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Association Between Language Proficiency and the Quality of Primary Care Among A National Sample of Insured Latinos

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Abstract

Context—Latinos experience substantial barriers to primary care. Limited English language proficiency may be a mechanism for these deficiencies, even for Latinos with health coverage.

Objective—To determine the relationship between English language proficiency and the experience of primary care reported by insured Latinos.

Design, Setting, Participants—Analysis of the National Latino and Asian American Study (NLAAS), a nationally representative household survey, 2002–2003. This analysis was restricted to Latinos who reported current health insurance (n=1,792), and included information on ethnic subgroups.

Main Outcome Measures—Four outcomes addressed different aspects of the quality of primary care: 1) not having a regular source of care or lacking continuity of care; 2) difficulty getting an appointment over the phone, 3) long waits in the waiting room, and 4) difficulty getting information or advice by phone.

Results—English language proficiency was associated with the experience of primary care for three of the four outcomes. Insured Latinos with poor/fair English language proficiency were more likely than those with good/excellent proficiency to report not having a regular source of care or lacking continuity (odds ratio {OR} 2.20, 95% confidence interval {CI} 1.60–3.02), long waits (OR 1.88, CI 1.34–2.64), and difficulty getting information/advice by phone (OR 1.76, 95% CI 1.25– −2.46).

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Conclusions—Among insured Latinos, low English language proficiency is associated with worse reports of the quality of primary care. These results suggest that interventions to address limited English proficiency may be important to improving the quality of primary care for this rapidly growing population.

Introduction

The Institute of Medicine identifies accessibility and continuity as key dimensions of primary care.[1] Access to care is often conceived of in terms of insurance status; however, accessibility can also be thought of as encompassing a variety of experiences reflecting a patient's ability to interact with the health care system. The concept of continuity reflects the longitudinal aspect of primary care. Previous studies have documented racial and ethnic disparities in the quality of primary care. Latinos are more likely to report a lack of continuity of care, or no usual source of care.[2,3,4] Latinos also give more negative ratings of specific aspects of primary care, including long wait times and worse listening skills by their providers.[5] However, not all studies document disparities for Latinos. A study of Massachusetts employees found that Latinos had lower ratings on access to primary care but found no differences on a number of other measures, including continuity, communication, and interpersonal treatment.[6] A study of members of a large health maintenance organization found that ratings of Latinos were lower than those for non-Latino whites for access to care, but were no different for several other dimensions of care, including communication and overall satisfaction.[7]

Low English language proficiency may be a mechanism for the disparities in the quality of primary care between Latinos and non-Latino whites. Previous work has documented an association between language proficiency and the utilization of preventative health care by Mexican Americans.[8] A study of older adults in California found that individuals with limited English proficiency were less likely than subjects who spoke only English to report having a usual source of care but did not report differences in delays in care.[9] In a study of Medicaid patients, Spanish-speakers reported lower scores than white English-speakers for timeliness of care, provider communication, and staff helpfulness but not for access to care.[10]

Past studies have been limited in a number of ways: some were limited in geographic scope (e.g. single state),[6,9] others were restricted to a single insurance type (e.g. Medicaid),[10] and others treated Latinos as a homogenous group, failing to consider differences between ethnic subgroups.[11, 7, 5] Our study addresses some of these past shortcomings by utilizing a nationally representative sample of Latinos that includes the three major Latino ethnic subgroups, and individuals with a variety of insurance arrangements. The goal of our study is to determine the relationship between English language proficiency and the experience of primary care reported by a diverse, nationally representative sample of Latinos. Our principal hypothesis is that individuals with a limited English proficiency report worse experience of primary care than do those proficient in English.

Methods

Study Design and Participants

This study is a secondary analysis of data from the National Latino and Asian American Study (NLAAS) for adults over the age of 18 years. This study, which had been described previously, is a nationally representative, cross-sectional household survey of 2,554 Latinos and 2,095 Asian Americans that uses a stratified area probability sample design.12 Data were collected from 2002 to 2003, and Latino participants were questioned in either English or Spanish. The response rate for the Latino sample was 75.5%.12 Because our interest was

specifically in the experience of Latinos, we restricted our analysis to individuals who self-identified as Latinos. The questions addressing the quality of primary care were asked only of subjects reporting a current source of insurance (n=1,792). This analysis was approved by the Institutional Review Board of Partners HealthCare.

Variables

Four outcomes were selected to address different aspects of the quality of primary care. Three of the outcomes were binary variables based on subjects' responses to the following three questions about the accessibility of care: "Have you experienced any of the following situations with your primary doctor in the last year? 1) Difficulty getting an appointment over the phone; 2) Long waits in the waiting room (> 1 hour); and 3) Difficulty getting information or advice by phone." These questions are adapted from previous work that used the Consumer Assessment of Health Plans Study (CAHPS) measures for reports of care.[10] The fourth outcome was developed from subjects' responses to the following two questions and reflected continuity of primary care: 1) "Have you experienced any of the following situations with your primary doctor in the last year? Lack of continuity of care or high turn over of providers" and 2) "Do you have a regular medical doctor who you usually visit when you need routine medical care?" Subjects who reported that they had experienced a lack of continuity of care and/or did not have a regular medical doctor were considered to have poor continuity of care; all other subjects were considered to have adequate continuity of care.

We hypothesized that limited English language proficiency is associated with each of these measures, however, the mechanism underlying these associations likely differs for each outcome. For example, the ability to communicate by phone may be impacted by limited English language proficiency when inadequate language support systems are in place.[10] An association between English proficiency and long waits may be due to differences in site of care, with subjects having low English language proficiency receiving care at sites with either fewer resources and/or greater demands.[13,14] A relationship between language proficiency and lack of continuity could be mediated by the strain put on the provider-patient relationship by language barriers or cultural differences.[15,16]

The primary independent variable was English language proficiency. Language proficiency was treated as a binary variable (poor/fair versus good/excellent) and was based on subjects' response to the question, "How well do you speak English?" Previous work has used this definition of language proficiency, and its treatment as a binary outcome.[17]

Other covariates included Latino ethnic subgroup (Mexican, Puerto Rican, Cuban, or other), region (Northeast, Midwest, South, West), age (18–24, 25–34, 35–44, 45–54, 55–64, and ≥ 65 years), gender, marital status (married or cohabiting versus not married or cohabiting), presence of children under 17 years in the household (≥ 1 versus none), years of education (≤ 11, 12, 13–15, or ≥ 16), insurance status (private, Medicare, Medicaid, or other), comorbidity (none, 1 condition, ≥ 2 conditions) which was based on self-report of asthma, diabetes, chronic lung disease, cancer, and cardiovascular disease, and 30-day functioning (measured as number of days out of the past 30 when subject reported being unable to work or carry out normal activities).

Statistical Analyses

Logistic regression was used to determine whether there was a relationship between language proficiency and the four outcomes. An a *priori* decision was made to include language proficiency, the principal independent variable, in the final models. In addition, covariates found to be significant in univariate analyses or of demonstrated importance in past studies were included in the final models. Analyses were implemented using SUDAAN

version 9.0 (Research Triangle Institute, Research Triangle Park, NC) to account for the complex survey design.

Results

Most of the subjects (71.9%) were from one of three major Latino ethnic subgroups (Mexican, Puerto Rican, and Cuban) (Table 1). While more than half of subjects reported good/excellent proficiency in English, many (39.2%) reported only poor or fair proficiency. Most subjects were from the West (44%). The majority of the sample was young adults, and females were approximately equal. Most subjects reported being married or cohabiting (64.2%), while 43.1% reported having ≥ 1 child under the age of 17 in the household. While most Latinos had private insurance (64.6%), a substantial number were receiving Medicaid (18.2%) or Medicare (14.0%). A third of subjects reported having one or more comorbid conditions. The mean number of days (in the past 30 days) that subjects reported being unable to work or carry out normal activities was 1.7. A substantial number of Latinos reported having less than 12 years of education (36.9%). The majority of Latinos reported having either a usual source of care or good continuity of care (70.8%).

Language proficiency was associated with quality of care for three of the four outcomes (Table 2). Subjects with only poor/fair English language proficiency were more likely than those with good/excellent language proficiency to report: waits > 1 hour (odds ratio {OR} 1.88, 95% confidence interval {CI} 1.34–2.64), difficulty getting information or advice by phone (OR 1.76, 95% CI 1.25–2.46), and no regular source of care or lack of continuity of care (OR 2.20, 95% CI 1.60–3.02). There was no association between language proficiency and the difficulty of getting an appointment by phone (Table 2). Use of an alternative cutoff for language proficiency (poor/fair/good versus excellent) did not substantially alter the results (data not shown).

In addition to language proficiency, insurance status was associated with the experience of primary care. Subjects receiving Medicare or Medicaid were more likely to report long waits than were those with private insurance (OR 1.85, 95% CI 1.11–3.10 and OR 1.84, 95% CI 1.34–2.53, respectively). There was a non-statistically significant trend towards subjects receiving Medicare or Medicaid reporting greater difficulties getting information or advice by phone than those with private insurance (OR 1.61, 95% CI 0.88–2.95 and OR 1.45, 95% CI 0.93–2.26, respectively). Subjects receiving Medicare were less likely, however, to report having no regular source of care or lack of continuity of care (OR 0.49, 95% CI 0.27–0.89), while subjects with “other” insurance were more like to report having no regular source of care or a lack of continuity of care (OR 2.02, 95%CI 1.06–3.85).

In addition, several demographic characteristics were variably associated with the outcomes. Difficulty getting an appointment over the phone was associated with female gender while subjects with 12 or fewer years of education reported having less difficulty than did their counterparts with more education. Factors associated with long waiting time included female gender and residence in the Midwest and West. Women as well as subjects with worse functional status were more likely to report difficulty getting information or advice by phone. Several factors, including age, female gender, and having a greater number of comorbidities, were associated with lower odds of not having a usual source of care or lacking continuity of care, while subjects from the South (compared to the Northeast) were more likely to report having no regular source of care or lack of continuity of care. Not having a regular source of care or reporting a lack of continuity was associated with each of the other three outcomes.

Conclusions

This study suggests that among insured Latinos, those with low English language proficiency have more negative experiences of primary care than their English language proficient counterparts, with decreased access (longer wait times and greater difficulty obtaining information or advice by phone) and less continuity. There was no association demonstrated between low English language proficiency and difficulty getting an appointment over the phone. We suspect that the reason for this lack of association is that this outcome captures an aspect of the primary care experience that is less complex than the other three measures, and therefore less likely to be sensitive to the strains imposed by language barriers. Both simple interventions (bilingual office staff) and minimal language proficiency on the part of subjects may be enough to allow them to circumvent difficulties in obtaining appointments, but not improve these other dimensions of primary care.

The findings of this study are in keeping with past work demonstrating an association between low English proficiency and less timeliness of care, as well as poorer communication with providers and less helpful staff.[10] Consistent with past work, our results demonstrate an association between low proficiency in English and continuity of care.[9] This body of work has implications both in terms of ongoing research, practice, and policy. Future studies should consider interventions that address the barriers faced by Latinos with limited English proficiency, including training more physicians who speak Spanish and who are culturally concordant,[17] and better integration and availability of translation services.[18] With regards to policy, only 9 states offered direct reimbursement for the cost of language interpreters in 2003, despite data suggesting that these services are cost-effective.[19, 20,21] In addition, while addressing language barriers is mandated by federal law, there remains need for increased standardization of approaches to ensuring linguistic competence in healthcare.[19,22] Policy makers ought to examine both the implementation of services aimed at mitigating the effects of language barriers as well as the implementation of existing federal and state legislation.

Insurance status was associated with the experience of primary care in this study. Subjects with Medicare or Medicaid were significantly more likely than those with private insurance to report having long waits, and they also experienced a non-significant trend towards having greater difficulty obtaining information or advice by phone. Past work has demonstrated that lack of insurance is an important mediator of the difference between Hispanics and whites in access to care,[23] but less is known about the relationship between type of insurance and the experience of primary care among Latinos. A study of the elderly (including Latinos and African Americans) in California found that subjects with either Medicare coverage or Medicare plus Medicaid coverage were less likely than subjects with Medicare plus private supplemental insurance to report use of a number of preventative services.[24]

This study overcomes some of the limitations of previous work by the inclusion of a nationally representative sample of Latinos from a number of different ethnic subgroups and with various types of insurance. Since Latinos are the largest and fastest growing minority group in the United States, with a population that exceeds 42 million in 2005, it is particularly timely to focus on the experiences of this population.[25]

This study has several limitations. The outcomes are based on self-report. Past work has documented the presence of differences in reliability and validity between the responses to English and Spanish versions of surveys; however, the majority of the differences were due to the tendency for Spanish speakers to give more favorable responses.[26] Such a bias, however, would have caused the results of our study to be under-estimated, suggesting that

the strong association demonstrated between language proficiency and experience of primary care is robust. In addition, the study sample is drawn from subjects who all report some type of health insurance, preventing us from examining the impact of language proficiency among the uninsured. This analysis does not include information on language concordance between subjects and providers nor on the availability of interpreter services. Future work ought to include such variables in order to better elucidate the mechanisms underlying the relationship between language proficiency and the quality of primary care.

Among insured Latinos, low English language proficiency is associated with worse reports of the experience of primary care despite health insurance coverage. Reducing disparities in the quality of care for this growing segment of the US population requires that providers and payers address linguistic barriers to care.

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Table 1

Characteristics of the sample (n=1,792)

	Percent (n) *
Language proficiency#	
Poor/fair	39.2 % (750)
Good/excellent	60.8 (1,036)
Latino subgroup#	
Mexican	52.2 (530)
Puerto Rican	13.6 (420)
Cuban	6.1 (434)
Other Latino	28.1 (404)
Region	
Northeast	19.8 (485)
Midwest	9.6 (125)
South	26.6 (690)
West	44.0 (492)
Age (years)	
18–24	17.0 (243)
25–34	26.2 (433)
35–44	22.3 (410)
45–54	16.2 (291)
55–64	7.4 (191)
≥ 65	11.0 (224)
Gender	
Male	50.6 (764)
Marital status	
Married or cohabiting	64.2 (1,094)
Child < 17 years in the household	43.1 (691)
Type of insurance	
Private	64.6 (1,084)
Medicare	14.0 (293)
Medicaid	18.2 (360)
Other	3.2 (55)
Number of comorbid conditions#	
None	66.4 (1,117)
1	24.4 (491)
≥ 2	9.2 (183)

	Percent (n) *
Years of education	
≤ 11	36.9 (600)
12	24.9 (440)
13–15	25.2 (455)
≥ 16	13.1 (297)
Has regular source of care/good continuity of care#	70.8 (1,302)

*Weighted percentage and unweighted n.

#Missing data are as follows: Language proficiency (n=6), Latino subgroup (n=4), comorbid conditions (n= 1), regular source of care/good continuity of care (n =35).

Table 2

Association of English Language Proficiency with the Quality of Primary Care.

	Difficulty getting an appointment over the phone			Long waits in waiting room (> 1 hour)			Difficulty getting information or advice by phone			No regular source of care or lack of continuity of care		
	%	OR	95% CI	%	OR	95% CI	%	OR	95% CI	%	OR	95% CI
Language Proficiency												
Poor/fair	9	1.09	0.59–2.02	44	1.88	1.34–2.64	27	1.76	1.25–2.46	34	2.20	1.60–3.02
Good/Excellent	11	Ref.	Ref.	27	Ref.	Ref.	19	Ref.	Ref.	26	Ref.	Ref.
Latino subgroup												
Puerto Rican	12	1.44	0.78–2.66	34	0.77	0.54–1.09	23	1.21	0.75–1.95	24	1.36	0.91–2.03
Cuban	9	0.88	0.46–1.67	40	1.19	0.79–1.80	24	1.39	0.76–2.53	20	0.65	0.42–1.00
Other Latino	9	0.89	0.46–1.73	33	0.80	0.56–1.16	23	1.16	0.67–1.99	29	1.22	0.72–2.07
Mexican	11	Ref.	Ref.	33	Ref.	Ref.	21	Ref.	Ref.	31	Ref.	Ref.
Region												
Midwest	8	1.15	0.48–2.76	28	0.59	0.36–0.95	20	1.06	0.54–2.07	26	1.32	0.61–2.87
South	11	1.63	0.78–3.40	37	0.73	0.47–1.15	22	0.95	0.64–1.40	34	2.46	1.50–4.05
West	11	1.65	0.91–3.01	29	0.51	0.31–0.82	21	1.01	0.59–1.71	30	1.65	0.97–2.82
Northeast	8	Ref.	Ref.	41	Ref.	Ref.	23	Ref.	Ref.	23	Ref.	Ref.
Gender												
Female	13	1.88	1.16–3.03	39	1.61	1.26–2.05	25	1.57	1.11–2.21	21	0.47	0.35–0.61
Male	8	Ref.	Ref.	28	Ref.	Ref.	18	Ref.	Ref.	37	Ref.	Ref.
Marital Status												
Not married or cohabiting	9	0.78	0.49–1.22	30	0.76	0.57–1.01	18	0.66	0.49–0.89	27	0.96	0.69–1.35
Married or cohabiting	11	Ref.	Ref.	36	Ref.	Ref.	24	Ref.	Ref.	30	Ref.	Ref.
Children < 17 in household												
None	9	0.71	0.46–1.12	31	0.87	0.67–1.13	20	0.87	0.64–1.17	28	1.10	0.76–1.60
≥ 1	12	Ref.	Ref.	37	Ref.	Ref.	24	Ref.	Ref.	30	Ref.	Ref.
Type of Insurance												

	Difficulty getting an appointment over the phone			Long waits in waiting room (> 1 hour)			Difficulty getting information or advice by phone			No regular source of care or lack of continuity of care		
	%	OR	95% CI	%	OR	95% CI	%	OR	95% CI	%	OR	95% CI
Medicare	8	1.09	0.48–2.43	35	1.85	1.11–3.10	22	1.61	0.88–2.95	10	0.49	0.27–0.89
Medicaid	12	1.24	0.71–2.19	47	1.84	1.34–2.53	28	1.45	0.93–2.26	30	1.12	0.74–1.69
Other	9	0.70	0.18–2.72	37	1.70	0.77–3.77	19	0.96	0.32–2.89	45	2.02	1.06–3.85
Private	10	Ref.	Ref.	29	Ref.	Ref.	20	Ref.	Ref.	32	Ref.	Ref.
Number of comorbid conditions												
1	11	1.16	0.75–1.79	35	1.18	0.86–1.61	22	1.04	0.75–1.45	21	0.63	0.45–0.87
≥ 2	10	1.28	0.39–4.24	40	1.53	0.87–2.67	23	1.07	0.52–2.19	7	0.23	0.10–0.52
None	10	Ref.	Ref.	32	Ref.	Ref.	21	Ref.	Ref.	35	Ref.	Ref.
Education (years)												
≤ 11	9	0.45	0.26–0.78	38	0.89	0.55–1.42	20	0.66	0.38–1.13	30	1.19	0.63–2.27
12	8	0.44	0.25–0.78	33	1.01	0.76–1.34	24	1.08	0.65–1.79	32	1.19	0.65–2.17
13–15	14	0.97	0.57–1.66	31	1.05	0.72–1.53	23	1.09	0.67–1.78	28	1.07	0.64–1.77
≥ 16	13	Ref.	Ref.	29	Ref.	Ref.	20	Ref.	Ref.	25	Ref.	Ref.
Has regular source of care/good continuity of care										n/a		
No	16	2.58	1.62–4.12	44	2.10	1.60–2.75	31	2.39	1.65–3.46			
Yes	8	Ref.	Ref.	30	Ref.	Ref.	18	Ref.	Ref.			

NOTE: Models adjusted for age in addition to the factors shown.