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Research Article



Bridging language barriers: Access to primary care for Medicaid Managed Care patients with limited English proficiency in three metropolitan areas

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Abstract

This secret shopper study compares the wait times for scheduling a first-time primary-care appointment among adults enrolled in Medicaid Managed Care who speak English, Spanish, or Mandarin in the Los Angeles, Houston, and New York Metropolitan Statistical Areas. Primary-care practices in Medicaid Managed Care Organization directories were randomized by language. The objective of the secret shoppers was to schedule first-time primary-care appointments, either in person or via telehealth. We found that the average wait times for Spanish and Mandarin speakers were greater than for English speakers by 3.73 and 14 days in Los Angeles and 7.29 and 2.55 days in Houston, respectively. The average wait time among Spanish and Mandarin speakers was 2.22 and 1.76 days less compared with English speakers in New York. We discuss the importance of policies and provide recommendations to address disparities in health access and use among adults with limited English proficiency.

Lay summary

We conducted a mystery shopper study that compares wait times to scheduling a first-time primary-care appointment among patients who have Medicaid managed care, and whose primary language is Spanish, Mandarin, or English. This study was conducted in 3 metropolitan areas that have a high concentration of foreign-born populations, including Los Angeles, Houston, and New York. Mystery shoppers called primary-care offices and asked to schedule an appointment as a new patient. Spanish- and Mandarin-speaking patients also inquired about scheduling a primary-care appointment with a bilingual clinician and the availability of an interpreter. Overall, we found longer wait times for patients with similated English proficiency, compared with English speakers, with some variation after considering a patient's language, Spanish or Mandarin, and the geographic area of the primary-care office. We also found that although the availability of bilingual primary-care clinicians and interpreters remains low, Spanish-speaking clinicians and interpreters were more common compared with those that are Mandarin speaking. These results highlight the disparities that continue to exist in the primary-care setting for marginalized populations.

Key words: Medicaid; telehealth; primary care; limited English proficiency; health equity.

Introduction

In 2021, 25.7 million people in the United States had limited English proficiency (LEP), representing 8% of the national population. The states with the highest concentrations of persons with LEP were California (25%), Texas (14%), Florida (10%), and New York (9%). The most commonly spoken languages among persons with LEP were Spanish (63%) and Chinese (7%). Specifically, in California, there were 4.1 million Spanish-speaking persons with LEP followed by 3.1 million in Texas and 1.2 million in New York. Among Chinese-speaking persons with LEP, there were 682 287 people in California, 380 297 in New York, and 93 786 in Texas. Existing literature suggests that people with LEP encounter more barriers to healthcare access and use compared with

their non-LEP counterparts.⁴ People with LEP are more likely to experience linguistic barriers, be uninsured or underinsured, and have immigration concerns, all of which interfere with their healthcare access and utilization.⁵ These barriers contribute to disparities in health outcomes, including uncontrolled hypertension,⁶ diabetes,⁷ and asthma.⁸

Federal and state governments have worked together to administer and finance programs like Medicaid to provide health coverage to underserved populations, many of whom are persons with LEP.^{9,10} In 2021, persons with LEP comprised ~4.9 million or 19% of Medicaid and State Children's Health Insurance Program enrollees.¹¹ To address the challenges that disproportionately impact persons with LEP who navigate the US health insurance system, Medicaid requires state

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agencies to provide program information, including eligibility requirements and available services, in plain language. ¹¹ This information must be provided in an accessible manner, in both paper and electronic formats, and may involve the use of oral interpretation and written translations. ¹¹ Although Medicaid requires state agencies to meet standards that improve accessibility for persons with LEP, the implementation of these requirements varies by state. ¹¹

While existing literature suggests that persons with LEP experience disparities in healthcare access, little is known about their experiences when calling to schedule a first-time primarycare appointment. 6-8 This study has 2 aims that add to the existing literature. First, we estimate the mean number of days it takes adults covered by a Medicaid Managed Care Organization (MCO), and who speak either English, Spanish, or Mandarin, to schedule a first-time primary-care appointment, either in person or via telehealth, in the Los Angeles (LA), Houston, and New York (NY) Metropolitan Statistical Areas (MSAs). Second, we estimate the average time it takes adults covered by an MCO and who have LEP to schedule a first-time primary-care appointment with a clinician who speaks either Spanish or Mandarin. To our knowledge, this is the first study that utilizes a secret shopper approach to quantitatively investigate disparities in scheduling a first-time primary-care appointment, with a focus on the needs of new patients covered by an MCO whose primary language is not English. Secret shopper studies provide an avenue for studying real-world patient experiences while decreasing social desirability, nonresponse, and recall biases, which are common in standard investigative techniques. 12-14 This study contributes to a growing body of research on healthcare disparities including the disaggregation of persons with LEP into Spanish and Mandarin speakers, while also comparing differences across the 3 US Metropolitan areas with the highest concentration of Spanish and Mandarin speakers.

Data and methods

We partnered with a national polling company to collect data for this secret shopper study. The secret shopper methodology facilitates the study of real-world patient experiences while decreasing recall, nonresponse, and social desirability biases that are common in other standard investigative techniques, including surveys. ¹² For example, healthcare clinicians who complete surveys often overestimate their capacity to accept new hypothetical patients and their willingness to accept different types of health insurance, including Medicaid. ¹²

Sample selection

The goal of the mystery shoppers was to schedule a first-time primary-care appointment. To identify primary offices, we used the Centers for Medicare and Medicaid definition of primary care as "health services provided by primary-care providers that include prevention, wellness, and treatment of common illnesses." We compiled a comprehensive list of primary-care offices with at least one Spanish or Mandarin-speaking clinician by searching the online clinician directories for each MCO health plan operating in the LA, Houston, and NY MSAs. These offices also indicated that they were accepting new patients on the online clinician directories.

The comprehensive list of primary-care offices included over 11 000 listings across the 3 geographic areas. Since some primary-care offices partner with multiple MCOs, we removed duplicates through a multi-step process. First, we identified cases with identical information and removed all but 1 case. Second, we identified and concatenated cases with identical street addresses but with varying clinician names and phone numbers. Third, we identified cases with different street addresses but identical phone numbers and clinician names. In these cases, we retained a single commonly occurring address for the telephone number. Most of these cases were toll-free or 1-800 numbers that served as hotlines for multiple offices and were not the office's primary telephone number. If available, the office's primary telephone numbers were prioritized over the toll-free telephone numbers. After removing duplicates, we identified 5878 unique primary-care offices. Primary-care offices were assigned to replicate groups, each containing 10 offices. To ensure diversity within these groups, offices were randomly selected while avoiding the inclusion of multiple offices from the same census tract in a single group. Offices from a previously selected census tract were excluded from selection until all other census tracts were represented in that group.

After we created the comprehensive list of unique primarycare offices, we produced the precise preload data required for the secret shopper calls through personas. Data for these personas included the clinician's name, address, phone number, the call language (Spanish, English, or Mandarin), the MSA, county, and MCO health plan. We prioritized Mandarin over Spanish as the pairing language when primary-care offices had clinicians who spoke both languages because there was an overall smaller number of Mandarin-speaking clinicians in the 3 MSAs. Each primary-care office had a unique identifier to easily identify pairings, and each call also had its own unique identifier to distinguish call attempts between languages. Based on published literature, 13 a priori quotas were determined as follows; 20 paired English and Mandarin appointments and 30 paired appointments in English and Spanish for each MSA.

Data collectors and script

Twenty secret shopper callers, hereinafter referred to as callers, contacted the randomly sampled primary-care offices with the aim of scheduling a first-time primary-care appointment, either in-person or via telehealth. Of the 20 callers, 13 were females and 7 were males. The callers ranged between the ages of 22 and 73 years, 5 of the 20 were foreign born in either Mexico or China, and half of them were bilingual in English and Spanish, 3 were bilingual in English and Mandarin, and 7 spoke English only. All callers participated in an in-person training to gain the necessary background information on the study, introduce them to the scripts and the technology, and answer any questions. We conducted a pilot from March 13, 2024 to March 14, 2024, to provide callers with an opportunity to practice the scripts, provide feedback on the scripts, and roleplay during the live calls. After the pilot, the scripts were revised based on the callers' feedback and observations from members of the research team and the polling company. This study does not include data from the pilot phase. During both the pilot and the data collection phases, callers had access to information about their persona on a computer screen, including pseudonyms, gender, age, preferred language, the assigned MCO health plan, and the clinician's name, phone number, and address. They also had access to the scripts in English and Spanish, and English and Mandarin.

Data collection

We collected data for this study between April 2 and May 29, 2024. Calls were made Monday to Friday, between 7 AM and 3 PM Pacific Standard Time, to account for time differences across the 3 MSAs. Data collection began by first calling primary-care offices to schedule an appointment in either Spanish or Mandarin. Once the a priori quota was met for the Spanish and Mandarin language calls, the same office was contacted after a 2-week waiting period to try and schedule an appointment in English, which resulted in 2 individual completed calls or 1 English and Spanish or English and Mandarin pair. The waiting period was implemented to reduce the likelihood of recognition by the receptionists. At the beginning of each call, the caller asked the receptionist whether they could schedule a first-time primary-care appointment. By the end of each call, calls were classified as pending, disqualified, or qualified. A pending disposition code meant callers would attempt to contact the office a maximum of 5 times to try and schedule an appointment. We labeled a call as disqualified if no appointment was scheduled and as qualified or completed if an appointment was scheduled. The reasons for disqualifications included the following: offices did not accept new patients, offices did not accept the specific MCO or health plan that they were sampled for, or offices were a medical specialty and not a primary-care office. Although offices were sampled from each MCO's primarycare clinician directories, in the event a caller reached a specialist office, the call resulted in a disqualification.

Institutional Review Board approval

The Institutional Review Board at our institution approved this study.

Study variables

Call-level characteristics, including call language and MSA, were predetermined and recorded before each call. Call language was recorded as either English, Spanish, or Mandarin. MSA was recorded as either LA, Houston, or NY. Our primary outcome variable was the mean number of days to a scheduled first-time primary-care appointment, either in-person or via telehealth. The mean number of days to a scheduled first-time primary-care appointment was compared among adults with and without LEP and by MSA. LEP calls were disaggregated into Spanish or Mandarin. The difference in the number of days between LEP and non-LEP callers was calculated at the completed individual call level (see Table S1) and the paired

call level (see Table 1), by MSA. The mean number of days until the first appointment was calculated using the difference in the number of days between the call date and the appointment's confirmed date. The secondary outcomes were the availability of a bilingual clinician, defined as an appointment with a Spanish- or Mandarin-speaking healthcare clinician, and the availability of a translator (see Tables 2 and 3). The availability of a bilingual clinician and translator was each recorded as "yes" or "no" for our analysis.

Statistical analyses

We conducted univariate analyses to estimate the number of individual completed calls, paired calls, and primary-care offices by call language and MSA (see Figure 1). We further stratified by call language and MSA to examine the distribution of the number of days until an appointment among all individual completed calls (see Table S1) and paired calls (see Table 1). We performed bivariate analyses, using Pearson's χ^2 to determine the statistical significance of the difference in proportions of bilingual clinicians and interpreters by MSA and call language (see Table 2). All statistical analyses were conducted using Stata/SE software version 17.0. Statistical significance was determined with a *P*-value of <.05, and all tests were 2-sided.

Limitations

This study is not without limitations. First, we assessed differences in the number of days to a scheduled appointment between English and Spanish or English- and Mandarin-speaking patients. These findings may not be generalizable to other non-English-speaking populations. Second, although callers recorded the data during and immediately after the calls, there is a possibility of measurement error in the collected and recorded data. Third, telehealth for first-time primary-care appointments was available only in a small number of offices, which did not allow us to conduct a robust disaggregated analysis of the scheduled appointments by modality (ie, in person or telehealth). Fourth, we did not collect practice-level characteristics, including practice size or staffing levels, because this was outside the scope of our study. We did, however, include practice-level characteristics, such as accepting new patients and having at least 1 clinician who spoke Spanish or Mandarin, which were part of our study inclusion criteria.

Results

We identified a total of 5878 unique primary-care offices in the LA, Houston, and NY MSAs (see Figure 1). Of the 5878, we selected a sample of 736 primary-care offices as the sampling frame of this study. Callers successfully scheduled an inperson or telehealth appointment for an English and Spanish or Mandarin and English pair in 163 of the 736 randomly

Table 1. Wait time in number of days to a scheduled in-person or telehealth appointment by language pairing and MSA (n = 163).

	Engli	sh–Spanish pairs $(n = 1)$	00)	English–Mandarin pairs $(n = 63)$			
	Mean for English calls ^a	Mean for Spanish call ^a	Difference in means	Mean for English calls ^a	Mean for Mandarin calls ^a	Difference in means	
Los Angeles	21.65	25.38	+3.73	16.68	30.68	+14.00	
Houston	7.71	15.00	+7.29	5.25	7.80	+2.55	
New York	26.52	24.30	-2.22	14.47	12.71	-1.76	

Abbreviation: Metropolitan Statistical Areas.

^aMean number of days until scheduled in-person or telehealth appointment.

Table 2. Availability of a bilingual clinician (n = 163) and interpreter (n = 81) by language and MSA.

	Availability of a bilingual clinician $(n = 163)$				Availability of an interpreter $(n = 81)$				
Language of call	Yes	No	χ2 value	P-value		Yes	No	χ2 value	P-value
Spanish $(n = 100)$ Mandarin $(n = 63)$	56 (56.00%) 26 (41.27%)	44 (44.00%) 37 (58.73%)	3.35	.067	Spanish $(n = 44)$ Mandarin $(n = 37)$	36 (69.23%) 16 (30.77%)	8 (27.59%) 21 (72.41%)	13.01	.00
MSA									
LA MSA $(n = 54)$ Houston MSA $(n = 52)$ NY MSA $(n = 57)$	35 (64.81%) 22 (42.31%) 25 (43.86%)	19 (35.19%) 30 (57.69%) 32 (56.14%)	6.8253	.033	LA MSA $(n = 19)$ Houston MSA $(n = 30)$ NY MSA $(n = 32)$	11 (57.89%) 19 (63.33%) 22 (68.75%)	8 (42.11%) 11 (36.67%) 10 (31.25%)	0.63	.73

Abbreviations: LA, Los Angeles; MSA, Metropolitan Statistical Areas; NY, New York.

selected primary-care offices, or 326 individual completed calls. The number of primary-care offices with completed paired calls was 54 in the LA MSA, 52 in the Houston MSA, and 57 in the NY MSA. When disaggregated by language, the LA MSA had 32 English and Spanish and 22 English and Mandarin paired calls (see Figure S1). In the Houston MSA, we obtained 32 English and Spanish and 20 English and Mandarin paired calls. Finally, in the NY MSA, we recorded 36 English and Spanish and 21 English and Mandarin paired calls. The language of the call refers to the initial language used by the caller and corresponds to the language attributed to the wait times.

Among the 326 individual completed calls, the number of days until the scheduled appointment, hereinafter referred to as wait time, was greater for Spanish-speaking callers compared with English-speaking callers across the 3 MSAs (see Table S1). The wait time for a scheduled appointment among Mandarin-speaking callers was greater than for English-speaking callers in the LA and Houston MSAs, but not in the NY MSAs (see Table S1). Among non-Englishspeaking callers in the Houston and NY MSAs, wait times were longer for Spanish, compared with Mandarin-speaking callers, although the opposite was true in the LA MSA (see Table S1). We also assessed the wait time for scheduled appointments by pairings, English and Spanish or English and Mandarin, within each MSA (see Table 1). In the LA MSA, the English-speaking caller's average wait time was less than Spanish-speaking callers, 21.65 days compared with 25.38 days (see Table 1). In the LA MSA, the same outcome was observed for Mandarin callers, who had an average wait time of 30.68 days, compared with 16.68 days for English speakers. In the Houston MSA, on average, English-speaking callers also had a shorter wait time of 7.71 days, compared with 15.00 days for Spanish-speaking callers (see Table 1). English-speaking callers in the Houston MSA, on average, also had a shorter wait time of 5.25 days, compared with 7.80 days for Mandarin-speaking callers. In the NY MSA, on average, Spanish-speaking callers had a shorter wait time of 24.30 days, compared with 26.52 days for English-speaking callers. Similarly, Mandarin-speaking callers in the NY MSA, on average, also had a shorter wait time of 12.71 days, compared with 15.11 days for English-speaking callers.

Of the 326 completed calls, 163 were conducted in either Spanish or Mandarin, and all callers recorded whether a bilingual clinician was available or not. Among the non-English calls, Spanish-speaking clinicians were more common than Mandarin-speaking clinicians (56.00% vs 41.27%;

P = .067), which is likely related to the a priori quotas (see Table 2). In instances where Spanish- or Mandarin-speaking clinicians were available, the wait times were, on average, longer to schedule first-time primary-care appointments with these clinicians, compared with their English-speaking counterparts in most instances (see Table 3). Of the 326 completed calls, we have data for whether an interpreter was available or not during the visit for 81 calls. Of these 81 calls, interpreters were available for 52 calls (see Table 2), and Spanish callers were more likely to have access to an interpreter compared with Mandarin-speaking callers (69.23% vs 30.77%; P = .000). Availability of an interpreter was slightly higher in the NY MSA, followed by the Houston and LA MSAs (68.75% vs 63.33% and 57.89%; P = .731; see Table 2).

Telehealth was not available at all in more than half of the individual completed calls in each of the MSAs (see Figure S1). Our findings suggest that the absence of telehealth for primary-care appointments is more common in each geographic region relative to the presence of telehealth. Of the 326 completed individual calls, 144 reported that telehealth was available. Of the 144 completed individual calls, 22 of these calls reported that telehealth was available for first-time primary-care visits. Among the 22 individual completed calls that offered telehealth for first-time primary-care appointments, 3 offered a phone call-only option, 9 used a videoonly option, and 10 offered both phone call and video options.

Discussion

In this study, we investigated the differences in wait times to scheduling a first-time primary-care appointment, either in person or via telehealth, between adults with and without LEP. Specifically, this study advances our understanding of disparities in scheduling first-time primary-care appointments between English-, Spanish-, and Mandarin-speaking adult callers with Medicaid managed care in the 3 MSAs with the largest concentrations of adults with LEP, including LA, Houston, and NY. One of our main strengths is the use of an innovative secret shopper approach to collect real-world data to reduce recall and social desirability biases that are common in other standard research techniques, including surveys. 12 In our study, adults with LEP, including Spanish- and Mandarin-speaking callers, had longer wait times until their scheduled first-time primary-care appointment, compared with non-LEP, or English-speaking callers, in the LA and Houston MSAs. In comparison, in the NY MSA, adults with

Table 3. Wait time in number of days to a scheduled in-person or telehealth appointment with a Spanish- or Mandarin-speaking clinician by caller language and MSA (n = 163).

	Los Angeles $(n = 54)$		Housto	on $(n = 52)$	New York $(n = 57)$		
Bilingual clinicians available	Mean for Spanish calls ^a	Mean for Mandarin calls ^a	Mean for Spanish calls ^a	Mean for Mandarin calls ^a	Mean for Spanish calls ^a	Mean for Mandarin calls ^a	
Yes	21.36	37.69	27.84	10.22	32.66	5.00	
No	34.20	20.55	6.21	5.81	12.60	14.52	
Difference in means ^b	-12.84	+17.14	+21.63	+4.41	+20.06	-9.52	

Abbreviation: MSA, Metropolitan Statistical Areas.

^aMean number of days until scheduled in-person or telehealth appointment with a Spanish or Mandarin-speaking clinician.

bThe difference in means refers to the difference in the number of days to scheduling an appointment when there is a Spanish- or Mandarin-speaking clinician relative to not having a clinician who speaks Spanish or Mandarin.

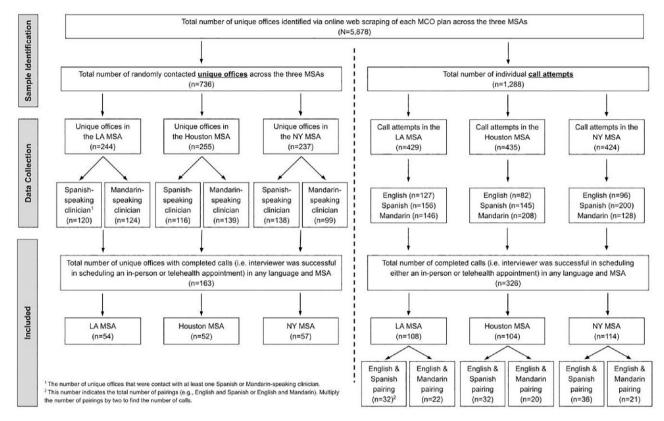


Figure 1. Flow diagram showing the number of unique offices, individual completed calls, and paired calls.

LEP had to wait slightly fewer days, compared with their non-LEP counterparts, although this difference was quite small.

The differences in wait times across the 3 MSAs may be, at least partially, explained by differences in the ratio of primary-care clinicians and disparities in the Medicaid and CHIP reimbursement rates. In 2022, the ratio of primary-care clinicians was 93.2 in New York, 89.7 in California, and 66.2 in Texas, per 100 000 people. In general, states with lower ratios of primary-care clinicians experience increases in overall wait times, which compounded with geographic differences in the ratio of Spanish- and Mandarin-speaking provider, may contribute to disparities in wait times across the 3 MSAs. Moreover, state-level differences in Medicaid and CHIP reimbursement rates for language services may also contribute to the differences in wait times by Spanish- and Mandarin-speaking patients. In California, the state does not pay separately for language or interpretation services,

instead including these charges in the capitation rates for the managed care programs.¹⁷ In New York, interpretation is a covered and reimbursable service.¹⁷ Thus, the differences in the ratio of primary-care clinicians across geographies and the Medicaid reimbursement rates likely contribute to the observed differences in wait times.

Examining the differences in wait times across the 3 MSAs is important since delays in scheduling primary-care appointments are linked with poorer physical and mental health, and the exacerbation of health conditions by prolonging the time it takes for patients to receive timely physical examinations, diagnoses, and medication prescriptions. ¹⁸ Patients with LEP encounter multiple challenges in accessing health care, including language barriers, lower rates of health literacy, un- and underinsurance, potential immigration, and legal status concerns, all of which individually and in combination reduce access to timely health care. ⁵ Delays in the wait times for scheduling primary-care appointments further increase the time it takes adults with LEP to

access health care. Overall, our findings are consistent with previous literature which suggests that adults with LEP have worse access to health care compared with non-LEP adults. The findings from the current study suggest that when adults with LEP call to schedule a first-time primary-care appointment they must wait longer to see a healthcare clinician, compared with their non-LEP counterparts.

In addition to providing insights into wait times by MSA and language, this study also advances our understanding of access to telehealth for first-time primary-care appointments, and particularly in the context of persons with LEP. Telehealth for first-time primary-care appointments provides patients who lack flexible work schedules, who have transportation barriers, or who have immigration concerns, an opportunity to establish their first contact with the healthcare system remotely. Existing literature suggests that telehealth is suitable for primary-care appointments, with simple and straightforward disease etiologies. It is also important, however, to recognize that telehealth is not without challenges, including the limited ability to conduct physical examinations, particularly for diseases with complex etiologies, a need for basic digital literacy, and access to medical interpretation. 20,21

The findings from this study have institutional policy implications. First, primary-care offices should make language and translation services available beyond the patient—clinician interaction, including the different phases that individuals with LEP must navigate prior to seeing a healthcare clinician. For example, availability of language and translation services is important when individuals enroll or re-enroll in Medicaid, when they call to schedule an appointment, and when they engage with other departments, including medical billing. Second, establishing a single point of contact, such as an office or official within a clinician's office, can help oversee the language and interpretation services provided to patients.

Conclusion

This study shows that adults with LEP experience longer wait times, compared with non-LEP callers, when they call to schedule a first-time primary-care appointment. The differences in wait times across the 3 MSAs may be, at least partially, explained by differences in the ratio of primary-care clinicians and disparities in the Medicaid and CHIP reimbursement rates. These findings provide important avenues for future research and advocacy to ensure a more equitable US healthcare system.

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Supplementary material

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Conflicts of interest

Please see ICMJE form(s) for author conflicts of interest. These have been provided as supplementary materials.

Notes

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