is known about the care experiences of Latinos with diabetes in diverse primary care settings such as private physician offices and community health centers (CHCs). The Federal Health Center Growth Initiative dedicated federal funds to a five-year (2002–2007) expansion to serve 6.1 million additional patients[16] and resulted in a increase in the number of CHCs by 60%. The rapid growth of CHC providers underscores the importance of assessing communication quality and patient experience differences between CHCs and private physician offices providing care for Latinos with diabetes.

Recent evidence suggests that insured patients cared for by CHC providers receive chronic care quality comparable to that received by patients in other settings,[17,18] but substantial quality deficits have been observed for uninsured CHC patients.[19,20] Since Latinos are much more likely than other racial/ethnic groups to be uninsured,[21,22] and CHCs serve as a safety net for a large proportion of Latinos in the United States,[23] it is possible that deficits exist in diabetes care quality for Latinos in CHCs.[24] On the other hand, CHCs are mission-driven organizations that are widely viewed as providers of culturally competent care. Because of their specialized knowledge about treating underserved populations, they are thought to play an important role in eliminating racial and ethnic disparities in care quality and health outcomes.[25]

This study fills important research gaps by examining differences in problematic care experiences among Latinos with diabetes across usual care sites in a nationally representative sample of Latinos. The study makes an important methodological contribution by employing the Blinder-Oaxaca decomposition method[26–28] to identify the patient factors that account for differences in problematic care experiences across different usual care sites. For example, we examine the extent to which any differences in problematic care experiences across usual care sites are explained by patients' health insurance coverage and acculturation level. Uninsured patients may forgo treatment due to cost concerns or receive less patient-centered care because of visit discontinuity.[29,30] Since CHCs tend to care for higher proportions of uninsured patients, differences in the proportions of uninsured patients between CHCs and private physician practices could account for differences in problematic care experiences across the two usual sites of care. If patient health insurance coverage differences across care sites explains a high proportion of the differences in experiences across care settings, then insurance expansion has great potential for improving patients' experiences across care settings.[31] On the other hand, if patient factors do not explain differences in problematic care experiences across CHCs and private physician practices, then reducing differences will require focused improvement interventions in specific types of usual care sites (i.e., CHCs or private physician offices).[32]

Methods

Survey and analytic sample. The study employs the 2007 Pew Hispanic Center/Robert Wood Johnson Foundation (RWJF) Latino Health Survey, which includes a nationally representative sample of Latino adults in the United States. A two-stage weighting design was executed to ensure an accurate representation of the national Latino population. The Pew Hispanic Center/RWJF survey is unique because many important influences on effective diabetes self-management and quality of care were assessed in the interviews, including respondents' care site information, diabetes knowledge, use of traditional folk healers and foreign medical care, and comprehensive patient sociodemographic information. This extensive information from a nationally representative sample of Latinos is not available from other data sources.

The overall response rate for the survey was calculated to be 46.3% using American Association for Public Opinion Research's (AAPOR's) RR3 formula,[33] yielding 4,013 unique respondents. This study's analytic sample includes 583 respondents who self-reported having diabetes, with 423 respondents interviewed in Spanish and 160 respondents interviewed in English.

Usual care sites. Three usual care site categories were created using interview responses. Respondents were asked whether there was a place that they usually go to when sick or health-related advice is needed. Those who answered negatively (n=100) were considered to have no usual source of care. Those who answered positively (n=519) were then asked about the type of place they usually go. Using responses to the follow-up question, respondents were grouped as being cared for by a private physician practice (n=246) or community health center (n=237). Individuals who indicated that their usual source of care was a hospital outpatient department (n=22) or did not respond to the question (n=14) were excluded from the analysis.

Problematic care experiences. Survey questions assessing problematic care experiences were adapted from previous studies examining patients' experiences of care.[34–38] The study included three questions that assessed respondents' problematic care experiences during their last medical office visit. The questions read: "Thinking about the last time you saw a doctor or other medical professional for any reason, did you feel any of the following things . . . . At any point, did you feel . . . 1) confused by the information you were given? 2) frustrated by a lack of information or an inability to find what you wanted to know? and 3) reassured that you could manage your own health?" A problematic care experience composite measure ($\alpha=0.67$) was calculated using the unweighted average of the three binary measures (Yes/No questions) and transformed to a 0–100 scale. Question #3 was reversed prior to scoring the composite so not being reassured about self-management was considered a problematic patient care experience.

Perceived quality of care. Respondents also answered the following question, "Overall, how would you rate the quality of medical care that you have received in the past 12 months? Was the medical care *excellent*, *good*, *fair*, or *poor*?"[39,40] Responses to this question were transformed to a 0–100 scale (*excellent* scored as 100 and *poor* as 0).

Covariates. We considered three groups of covariates for inclusion in adjusted analyses: 1) respondent sociodemographic characteristics, 2) respondent health care utilization and health factors, and 3) geographic region. Respondent sociodemographic characteristics included age, gender, subethnicity, citizenship, educational attainment, marital status, annual income, and employment. Using an adaptation of Coronado et al.'s scale construction method,[41] an acculturation scale ($\alpha=0.88$) was calculated using the unweighted average of responses to questions about respondents' English verbal and reading skills, nativity, and parental (mother and father) nativity, then transformed to a 0–100 scale. A spirituality scale ($\alpha=0.72$) was also calculated using the sum (range=0–3) of responses to questions that assessed whether the respondent ever prayed specifically to be healed of an illness or injury, prayed for someone else to be healed of an illness or injury, or asked someone else to pray for the respondent to be healed of an illness or injury.[42]

Patient health care utilization factors included health insurance coverage (insured for 12 months or more, currently insured but uninsured at some point during the previous 12 months, or currently uninsured), the recency of the clinician last seen, use of *curandero* or traditional folk healer, and use of medical treatments from Mexico or another Latin American country. Clinician-patient language discordance was also assessed using responses to questions assessing the respondents' ability to carry on a conversation in English, both understanding and speaking, and the language reported as generally being spoken during most medical appointments. If a respondent endorsed speaking English *very well*, they were categorized as English-proficient. If a respondent was limited-English proficient (LEP) (not endorsing speaking English very well) and indicated that most appointments were conducted in English, they were considered to receive language discordant care. Limited-English proficient respondents who indicated that most appointments were conducted in Spanish were considered to receive language concordant care.

Other health factors assessed were self-rated physical health, self-reported diagnosis of depression by a health care provider, and diabetes knowledge. Diabetes knowledge was assessed using a battery of eight questions (score range = 0–8) testing basic knowledge about the causes, symptoms, and treatment of diabetes, as in previous work.[43] The final set of covariates considered were regional factors, which included geographic region (Northeast, Midwest, South, and West) and urbanicity (urban, suburban, and rural).

Analysis. Respondent sociodemographic characteristics, health care utilization and health factors, and geographic region were compared by respondents' usual care site (private physician practice, community health center, and no usual source of care). Statistical significance was assessed using χ^2 tests for categorical variables and t-tests for continuous variables. Next, bivariate associations between the usual care site variables and the various covariates were calculated. For each of the two outcome measures, unadjusted and adjusted linear regression models were specified. We included covariates that reached marginal significance in bivariate analyses with the outcome measures and were significantly associated with the usual care site variables as covariates in the adjusted models. Collinearity diagnostics were calculated to prevent over-fitting the multivariate regression models. All analyses used sampling weights to account for differential selection probabilities among respondents.

Finally, we examined the influences on problematic care experiences and perceived quality of care differences between CHCs and private physician practices using the Blinder-Oaxaca decomposition method.[26–28] The decomposition method has been used extensively to assess mean outcome differences in the labor economics literature.[27,44,] In health services research, this method has been employed to study racial and ethnic disparities in different measures of health care access and utilization and health insurance coverage.[45–53] In the current study's context, differences in problematic care experiences and perceived quality of care across usual care sites may reflect two broad sources: 1) differences that stem from observed factors (e.g., health insurance coverage); and 2) differences that stem from unobserved heterogeneity (such as the organization of care across care settings). The decomposition method is used to estimate the final ordinary least squares (OLS) regression models for the two outcome measures. The resulting coefficients and the mean values of all independent variables are then used to decompose the observed variation into explained and unexplained components.

Results

Respondent characteristics differed substantially by care arrangement type (Table 1). Among the many differences, Latino diabetics primarily receiving care at CHCs were more likely to be of Mexican descent (75.0% vs. 57.1%, $p<.001$), less acculturated (30.6 vs. 54.2, $p<.001$), less educated (less than high school: 38.2% vs. 15.6%, $p<.001$), and less likely to be continuously-insured (39.8% vs. 54.0%, $p<.001$) than Latino diabetics primarily receiving care in private physician practices. Like Latino diabetics receiving care in CHCs, respondents who lacked a usual source of care differed from respondents primarily receiving care in private physician practices. Respondents without a usual source of care, however, were also significantly less likely to have seen a clinician during the previous 12 months (69.0% vs. 88.9%, $p<.01$), more likely to use foreign medical treatments (14.8% vs. 6.9%, $p<.05$), and had worse diabetes knowledge (5.8 vs. 6.3, $p<.05$) than respondents primarily receiving care in private physician practices. Importantly, the level of language discordant care did not differ by usual care site.

Approximately half (47.4%) of Latinos with diabetes reported at least one problematic care experience during their last clinician visit (Figure 1). Respondents primarily receiving care in CHCs ($p=.03$) or without a usual source of care ($p<.001$) reported problematic care experiences more often than respondents primarily receiving care in private physician practices (Table 2, left columns). Differences between CHCs and private physician practices largely were attenuated in adjusted analyses. In multivariate analysis, the strongest correlates of more problematic care experiences were not having a usual source of care ($p=.03$), male gender ($p=.009$), higher spirituality ($p=.02$), poor self-rated health ($p=.03$), and reporting a depression diagnosis ($p=.01$).

Perceived quality of care was also worse for respondents primarily receiving care in CHCs ($p<.001$) or without a usual source of care ($p=.03$) than for respondents primarily receiving care in private physician practices (Table 2, right columns). The differences in patient-reported quality by care arrangements stemmed from substantially smaller proportions of CHC users (27.4%) and respondents without a usual source of care (27.3%) reporting *excellent* care quality compared with respondents receiving care in private physician practices (43.1%) (data not shown). As a result, most care arrangement differences were attenuated in multivariate analysis. The strongest correlates of worse perceived quality of care were worse self-rated health ($p<.001$), use of *curanderos* or folk healers ($p=.01$), higher education ($p=.01$), and residing in the Midwest ($p=.01$).

The decomposition results (Table 3) indicate that a large proportion of differences between CHCs and private physician practices are explained for the problematic care

Table 1.

RESPONDENT CHARACTERISTICS, BY USUAL CARE SITE

	Overall	Private Physician (reference)	Community Health Center	p	No Usual Source	p
N	583 (100%)	246 (42.2%)	237 (40.7%)		100 (17.2%)	
Sociodemographic Characteristics						
Age (years, SD)	48.3	51.5	47.3	*	43.0	**
Male (%)	51.4	49.4	44.6		67.0	*
Subethnicity						
Mexican (%)	64.0	57.1	75.0	**	59.9	
Puerto Rican (%)	12.4	14.5	9.8		12.5	
Central/South (%)	15.5	15.7	13.3		19.0	
Cuban/Other (%)	8.0	12.7	1.9	**	8.6	
Acculturation Scale (range: 0–100)	42.2	54.2	30.6	***	36.5	***
U.S. Citizenship	69.3	82.2	55.4	**	65.4	***
Spirituality Scale (range: 0–3)	2.0	2.1	2.1		1.9	
Education						
0–8 years (%)	27.2	15.6	38.2	***	33.6	**
9–11 years (%)	18.7	20.0	17.0		19.0	
HS grad or GED (%)	28.3	26.7	28.2		31.8	
Some college/voc (%)	17.6	24.0	12.3	*	12.8	
College + (%)	8.2	13.7	4.4	**	2.8	**
Marital Status						
Married (%)	61.5	62.8	62.2		57.7	
Divorced/Separated (%)	24.9	29.4	21.8		20.5	
Never Married (%)	13.6	7.8	16.0	*	21.8	*
Annual Household Income						
0–14,999 (%)	29.8	21.2	38.6	***	33.4	*
15,000–24,999 (%)	21.7	16.7	23.8		28.6	*
25,000–34,999 (%)	20.3	20.3	19.8		21.2	
35,000–59,999 (%)	18.5	23.5	15.6		12.8	
60,000+ (%)	9.7	18.3	2.2	***	3.9	**
Employment						
Employed (%)	48.7	54.0	39.8	*	52.5	
Unemployed (%)	10.9	10.8	8.7		14.9	
Homemaker (%)	17.5	9.2	30.1	***	13.6	
Retired (%)	16.4	19.2	13.3		15.9	
Other (%)	6.4	6.8	8.0		3.0	

(Continued on p. 1158)

Table 1. *(continued)*

	Overall	Private Physician (reference)	Community Health Center	p	No Usual Source	p
Health Care Utilization and Health Factors						
Insurance Status						
Continuously Insured (%)	65.8	79.3	62.2	***	43.2	***
Recently Uninsured (%)	9.1	5.7	10.8		13.7	
Chronically Uninsured (%)	24.6	14.0	27.0	**	43.1	***
Clinician Last Seen						
Less than 6 months (%)	82.8	88.9	83.4		69.0	**
6 months– 1 year (%)	9.7	7.4	11.2		11.9	
More than 1 year (%)	7.5	3.7	5.3		19.1	***
Clinician-Patient Language Concordance						
English Proficient (%)	49.8	62.8	36.0	***	45.4	*
LEP—Language Concordant Care	39.0	28.2	51.6	***	40.6	*
LEP—Language Discordant Care	11.2	9.0	12.4		14.0	
Foreign Medical Treatment (%)	8.6	6.9	7.1		14.8	*
Use of Curandero (%)	7.0	6.2	6.4		9.6	
Physical Health, self-rated						
Excellent/very good (%)	20.1	24.8	12.1	**	23.8	
Good (%)	26.0	29.9	22.8		23.0	
Fair (%)	39.8	32.4	50.0	**	37.9	
Poor (%)	14.2	13.0	15.1		15.2	
Depression, self-reported (%)	27.0	23.7	32.6		24.5	
Diabetes Awareness Scale (range: 0-8)	6.2	6.3	6.3		5.8	*
Regional Factors						
Region						
Northeast (%)	18.0	19.7	17.3		15.5	
Midwest (%)	8.6	8.3	9.5		7.7	
South (%)	34.9	35.0	29.7		43.2	
West (%)	38.5	36.9	43.4		33.6	
Urbanicity						
Urban (%)	43.7	45.4	42.4		41.9	
Suburban (%)	41.8	42.5	42.5		38.8	
Rural (%)	14.6	12.0	15.1		19.3	

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*$p<.05$

**$p<.01$

***$p<.001$ compared to private physician practices

LEP = Limited English Proficiency

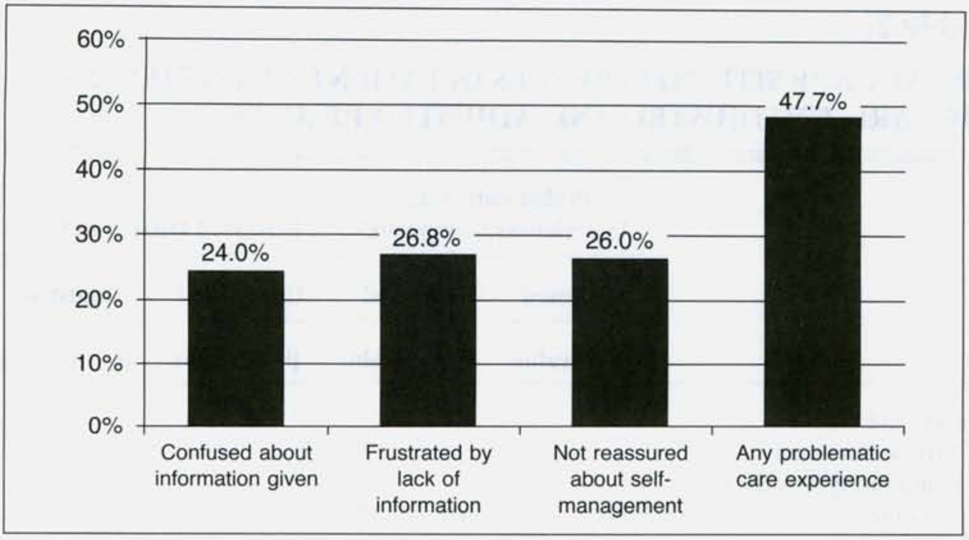

Figure 1. Proportion of Latinos with diabetes reporting problematic care experiences during their last office visit.

experiences composite (70.8%) and the perceived quality of care (65.8%) measure. Patient acculturation and health insurance coverage accounted for approximately 50% and 47% of the explained differences in problematic care experiences across the two care settings, respectively. If the two care site types cared for Latino patients with comparable levels of acculturation and health insurance coverage, problematic care experiences would decrease substantially for CHCs. Respondent educational attainment and self-rated physical heath accounted for 60% and 27% of the explained differences in perceived quality of care between CHCs and private physician practices, respectively. If the two care settings cared for Latino patients with comparable educational attainment and self-rated physical health, the differences in perceived quality of care would decrease substantially.

Discussion

This study, the first to compare problematic care experiences and perceived quality of care among Latinos with diabetes across care settings has several findings relevant to advancing patient-centered care for Latinos with diabetes. First, we found that nearly half (47.7%) of Latinos with diabetes reported a problematic care experience during their last office visit. Importantly, Latinos who primarily receive care in CHCs reported problematic experiences more often and rated quality of care lower than Latino diabetics who primarily receive care in private physician practices. Most differences between CHCs and private physician practices, however, were attenuated after accounting for differences in patient case-mix across the care settings, because CHC clinicians are more likely to care for uninsured and less acculturated Latinos. This is consistent with evidence that CHCs are increasingly treating higher proportions of the uninsured population in the

Table 2.

USUAL CARE SITE DIFFERENCES IN PATIENTS' EXPERIENCES OF CARE, UNADJUSTED AND ADJUSTED RESULTS

	Problematic Care Experiences Composite[a]				Perceived Quality of Care			
	Unadjusted		Adjusted		Unadjusted		Adjusted	
	β	p-value	β	p-value	β	p-value	β	p-value
Usual Care Site								
Private Physician	—	—	—	—	—	—	—	—
Community Health Center	6.99	.03	2.01	.57	−8.04	<.001	−2.34	.37
No Usual Source of Care	14.46	<.001	9.64	.03	−8.98	.03	−6.84	.07
Respondent Characteristics								
Age (years)			−0.45	.75			0.23	.84
Gender (male)			7.30	.01			−3.19	.17
Acculturation			−2.87	.08			0.59	.65
Spirituality			3.07	.02			1.00	.38
Annual Household Income								
0–14,999			—	—			—	—
15,000–24,999			−0.68	.86			0.82	.80
25,000–34,999			−0.68	.87			−3.78	.30
35,000–59,999			0.20	.96			−0.02	1.00
60,000+			−2.71	.65			1.94	.66
Education								
0–8 years			—	—			—	—
9–11 years			−2.97	.50			6.27	.08
HS grad or GED			−1.42	.72			7.98	.03
Some college or voc school			1.94	.71			3.03	.49
College or more			−2.30	.70			11.36	.01
Physical Health, self-rated								
Excellent/Very Good			—	—			—	—
Poor			10.34	.03			−8.21	.08
Fair			6.87	.11			−10.00	<.001
Good			0.64	.89			−8.11	.01
Depression			8.77	.01			−5.15	.04
Insurance and Utilization								
Insurance Status								
Continuously Insured			—	—			—	—
Chronically Uninsured			4.68	.17			−1.89	.52
Recently Uninsured			9.55	.16			−8.62	.06
Language Discordance			−3.19	.50			−8.29	.11

(Continued on p. 1161)

Table 2. *(continued)*

	Problematic Care Experiences Composite[a]				Perceived Quality of Care			
	Unadjusted		Adjusted		Unadjusted		Adjusted	
	β	p-value	β	p-value	β	p-value	β	p-value
Use of curandero			10.83	.07			−10.28	.01
Geographic Region								
West			—	—			—	—
Northeast			−4.93	.19			1.00	.75
Midwest			−2.97	.54			−12.35	.01
South			5.59	.11			0.69	.80
Constant	20.19	<.001	11.56	.04	76.22	<0.001	82.32	<.001
Adjusted R^2	0.03		0.13		0.03		0.14	

[a] The problematic care experiences composite is scored on a 0–100 scale, where higher scores indicate more problem experiences. The perceived quality of care measure is scored on a 0–100 scale, where higher scores indicate higher perceived quality of care. Continuous measures (age, acculturation, spirituality) are standardized to a mean of 0 and standard deviation of 1. As a result, the effect sizes for continuous measures therefore represent the effect of a standard deviation change of the predictor on the composite score.

β = Beta Coefficient

United States.[23,54,55] The results underscore the importance of case-mix adjustment of performance comparisons across care sites, because relying on unadjusted data runs the risk of misattributing differences that stem from patients as modifiable differences that are a function of the organization and delivery of care. Importantly, the results indicate that expanding health insurance coverage can substantially improve the care experiences of Latinos with diabetes.

Consistent with previous studies assessing care integration and quality of care,[56,57] Latino diabetics without a usual source of care, who constituted 17.1% all respondents in the analytic sample, reported problematic care experiences more often than patients seeing private physicians. The differences in problematic care experiences persisted even after adjusting for important respondent characteristics. The findings are consistent with empirical research that demonstrates that having a usual source of care has quality benefits above and beyond health insurance coverage.[22,56,58,59] Evidence suggests that effective clinician-patient communication is associated with more consistent provision of preventive care and health promotion support,[60] and important for treatment adherence and outcomes of care.[9–13] Recent work indicates that Latino disparities in care quality can be reduced by integrating Latinos into patient-centered medical homes (PCMHs), defined as having a regular provider who provides total care, fosters patient engagement in care, and offers easy access to care.[61] Our results also suggest that integrating Latinos

Table 3.

FACTORS DRIVING DIFFERENCES IN PROBLEMATIC CARE EXPERIENCES AND PERCEIVED QUALITY OF CARE BETWEEN CHCS AND PRIVATE PHYSICIAN PRACTICES

	Problematic Care Experiences Composite[a]	Perceived Quality of Care
Performance on Composite Measure		
CHCs	27.3	68.1
Private Physician Practices	20.8	75.4
Difference Between Care Settings	6.5	−7.3
Total Difference Explained by Final Models	4.6 (70.8%)	−4.8 (65.8%)
Factors associated with explained differences between CHCs and private physician practices (%)		
Acculturation	50.0	—
Education	—	60.4
Physical health, self-rated	—	27.0
Health Insurance Coverage	47.8	—
All Other Factors	2.2	12.5

[a] The problematic care experiences composite is scored on a 0–100 scale, where higher scores indicate more problem experiences. The perceived quality of care measure is scored on a 0–100 scale, where higher scores indicate higher perceived quality of care.
CHC = Community Health Center

with diabetes into PCMHs has the potential to improve patient self-management and, ultimately, outcomes of care.

Third, Latinos with diabetes who were more spiritual, less acculturated, used *curanderos* or traditional folk healers, or reported a depression diagnosis reported more problematic care experiences than others, controlling for other factors. The results related to acculturation are consistent with previous studies,[62,63] but the independent effects of *curandero* use and spirituality on diabetic patients' experiences have not been documented previously. Evidence indicates that patients who use complementary and alternative medicine (CAM) are more likely to be skeptical of Western medicine than non-CAM users,[64] which can affect their perceptions of care quality provided by Western-style clinicians. The same pattern appears to be true for Latinos who use *curanderos*. In addition, the effective management of chronic illness relies on patient engagement during clinical encounters, including asking clarifying questions when confused.[18] Patients suffering from depression are likely less active participants in clinical encounters,[65] so it is not surprising that these patients have more unresolved clinical concerns. Importantly, wide depression treatment disparities exist among racial and ethnic groups in the United States.[66–68] In order to improve patient self-management and adherence to recommended treatments, clinicians treating Latinos with diabetes should assess depression symptoms[69,70] and the use of CAM and folk medicine, particularly among uninsured patients.

Our study results should be viewed in light of important limitations. First, the survey did not assess the technical quality of care received by patients or outcomes of care. The relationships between care arrangements and technical aspects of quality for Latinos with diabetes might differ, although some studies find consistency in technical and interpersonal aspects of care.[71,72] Importantly, patient-centered care is widely considered central to health care quality[73] and our results have key implications for reducing communication quality disparities across care settings. Second, we did not assess how the organization of care differs between CHCs and private physician practices. Previous studies have shown that due to lack of insurance, less acculturated Latino diabetics are more likely to have multiple clinicians involved in their care,[74] and differences in continuity of care across settings could contribute to observed differences in communication quality. Third, we could not account for the use of interpreters during office visits, but the proportion of LEP patients receiving language discordant care did not differ by usual care site. As a result, inclusion of this additional information is unlikely to alter the study conclusions. Fourth, survey non-response bias could affect the nature and magnitude of the observed associations. However, recent work indicates that case-mix adjustment, or accounting for differences in patient characteristics across clinics when making performance comparisons, eliminates much of the impact of non-response bias.[75] Finally, co-morbidities were not assessed in the survey, and administrative data were not available for study participants. Our study, however, adjusted for health status differences using a measure of patient-reported physical health, which has been shown to have predictive validity.[76]

Primary care practices serving high proportions of Latino patients,[77–79] particularly CHCs, often function under major resource constraints,[80,81] which can affect the provision of patient-centered care. Our results indicate that Latino diabetics receiving care in CHCs experience more problematic care experiences and perceive worse quality of care than patients receiving care in private physician practices. A large proportion of differences in communication quality between care settings are attributable to patient case-mix differences, although observed factors do not fully explain differences. Recent initiatives focused on reducing racial and ethnic disparities at CHCs have achieved improvements in diabetes care quality,[82] demonstrating that suboptimal CHC performance on technical quality measures is modifiable through focused quality improvement activities. Initiatives should examine the extent to which the care experiences of Latino diabetics, particularly less acculturated and uninsured patients who tend to receive care at CHCs, can be improved. A diverse set of approaches might facilitate care improvements, including clinician communication interventions[32] such as training clinicians to customize information given to patients based on their health literacy level,[83] and self-management support interventions, including group visits, telephone case management, and community health workers (or, *promotoras*).[84–86] Clarifying the comparative effectiveness of various approaches for improving quality of care for Latinos with diabetes should be a high priority for researchers and practitioners.

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Notes

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