

# Access to Care Among Adults with Limited English Proficiency



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**BACKGROUND:** There are approximately 25.6 million individuals with limited English proficiency (LEP) in the USA, and this number is increasing.

**OBJECTIVE:** Investigate associations between LEP and access to care in adults.

**DESIGN:** Cross-sectional nationally representative survey.

**PARTICIPANTS:** Adults with ( $n = 18,908$ ) and without ( $n = 98,060$ ) LEP aged  $\geq 18$  years identified from the 2014–2018 Medical Expenditure Panel Survey

**MAIN MEASURES:** Associations between LEP and access to healthcare and preventive services were evaluated with multivariable logistic regression models, stratified by age group (18–64 and  $\geq 65$  years). The official government definition of LEP (answers “not at all/not well/well” to the question “How well do you speak English?”) was used. Access to care included having a usual source of care (and if so, distance from usual source of care, difficulty contacting usual source of care, and provision of extended hours), visiting a medical provider in the past 12 months, having to forego or delay care, and having trouble paying for medical bills. Preventive services included blood pressure and cholesterol check, flu vaccination, and cancer screening.

**KEY RESULTS:** Adults aged 18–64 years with LEP were significantly more likely to lack a usual source of care (adjusted odds ratios [aOR] = 2.48; 95% confidence interval [CI] = 2.27–2.70), not have visited a medical provider (aOR = 2.02; CI = 1.89–2.16), and to be overdue for receipt of preventive services, including blood pressure check (aOR = 2.00; CI = 1.79–2.23), cholesterol check (aOR = 1.22; CI = 1.03–1.44), and colorectal cancer screening (aOR = 1.58; CI = 1.37–1.83) than adults without LEP. Results were similar among adults aged  $\geq 65$  years.

**CONCLUSIONS:** Adults with LEP had consistently worse access to care than adults without LEP. System-level interventions, such as expanding access to health insurance coverage, providing language services, improving provider training in cultural competence, and increasing diversity in the medical workforce may minimize barriers and improve equity in access to care.

**KEY WORDS:** limited English proficiency; access to care; disparities; health equity.

J Gen Intern Med 38(3):592–9

DOI: 10.1007/s11606-022-07690-3

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## INTRODUCTION

There were approximately 25.6 million individuals living in the USA with limited English proficiency in 2019, an increase of nearly a million from 2010.<sup>1,2</sup> Adults with limited English proficiency (LEP) are more likely to face structural barriers in access to healthcare including ineffective patient-physician communication,<sup>3–5</sup> inadequate health insurance coverage,<sup>1,6,7</sup> lack of usual source of care,<sup>1</sup> and worse receipt of preventive services.<sup>8</sup>

Under federal law and the civil rights provision of the Affordable Care Act (ACA), healthcare providers receiving federal funds are required to provide equal access to care for individuals with LEP.<sup>9,10</sup> Additionally, improving access to healthcare for adults with LEP is a public health priority included in the Healthy People 2030 developing goals.<sup>11</sup>

Prior studies evaluating the association between LEP and access to healthcare and preventive services were conducted prior to implementation of the ACA.<sup>12–15</sup> Among these pre-ACA studies, two used data from nationally representative samples.<sup>14,15</sup> One study found individuals with LEP (defined as primary spoken language of Spanish) had more difficulty contacting the healthcare provider by phone or after hours and were less likely to receive preventive health services than English-proficient individuals.<sup>14</sup> The other study found that individuals with LEP (defined as choosing to be interviewed in Spanish) were less likely to have a medical visit.<sup>15</sup> Other pre-ACA studies evaluating the association between LEP and access to healthcare were restricted to a single state or city.<sup>12,13</sup> In California, individuals with LEP (defined as speaking English not well or not at all) were more likely to lack a usual source of care,<sup>13</sup> and in Chicago, individuals with LEP (defined as choosing to be interviewed in Spanish) were less likely to receive cardiovascular-disease-related screenings. However, previous studies did not use the official US government definition of

Received December 28, 2021

Accepted May 31, 2022

Published online July 26, 2022

LEP (i.e., speaking English less than “very well”) <sup>16</sup> to evaluate the association between LEP and healthcare access.

The present study uses contemporary nationally representative data to test the hypothesis that LEP is associated with worse access to healthcare, including preventive services use.

## METHODS

### Study Sample

We identified adults aged  $\geq 18$  years ( $n = 117,043$ ) from the 2014–2018 Medical Expenditure Panel Survey (MEPS) Household Component, a nationally representative survey of the US civilian non-institutionalized population. The MEPS measures health insurance coverage, access to care and utilization, as well as demographic characteristics and health history. Annual response rates ranged from 44 to 49% during the study period, and interviews were conducted in Spanish and English.<sup>17</sup> All data used were publicly available and deidentified; thus, Institutional Review Board approval was not required for this study.

Survey respondents without information on English proficiency were excluded ( $n = 75$ ).

### Measures

The exposure of interest, LEP, was based on the question “How well do you speak English?” asked if the participant reported speaking a language other than English at home, and then dichotomized into speaking English “Well/Not well”/“Not at all” or speaking English “Very well,” as per US government official definition.<sup>16</sup> In sensitivity analysis, we evaluated each category of English proficiency separately. Sociodemographic characteristics included age (continuous), sex, education (less than high school, high school graduate, some college, college or more), marital status (currently married yes/no), region (Northeast, Midwest, South, West), race/ethnicity (non-Hispanic White, non-Hispanic Black, Hispanic, other), family income ( $< 138\%$ ,  $139\text{--}400\%$ ,  $> 400\%$  of federal poverty level), employment (employed vs. unemployed/not in the labor force), health insurance coverage type (18–64: any private, public only, uninsured;  $\geq 65$  Medicare only, Medicare and private, Medicare and other public, no Medicare but has other public/private, uninsured) and coverage continuity (insured all year, uninsured part of the year, uninsured all year), whether the adult was born in the USA, body mass index ( $< 25 \text{ kg/m}^2$ ,  $25\text{--}30 \text{ kg/m}^2$ ,  $\geq 30 \text{ kg/m}^2$ ), and is a person who currently smokes. All measures were self-reported.

We evaluated the study outcome, access to care, with multiple measures classified with an adaptation of Anderson and Aday’s behavioral model of access to health care to reflect the distinction between perceived and realized access to care.<sup>18,19</sup> Perceived access to care included questions about having a usual source of care, having trouble paying for medical bills,

and having to forego or delay medical care, dental care, or prescription medication. The analysis of usual source of care experiences was restricted to adults reporting a usual source of care and included distance from usual source of care, difficulty contacting usual source of care by phone, and late and weekend hours provided. Survey year 2018 was excluded for the delay in medical care measure because the survey question phrasing changed and was not comparable to previous years. Realized access to care included visiting a medical provider in the past 12 months and receipt of preventive services among eligible individuals. Eligibility for each preventive service was defined according to US Preventive Services Task Force (USPSTF)<sup>20</sup> and Advisory Committee on Immunization Practices (ACIP) recommendations.<sup>21</sup> Respondents with a history of the condition related to the preventive service were excluded (Supplemental Table 1). Preventive services included blood pressure check, cholesterol check, and flu vaccination, as well as cervical (Pap smear), breast (mammogram), and colorectal cancer (blood stool test, flexible sigmoidoscopy, or colonoscopy) screening. The year of the USPSTF recommendation, level of evidence (grade), number of eligible participants included in the study, the exact wording of the MEPS questionnaire for each preventive service, and timing of the services are listed in Supplemental Table 1. Survey years 2017 and 2018 were excluded for preventive services measures because the survey question phrasing and frequency changed and was not comparable to previous years.

### Statistical Analysis

Relevant sociodemographic characteristics of adults with and without LEP were compared using chi-square tests for categorical variables and *t* tests for continuous variables. All analyses were stratified by age group (18–64 years,  $\geq 65$  years) because adults  $\geq 65$  years old are age-eligible for Medicare coverage. Multivariable logistic regression models were used to assess the association between LEP and access to care controlling for survey year and sociodemographic characteristics (age, sex, education, marital status, and region) selected a priori as potential confounders according to the definition of disparity in access to health services used by the Healthy People 2030 (i.e., differences in access to health care that are not due to differences in underlying health-care needs or preferences).<sup>22,23</sup> Therefore, we chose not to adjust for socioeconomic status or health insurance coverage.<sup>24</sup> All estimates were weighted to account for MEPS complex survey design and nonresponses. All analyses were conducted using SAS 9.3 (SAS Institute Inc., Cary, NC). All tests were two-sided at the significance level of 0.05.

## RESULTS

Adults with LEP made up 9% of the study population, 22.7 million adults in 2018, and were more likely to be female, have lower educational attainment, self-identify as Hispanic or

other race, and be married than adults without LEP (Table 1). Adults with LEP were less likely to smoke, be born in the USA, live in the Midwest, be employed at the time of the

interview, be insured throughout the year, and have private health insurance coverage than adults without LEP (Table 1). Women and individuals who self-identified as being Hispanic,

**Table 1 Participants' Characteristics by Age Group and Limited English Proficiency (LEP), MEPS 2014–2018**

Characteristics	18–64 years old		P value	65 years old and older		P value
	LEP (n = 15,753)	EP (n = 78,399)		LEP (n = 3,155)	EP (n = 19,661)	
	W% (n = 91,565,356)	W% (n = 891,477,736)		W% (n = 20,019,086)	W% (n = 22,9224,567)	
Sex			0.6472			0.0012
Male	48.9	49.2		41.3	45.2	
Female	51.1	50.8		58.7	54.8	
Age, years			< .0001			0.0639
18–26	8.8	20.7		–	–	
27–34	17.1	17.8		–	–	
35–44	27.3	19.7		–	–	
45–54	27.1	20.7		–	–	
55–64	19.6	21.2		–	–	
65–74	–	–		55.8	59.0	
>74	–	–		44.2	41.0	
Race and ethnicity			< .0001			< .0001
Hispanic	70.5	12.5		56.9	4.0	
NH White	6.4	65.6		9.9	81.9	
NH Black	3.8	13.5		2.2	9.6	
Other <sup>a</sup>	19.2	8.4		31.1	4.5	
Education			< .0001			< .0001
< High school	43.3	9.3		50.0	11.7	
High school	32.7	39.0		25.5	41.8	
≥ Some college	24.0	51.6		24.6	46.6	
Income			< .0001			< .0001
≤ 138% FPL	32.0	15.9		37.0	15.6	
139–400% FPL	49.6	37.4		41.8	40.1	
> 400% FPL	18.4	46.7		21.2	44.3	
Currently married <sup>b</sup>	61.9	50.1	< .0001	54.4	56.2	0.3301
Region			< .0001			< .0001
Northeast	17.1	17.7		22.3	18.2	
Midwest	10.5	21.9		6.8	22.8	
South	36.8	37.6		34.3	37.8	
West	35.7	22.8		36.5	21.1	
Employed <sup>c</sup>	76.5	82.1	< .0001	19.5	24.3	0.0004
Non-US Born	91.6	10.7	< .0001	92.6	7.0	< .0001
Years living in the USA <sup>d</sup>			< .0001			< .0001
< 1 year	0.4	0.3		0.9	–	
1–5 years	9.4	5.3		2.7	0.7	
6–10 years	14.0	11.1		5.2	1.2	
11–15 years	18.6	12.8		6.6	2.0	
> 15 years	57.6	70.4		84.6	96.1	
Current smoker	8.1	17.0	< .0001	6.1	8.5	0.0054
Body mass index			< .0001			0.0029
< 25 kg/m <sup>2</sup>	31.4	34.7		37.4	33.0	
25–30 kg/m <sup>2</sup>	36.6	32.2		35.9	36.0	
≥ 30 kg/m <sup>2</sup>	27.1	31.4		23.7	29.2	
Missing	4.9	1.8		3.0	1.7	
Health insurance continuity			< .0001			< .0001
Uninsured all year	33.8	8.9		4.0	0.1	
Partially insured all year	14.8	11.7		4.2	1.8	
Insured all year	51.4	79.4		91.9	98.1	
Health insurance coverage type			< .0001			< .0001
< 65 any private	44.4	76.7		–	–	
< 65 public only	21.8	14.4		–	–	
< 65 uninsured	33.8	8.9		–	–	
65+ Medicare only	–	–		30.6	34.3	
65+ Medicare and private	–	–		16.9	56.1	
65+ Medicare and other public only	–	–		46.3	8.4	
65+ uninsured	–	–		4.0	0.1	
65+ no Medicare and any other public/private	–	–		2.3	1.1	

W weighted, LEP limited English proficiency, EP English proficient, NH non-Hispanic, FPL federal poverty level

<sup>a</sup>Other group is made up of the race group “non-Hispanic Asian only” and “non-Hispanic other race or multiple race.” The Asian race makes up 99% of this category for the adults with the LEP group and 50% for the adults without LEP

<sup>b</sup>Missing coded as other

<sup>c</sup>Employed or unemployed/out of the labor force

<sup>d</sup>US-born individuals were excluded

with lower educational attainment and lower income, who resided in the South, and who reported being uninsured all year were overrepresented among those who reported higher levels of LEP (Supplemental Table 2).

**Perceived Access to Care**

As shown in Table 2, nearly half (42.7%) of adults aged 18–64 years with LEP lacked a usual source of care provider, compared to approximately a third (27.4%) of adults without LEP (adjusted odds ratios [aOR] = 2.48; 95% confidence interval [CI] = 2.27–2.70 and ≥ 65 years: aOR = 1.61; CI = 1.28, 2.02 ). Among adults aged 18–64 years who reported having a usual source of care, having LEP was associated with having a difficult time contacting the usual source of care by phone during normal (aOR = 1.22; CI = 1.10–1.36) and after hours (aOR = 1.66; CI = 1.50–1.84). Among adults aged ≥ 65 years with a usual source of care, those with LEP were also more likely to have difficulty contacting the usual care source after hours (aOR = 1.27; CI = 1.04–1.54) and for the usual source of care to be more than 30 min away (aOR = 1.29; CI = 1.01–1.65) than adults without LEP (Table 2). Results were similar in sensitivity analyses where outcomes were analyzed according to more detailed English proficiency categories (English proficient vs. speaks English “well,” “not well,” or “not at all”). Individuals who reported speaking English “well,” “not well,” or “not at all” reported worse perceived access to care compared to those who were proficient, with individuals who reported speaking English “not at all” three times more likely to lack a usual source of care provider (Supplemental Table 3).

Adults aged 18–64 years with LEP were less likely to have problems paying for medical bills (aOR = 0.81; CI = 0.73–0.90) and to delay care (aOR = 0.60; CI = 0.53–0.67) than adults aged 18–64 years without LEP (Table 2 and Supplemental Table 3).

**Realized Access to Care**

As shown in Table 3, adults with LEP were more likely to not have visited a medical provider in the past year than adults without LEP (18–64 years: aOR = 2.02; CI = 1.89–2.16 and ≥ 65 years: aOR = 1.59; CI = 1.27–1.99). Adults with LEP had worse access to preventive services across multiple measures. Adults aged 18–64 years with LEP were more likely to have had their blood pressure taken more than a year ago or never (aOR = 2.00; CI = 1.79–2.23), to have their cholesterol checked more than 5 years ago or never (aOR = 1.22; CI = 1.03–1.44), to be overdue for receiving a pap-smear test (aOR = 1.25; CI = 1.04, 1.51), colorectal cancer screening (18–64 years: aOR = 1.58; 95% CI = 1.37–1.82 and ≥ 65 years: aOR = 1.82; CI = 1.40–2.37), and the flu vaccine (18–64 years: aOR = 1.21; CI = 1.10–1.32 and ≥ 65 years: aOR = 1.33; CI = 1.10–1.60) than adults without LEP (Table 3). Results were similar in sensitivity analyses, where outcomes were analyzed according to more detailed English proficiency categories (English proficient vs. speaks English “well,” “not well,” or “not at all”). Individuals who reported speaking English “well,” “not well,” or “not at all” reported worse realized access to care compared to those who were proficient, with individuals who reported speaking English “not at all” being twice more likely to not have visited a medical provider or had blood pressure checked in the last year (Supplemental Table 4).

**DISCUSSION**

In this large nationally representative contemporary study, we found that 9% of adults in the USA with LEP, 22.7 million people in 2018, experienced worse access to care than adults without LEP. Adults with LEP were more likely to lack a

**Table 2 Association Between Limited English Proficiency (LEP) and Perceived Access to Care by Age Group, MEPS 2014–2018**

	18–64 years				≥ 65 years			
	LEP W%	EP W%	Crude odds ratio	Adjusted odds ratio	LEP W%	EP W%	Crude odds ratio	Adjusted odds ratio
Perceived access to care								
No usual source of care provider	42.7	27.4	1.98 (1.82, 2.14)	2.48 (2.27, 2.70)	11.3	7.0	1.70 (1.39, 2.07)	1.61 (1.28, 2.02)
Difficulty contacting usual source of care by phone <sup>a</sup>	19.3	15.2	1.33 (1.21, 1.47)	1.22 (1.10, 1.36)	18.0	16.3	1.13 (0.93, 1.36)	1.06 (0.86, 1.30)
Usual source of care does not offer nights and weekend hours <sup>a</sup>	60.2	59.3	1.04 (0.93, 1.15)	1.00 (0.90, 1.12)	65.2	72.0	0.73 (0.61, 0.87)	0.76 (0.63, 0.93)
Difficult to contact usual source of care by phone after hours <sup>a</sup>	54.9	41.0	1.75 (1.59, 1.93)	1.66 (1.50, 1.84)	46.2	39.1	1.34 (1.12, 1.60)	1.27 (1.04, 1.54)
Usual source of care more than 30 min away <sup>a</sup>	10.7	9.4	1.15 (0.97, 1.36)	1.12 (0.94, 1.35)	14.0	10.4	1.41 (1.12, 1.77)	1.29 (1.01, 1.65)
Unable to get or delayed any necessary medical care, dental care, or prescription medication	7.9	12.2	0.62 (0.56, 0.68)	0.6 (0.53, 0.67)	12.4	13.0	0.95 (0.78, 1.16)	0.94 (0.75, 1.17)
Family having problems paying medical bills	10.1	11.0	0.91 (0.82, 1.01)	0.81 (0.73, 0.90)	9.6	7.4	1.32 (1.07, 1.63)	1.10 (0.81, 1.26)

Weighted logistic regression results using adults without limited English proficiency (LEP) as the reference group. Adjusted estimates included age, sex, education, marriage status, region, and survey year in the models. Survey year 2018 was not included for the delay care measure because phrasing of the survey question changed in 2018

W weighted, LEP limited English proficiency, EP English proficient  
<sup>a</sup>Among those who reported having a usual source of care

**Table 3 Association Between Limited English Proficiency (LEP) and Realized Access to Care by Age Group, MEPS 2014–2016**

	18–64 years			Adjusted odds ratio	≥ 65 years			Adjusted odds ratio
	LEP W%	EP W%	Crude odds ratio		LEP W%	EP W%	Crude odds ratio	
Realized access to care								
No medical provider visits this year	50.0	34.5	1.91 (1.79, 2.02)	2.02 (1.89, 2.16)	14.3	8.3	1.85 (1.51, 2.25)	1.59 (1.27, 1.99)
Blood pressure taken more than a year ago or never	37.3	22.7	2.02 (1.83, 2.24)	2.00 (1.79, 2.23)	14.4	8.2	1.89 (1.27, 2.83)	1.39 (0.89, 2.16)
Cholesterol checked more than 5 years ago or never	26.9	19.9	1.48 (1.29, 1.71)	1.22 (1.03, 1.44)	5.1	4.3	1.21 (0.71, 2.07)	0.92 (0.51, 1.68)
No colorectal screening	56.8	39.5	2.01 (1.78, 2.28)	1.58 (1.37, 1.82)	36.8	21.2	2.16 (1.73, 2.70)	1.82 (1.40, 2.37)
No blood stool test in the past year	83.4	90.6	0.52 (0.43, 0.62)	0.63 (0.50, 0.78)	76.4	84.4	0.60 (0.47, 0.77)	0.68 (0.51, 0.90)
No colonoscopy in the last 10 years	65.9	43.3	2.54 (2.23, 2.89)	1.85 (1.61, 2.13)	44.9	25.4	2.40 (1.93, 2.97)	1.94 (1.49, 2.52)
No sigmoidoscopy in the last 5 years	96.0	97.1	0.72 (0.55, 0.96)	0.83 (0.59, 1.16)	92.3	95.1	0.61 (0.43, 0.87)	0.71 (0.47, 1.06)
Flu vaccine more than a year ago or never	67.0	61.4	1.28 (1.17, 1.39)	1.21 (1.10, 1.32)	35.1	27.9	1.40 (1.19, 1.64)	1.33 (1.10, 1.60)
No Pap smear test in the last 3 years	17.2	12.8	1.41 (1.23, 1.62)	1.25 (1.04, 1.51)	–	–	–	–
No mammogram in the last 2 years	24.9	22.3	1.16 (0.94, 1.42)	0.90 (0.70, 1.17)	22.2	20.0	1.14 (0.84, 1.56)	0.87 (0.60, 1.28)

Weighted logistic regression results using adults without limited English proficiency (LEP) as the reference group. Adjusted estimates included age, sex, education, marriage status, region, and survey year in the model. Survey years 2017 and 2018 not included in use of preventive services models because in 2017 the phrasing and frequency of the preventive services questions changed  
W weighted, LEP limited English proficiency, EP English proficient

usual source of care and be overdue for receipt of preventive services, even after implementation of the health insurance coverage and civil rights provisions of the ACA.

Our findings of worse realized access to care, such as not visiting a healthcare provider in the last year and being overdue for receipt of preventive services, were consistent with studies conducted pre-ACA,<sup>14,15</sup> and extend previously reported higher emergency department visits and hospitalizations, highlighting unmet healthcare needs among adults with LEP.<sup>25</sup> Our finding of better perceived access to care among adults with LEP, such as being less likely to report delays in access to health care, is also consistent with findings from previous studies.<sup>14,26</sup> The apparent discrepancy between worse realized and better perceived access to care might be explained by fewer interactions with the healthcare system among individuals with LEP or by sociocultural heterogeneity leading to differences in health status perception, in which different population groups perceive their healthcare needs differently.<sup>27–29</sup> Combined, these findings could explain why adults with LEP, who are less likely to interact with the healthcare system, were also less likely to report having problems paying medical bills compared to English-proficient adults in this study. Of note, among individuals ≥ 65 years of age, who have greater medical needs and are more likely to interact with the healthcare system, adults with LEP were more likely to report having problems paying for medical bills than adults ≥ 65 without LEP, and there were no differences in delaying necessary care.

Importantly, for both age groups, adults with LEP had higher percentages of uninsurance and health insurance coverage disruptions (uninsured for part of the year) compared to adults without LEP, with individuals with higher LEP

experiencing worse health insurance coverage. These high levels of uninsurance and health insurance coverage disruptions are particularly striking and concerning as health insurance coverage is one of the most important modifiable factors determining access to health care.<sup>30,31</sup> Due to legal and policy contexts governing access to resources, adults with LEP, who are less likely to be US-born, are subjected to stricter health insurance coverage eligibility requirements and exposed to greater complexity and administrative burden in determining eligibility and acquiring and maintaining health insurance coverage.<sup>32</sup> For example, some immigration documentation types are excluded from the health insurance coverage provisions of the ACA,<sup>33</sup> and Medicare and Medicaid coverage eligibility is only available 5 years after obtaining permanent resident documentation.<sup>32</sup>

In addition to health insurance coverage policies, previous studies have shown that language concordance between provider and patient is associated with effective patient-provider communication, use of preventive services, and health outcomes in individuals with LEP.<sup>3,34–36</sup> In the absence of language concordance or professional interpretation services, adults with LEP have longer hospital stays, greater risk on in-hospital infections, falls, pressure ulcers, surgical delays, and readmissions.<sup>37,38</sup> Providers may also be less likely to recommend preventive services or cancer screening to adults with LEP.<sup>3</sup> For example, in study using data from the 1988 Breast Cancer Screening Consortium survey, providers were less likely to discuss and recommend mammography screening with patients whose preferred language was Spanish.<sup>39</sup> Additional evidence from the 2000 National Health Interview Survey found that providers were more than twice more likely to recommend Pap smear to English-proficient women

compared to women with LEP.<sup>40</sup> Several strategies for increasing language and cultural competence of the healthcare workforce have been proposed including increasing recruitment of students, residents, and physicians from diverse backgrounds and promoting high-quality medical language courses.<sup>41,42</sup>

Individuals with LEP have the legal right to access health care in their preferred language,<sup>9,10</sup> although this legislation has not been appropriately enforced.<sup>43,44</sup> Providers often have language services available, but may choose not to use professional language services due to provider under-valuing communication and rationalizing substandard care for patients with LEP,<sup>45</sup> lack of training on how to use interpreters,<sup>46,47</sup> or lack of reimbursement for medical interpretation.<sup>48,49</sup> Establishing healthcare delivery and financing systems that improve access to effective patient-provider communication through professional language assistance services that follow national standards,<sup>48,50</sup> and reinstating language provisions of the ACA (which required covered health entities to provide taglines informing individuals with LEP about the availability of language assistance services free of charge),<sup>51</sup> is crucial for addressing disparities in access to healthcare.<sup>37,52,53</sup>

Lack of diversity in the physician workforce also impedes effective patient-provider communication, not only through scarcity of language concordance, but also due to providers' lack of cultural competence and ability to demonstrate trustworthiness. A randomized study found that African American men were more likely to undergo preventives services, particularly those which were invasive, once they met in person with a racially concordant doctor,<sup>54</sup> emphasizing the importance of diversity in improving the ability of the physician workforce to demonstrate trustworthiness. Statistics from the Association of American Medical College indicate that as of July 1, 2019, among active physicians in the United States, only 5.6% were Hispanic; 5.0%, African American; and 17.1%, Asian.<sup>55</sup> Additionally, policy and cultural contexts on immigration and enforcement activities can further complicate the ability of healthcare providers to demonstrate trustworthiness.<sup>56–59</sup>

Strengths of this study include contemporary nationally representative data, use of the government's definition of LEP (which facilitates comparison with other studies and published government statistics), evaluation of different LEP levels in sensitivity analyses, inclusion of all adults with and without LEP (no exclusion criteria on racial/ethnic group), and separately investigating the association between LEP and access to healthcare for both 18–64- and  $\geq 65$ -year-old adults, who differ in age eligibility for Medicare coverage. Our study also has several limitations. First, the MEPS relies on self-reported information, which may lead to recall bias. However, self-reporting of mammography in other studies has been shown to be a reliable measure,<sup>60</sup> and we chose the most lenient cancer screening criteria recommended to minimize recall bias. Second, adults with LEP could be more likely to decline survey participation and/or answering the language proficiency question, which could lead to underestimation of

disparities. However, in this study, few participants (0.06%) did not answer the language proficiency question. Third, we are not able to evaluate how different state- and local-level policies contribute to disparities in access to healthcare by English proficiency because public use MEPS data do not allow for state- or local-level estimates. Finally, we were not able to account for type of immigration documentation as the MEPS does not collect this information.

## CONCLUSIONS

Adults with LEP are less likely to have health insurance coverage, have a usual source of care, or receive preventive services, compared to English-proficient adults. Efforts to reduce barriers to care disproportionately experienced by adults with LEP, such as facilitating access to effective patient-provider communication, improving cultural competence and increasing diversity in the healthcare workforce, and expanding access to health insurance coverage, are crucial for addressing this disparity. Future research should evaluate the relative contribution of different factors, including reimbursement and regulatory policies governing provision of language services, institutional and provider practices determining access to effective patient-provider communication, and immigration documentation types to the association between LEP and worse access to care.

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**Supplementary Information** The online version contains supplementary material available at <https://doi.org/10.1007/s11606-022-07690-3>.

### Declarations:

**Conflict of interest:** Natalia Ramirez, Stacey A. Fedewa, Leticia M. Nogueira, K. Robin Yabroff, and Xuesong Han have no conflict of interest.

**Financial Disclosure:** Natalia Ramirez has no financial disclosure. Stacey A. Fedewa has no financial disclosures. K. Robin Yabroff serves on the Flatiron Health Equity Advisory Board. Xuesong Han received research support from AstraZeneca for an unrelated project. Leticia M. Nogueira has no financial disclosures.

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