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Delayed and Forgone Health Care Among Adults With Limited English Proficiency During the Early COVID-19 Pandemic

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Background: Individuals with limited English proficiency (LEP) have long faced barriers in navigating the health care system. More information is needed to understand whether their care was limited further during the early period of the COVID-19 pandemic.

Objective: To assess the impact of English proficiency on delayed and forgone health care during the early COVID-19 pandemic.

Research Design: Multivariate logistic regression analysis of National Health Interview Survey data (July–December 2020; n = 16,941). Outcomes were self-reported delayed and forgone health care because of cost or the COVID-19 pandemic. Delayed health care included medical, dental, mental health, and pharmacy care. Forgone health care also included care at home from a health professional.

Results: A greater percentage of LEP adults reported delayed (49%) and forgone (41%) health care than English-proficient adults (40% and 30%, respectively). However, English proficiency was not significantly associated with delayed or forgone health care, after adjusting for demographic, socioeconomic, and health factors. Among LEP adults, multivariate models showed that being uninsured, having a disability, and having chronic conditions increased the risk of delaying and forgoing health care. LEP adults of Asian race and Hispanic ethnicity were also more likely to forgo health care while those with 65+ years were less likely to forgo health care.

Conclusions: Adults with LEP were more likely to experience challenges accessing health care early in the pandemic. Delayed and forgone health care were explained by low socioeconomic status and poor health. These findings highlight how during a period of limited health resources, deficiencies in the health care system resulted in an already disadvantaged group being at greater risk of inequitable access to care.

Key Words: delayed and forgone care, language, disparities, access to care

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Over 25 million individuals in the United States (or 8% of the population) are described as having limited English proficiency (LEP), or as speaking English "less than very well."[1] These individuals have long encountered a unique set of challenges when accessing health care. Compared to individuals with English proficiency (EP), LEP individuals have significantly worse access and care, including greater difficulty gaining insurance coverage, being less likely to receive preventive care, and more likely to have preventable emergency department visits.[2–4]

The COVID-19 pandemic amplified the challenges that many individuals face in accessing health care. The percentage of US adults experiencing delayed or forgone medical care during early in the pandemic was estimated to be between 25% to 40%, compared with 8%–14% before the pandemic.[5–13] Postponed or skipped care may increase the risk of morbidity and mortality, particularly among those with chronic health conditions; worsening health conditions can also limit the ability to work or perform other daily activities.[9] Reductions in access to care were found to be worse among traditionally underserved populations such as people with disabilities and racial and ethnic minorities.[6–8]

Previous studies have largely focused on access to medical care, yet the pandemic disrupted all aspects of the health care system. Few studies have explored the extent of delayed and forgone health care across different types of health care services during the pandemic[9,10] and none have examined the experiences among individuals with LEP. To address these gaps, we aimed to assess the impact of English language proficiency on delayed and forgone health care across several services (ie, medical, dental, mental health, pharmacy, and home care) during the early COVID-19 pandemic, using a nationally representative sample. Our primary research questions were whether there was an association between English proficiency and delayed and forgone health

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care; and what factors were associated with delayed and forgone health care among LEP adults. We hypothesized that during the early period of the COVID-19 pandemic, LEP adults had significantly more delayed and forgone health care than English proficiency adults. As a group that has long faced longstanding barriers in accessing care and subsequent disparities in health outcomes, it is important to understand health care access among LEP adults during the pandemic to better develop strategies to address their health care needs in future crises.

METHODS

Data and Sample

Data were from adult respondents to the 2020 National Health Interview Survey (NHIS) collected during July–December 2020. NHIS is a nationally representative, cross-sectional household survey of the civilian, noninstitutionalized US population.[14] The COVID-19 pandemic necessitated changes to data collection.[15] Interviews were typically conducted in person with a telephone follow-up visit; 2020 interviews were conducted over the telephone first with limited in-person follow-up visits. The 2020 response rate was 48.9% (compared to 59.1% in 2019).[15,16] The analytic sample included 16,941 adult respondents aged 18 years and older who were interviewed in the third and fourth quarter of 2020 and had data on all measures of interest. All study variables had <5% missing. This study was determined to be not Human Subjects Research by the Advocate Aurora Health Institutional Review Board.

Measures

Our main outcomes were 2 dichotomous measures, self-reported delayed and forgone health care. Delayed health care was a composite measure constructed from respondents who answered yes to a delay in medical care, dental care, mental health care, or prescriptions due to cost in the past 12 months or the coronavirus pandemic. Similarly, forgone health care was constructed from respondents who answered yes to not getting medical care, dental care, mental health care, prescriptions, or home care due to cost in the past 12 months or the coronavirus pandemic. Questions related to the pandemic were added in July 2020.[15] All questions were asked to all adults except delays in filling prescriptions due to cost was asked only from respondents who had taken prescription medication in the past 12 months. Full question texts can be found in Appendix A, Supplemental Digital Content 1, http://links.lww.com/MLR/C775.

The key independent variable was English proficiency (proficient vs. limited proficiency). Respondents were categorized as limited proficiency if their interview was conducted in Spanish, both English and Spanish, or some other language. Interview language has commonly been used as a proxy for English proficiency in the health care access and utilization literature.[11,17]

Covariates included demographic, socioeconomic, and health characteristics. Covariates included: race and ethnicity (non-Hispanic White, Hispanic, non-Hispanic Asian, non-Hispanic Other), age (18–44, 45–64, ≥65 years), sex (male, female), education (college degree or higher, some college, high school diploma, less than high school diploma), poverty status [family income <100% of federal poverty level (FPL), 100%–199% FPL, ≥200% FPL], insurance (private, public, uninsured), worked last week (yes, no), and having any one of 6 common chronic conditions (arthritis, cancer, congestive heart disease, diabetes, hypertension, high cholesterol). Respondents were considered to have a usual place of care if they responded to having one or more places. The presence of a disability (yes or no) was included using the Washington Group Short Set Composite Disability Indicator. We did not control for overall health status because the measure has been found to be susceptible to cultural bias among Asian and Latinx populations.[18]

Statistical Analysis

We conducted descriptive and multivariate analyses. Descriptive statistics were produced to understand differences in characteristics between LEP and English proficiency groups. We conducted bivariate analyses using χ^2 tests to compare the distribution of the outcomes and other characteristics. We then performed 2 analyses using multivariate logistic regression models. The first analysis assessed the association between English proficiency and delayed and forgone health care. In the second analysis, we separately modeled characteristics associated with delayed and forgone health care in the LEP and English proficiency groups.

All analyses were conducted using Stata version 17.0 (Stata Corporation) and used statistical methods to account for the complex survey design (ie, weighting). Two-sided $P < 0.05$ was considered statistically significant.

RESULTS

Descriptive Characteristics

The 16,941 respondents in our sample represented over 223 million adults nationally. Approximately 7% of respondents, representing over 16 million adults, were identified as LEP. A greater percentage of LEP adults were between 45 and 64 years, were Hispanic or Asian, had less education, were poorer, had public insurance or were uninsured, had not worked last week, and did not have a usual place of care (Table 1). We observed no differences by sex, having a disability, or having one or more chronic conditions.

LEP and English proficiency adults were markedly different in several demographic and socioeconomic characteristics. Almost all LEP adults were Hispanic (88.5%) or Asian (9.0%) while most English proficiency adults were White (68.1%). LEP adults also had much lower levels of educational attainment and income. More than half of LEP adults (51.5%) had less than a high school diploma, which is more than 6 times greater than English proficiency adults (8.1%). Almost one-third (31.5%) of LEP adults had an income below the FPL compared to only 8.6% of English proficiency adults. In addition, 38.5% of LEP adults were uninsured and 31.4% had public insurance compared to 9.2% and 21.0% of English proficiency adults, respectively. Finally, a smaller percentage of LEP adults reported a usual place of care (84.0%) compared to English proficiency adults (90.4%).

TABLE 1. Demographic, Socioeconomic, and Health Characteristics of Adult Respondents in the United States, by English Proficiency, National Health Interview Survey, July–December 2020

	Total (N = 16,941) % (95% CI)	English proficient (N = 16,257) % (95% CI)	Limited English proficient* (N = 684) % (95% CI)	*P*
Age				$P = 0.009$
18–44 years	45.7 (44.6, 46.9)	45.7 (44.5, 46.9)	45.7 (41.2, 50.2)	
45–64 years	32.5 (31.6, 33.4)	32.1 (31.2, 33.1)	37.4 (32.9, 42.1)	
65+ years	21.8 (21.0, 22.6)	22.1 (21.3, 23.0)	16.9 (14.0, 20.3)	
Male	48.2 (47.2, 49.2)	48.3 (47.2, 49.3)	46.8 (42.4, 51.3)	$P = 0.54$
Race and ethnicity				$P < 0.001$
Non-Hispanic White	63.5 (61.6, 65.4)	68.1 (66.4, 69.7)	1.7 (0.9, 3.1)	
Hispanic	16.7 (15.1, 18.4)	11.4 (10.3, 12.6)	88.5 (84.6, 91.5)	
Non-Hispanic Asian	5.9 (5.2, 6.6)	5.6 (5.0, 6.4)	9.0 (6.3, 12.8)	
Non-Hispanic Other†	14.0 (12.9, 15.1)	14.9 (13.8, 16.1)	0.8 (0.3, 2.1)	
Education				$P < 0.001$
College degree or higher	30.2 (29.1, 31.3)	31.8 (30.7, 32.9)	8.1 (5.9, 10.9)	
Some college	29.8 (28.8, 30.8)	31.1 (30.1, 32.1)	12.1 (9.4, 15.5)	
High school diploma	28.9 (27.9, 30.0)	29.0 (27.9, 30.1)	28.3 (24.1, 33.0)	
Less than high school diploma	11.1 (10.2, 12.1)	8.1 (7.4, 8.9)	51.5 (46.4, 56.5)	
Poverty status				$P < 0.001$
≥200% FPL	71.5 (70.2, 72.7)	74.3 (73.1, 75.5)	33.5 (29.0, 38.3)	
100%–199% FPL	18.3 (17.4, 19.3)	17.1 (16.2, 18.1)	35.0 (30.9, 39.3)	
<100% FPL	10.2 (9.4, 11.0)	8.6 (7.9, 9.3)	31.5 (27.0, 36.5)	
Insurance				$P < 0.001$
Private	67.1 (65.9, 68.4)	69.8 (68.6, 71.0)	30.1 (25.8, 34.8)	
Public	21.7 (20.7, 22.7)	21.0 (20.0, 22.0)	31.4 (27.4, 35.7)	
Uninsured	11.2 (10.3, 12.1)	9.2 (8.4, 10.0)	38.5 (34.1, 43.0)	
Worked last week				$P < 0.001$
Yes	61.3 (60.3, 62.4)	61.9 (60.9, 63.0)	53.2 (48.5, 57.8)	
No	38.7 (37.6, 39.7)	38.1 (37.0, 39.1)	46.8 (42.2, 51.5)	
Has a disability	8.2 (7.6, 8.7)	8.1 (7.6, 8.7)	8.6 (6.4, 11.5)	$P = 0.72$
Has ≥1 chronic condition	51.5 (50.4, 52.6)	51.7 (50.6, 52.8)	49.2 (44.3, 54.1)	$P = 0.33$
Has a usual place of care	89.9 (89.2, 90.6)	90.4 (89.6, 91.1)	84.0 (80.3, 87.2)	$P < 0.001$

*Respondents with limited English proficiency were identified using the language they used to respond to the survey.
†Non-Hispanic Other includes respondents who self-identified as Black/African American, American Indian/Alaska Native, and other single and multiple races.
FPL indicates federal poverty level.
Data Source: National Center for Health Statistics, National Health Interview Survey, 2020.

Differences in Delayed and Forgone Health Care

In aggregate, 44.9% of adults reported delaying or forgoing health care during the pandemic (41.1% reported delayed health care and 30.8% reported forgone health care). Descriptive analyses showed many statistically significant differences between LEP and English proficiency adults (54.1% of LEP adults and 44.2% of English proficiency adults reported delaying or forgoing health care, $P < 0.001$). LEP adults reported a significantly higher proportion of both delayed and forgone health care compared to English proficiency adults (delayed: 49.1% and 40.5%, $P < 0.01$; forgone: 41.3% and 30.0%, $P < 0.001$) (Figs. 1A, B). Among specific measures of delayed health care (Fig. 1A), LEP adults were significantly more likely than English proficiency adults to report delays in medical care due to cost (14.5% vs. 7.0%), dental care due to cost (35.7% vs. 18.9%), and prescriptions due to cost (10.0% vs. 5.8%) while LEP adults were significantly less likely than English proficiency adults to report delays in medical care due to the pandemic (19.6% vs. 24.2%). Similarly, LEP adults were also significantly more likely than English proficiency adults to report forgone medical care due to cost, dental care due to cost, prescriptions due to cost, and home care due to the pandemic (Fig. 1B). There were no significant differences between LEP and English proficiency adults reports of forgone medical care due to the pandemic or delayed or forgone mental health care due to cost.

While similar percentages of LEP and English proficiency adults reported delayed medical care (due to costs or the pandemic; 30.1% and 28.5%, $P = 0.46$), a greater percentage of LEP adults reported forgone medical care (23.8% and 19.8%, $P = 0.04$). Reasons for delayed and forgone medical care also differed (Fig. 2). A greater percentage of LEP adults reported cost as the sole reason for delaying (10.5%) and forgoing (9.9%) medical care compared to English proficiency adults (4.3% and 3.8%, respectively). In contrast, a greater proportion of English proficiency adults reported the pandemic as the sole reason for both delaying (21.5% vs. 15.7% for LEP adults) and forgoing medical care (13.8% vs. 10.4%).

Unadjusted and Multivariate Associations With Delayed and Forgone Health Care Use for Adults With Limited English Proficiency

Table 2 presents the unadjusted and multivariate associations in delayed and forgone health care by English

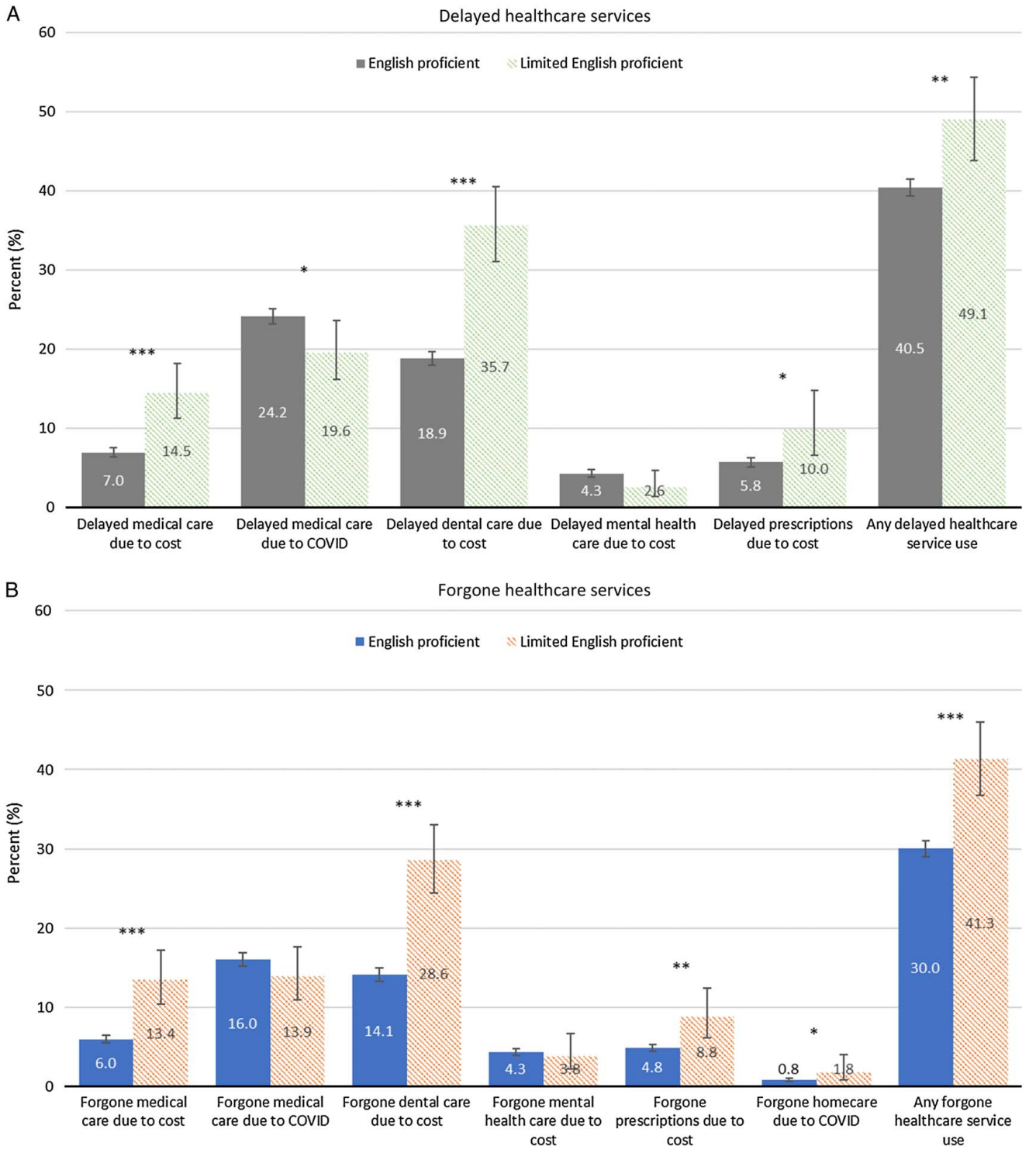

FIGURE 1. Delayed and forgone health care services, by English proficiency, National Health Interview Survey, July–December 2020. (A) Delayed Health Care Services. (B) Foregone Health Care Services. *$P < 0.05$, **$P < 0.01$, ***$P < 0.001$. Data Source: National Center for Health Statistics, National Health Interview Survey, 2020.

proficiency. Unadjusted logistic regression showed that compared to English proficiency adults, LEP adults had significantly greater odds of delaying prescriptions, medical care, and dental care because of costs and significantly lower odds of delaying medical care due to the pandemic. This resulted in LEP having greater odds of delaying health care in

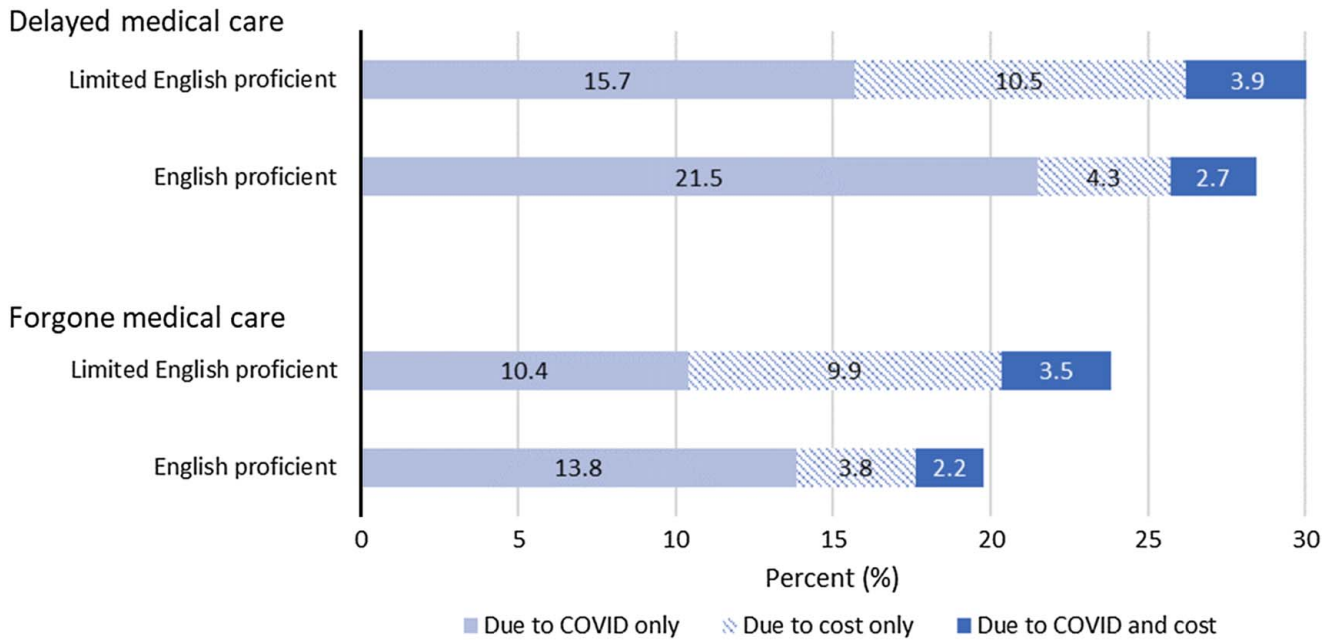

FIGURE 2. Reasons for delayed and forgone medical care, by English proficiency, National Health Interview Survey, July–December 2020. Data Source: National Center for Health Statistics, National Health Interview Survey, 2020.

aggregate [odds ratio (OR) = 1.42, 95% CI: 1.14, 1.77). Similar associations were seen in forgone health care; LEP adults had significantly greater odds of forgoing needed health care (OR: 1.64, 95% CI: 1.35, 1.99) due to their greater odds of forgoing medical care, dental care, prescriptions, and home care due to costs. After controlling for demographic, socioeconomic, and health characteristics, the relationships between English proficiency and delayed and forgone health care were no longer statistically significant.

English Proficiency-Specific Associations With Delayed and Forgone Health Care Service Use

Multivariate analyses showed that among LEP adults, insurance, having a disability, and chronic conditions were significantly associated with reports of both delayed and forgone health care (Table 3). Specifically, LEP adults without insurance had greater odds of reporting delayed health care [adjusted odds ratio (aOR): 4.32, 95% CI: 2.39, 7.84] and forgone health care (aOR: 2.98, 95% CI: 1.63, 5.46) than those

TABLE 2. Relationship Between Delay and Forgone Health Care Use Outcomes and English Proficiency (Reference English Proficient) Among Adult Respondents, National Health Interview Survey, July–December 2020

	Limited English proficient (reference: English proficient), OR (95% CI)	
Outcome	**Unadjusted odds ratio**	**Adjusted odds ratio**
Delayed health care service use	1.42 (1.14, 1.77)**	1.17 (0.89, 1.55)
Delayed medical care due to costs	2.26 (1.67, 3.05)***	1.05 (0.71, 1.55)
Delayed medical care due to COVID-19	0.77 (0.60, 0.97)*	1.17 (0.87, 1.56)
Delayed dental care due to costs	2.39 (1.92, 2.97)***	1.09 (0.82, 1.46)
Delayed mental health care due to costs	0.59 (0.31, 1.12)	0.65 (0.31, 1.35)
Delayed prescriptions due to costs	1.71 (1.07, 2.74)*	0.98 (0.56, 1.73)
Forgone health care service use	1.64 (1.35, 1.99)***	1.16 (0.88, 1.52)
Forgone medical care due to costs	2.45 (1.82, 3.31)***	1.25 (0.85, 1.83)
Forgone medical care due to COVID-19	0.85 (0.64, 1.12)	0.91 (0.63, 1.32)
Forgone dental care due to costs	2.43 (1.94, 3.05)***	1.06 (0.79, 1.43)
Forgone mental health care due to costs	0.88 (0.48, 1.60)	0.86 (0.43, 1.73)
Forgone prescriptions due to costs	1.89 (1.26, 2.83)**	1.12 (0.66, 1.89)
Forgone home care due to COVID-19	2.40 (1.02, 5.66)*	1.52 (0.55, 4.24)

*$P < 0.05$.
**$P < 0.01$.
***$P < 0.001$.
Adjusted models controlled for race and ethnicity, age, sex, education, poverty status, insurance, employment, disability status, chronic condition, and usual place of care.
OR indicates odds ratio.

TABLE 3. Adjusted English Proficiency-Specific Associations With Delayed and Forgone Health Care Among Adults, National Health Interview Survey, July–December 2020

	Adjusted odds ratio (95% CI)			
	Delay in health care services		Forgone health care services	
	Limited English proficient	English proficient	Limited English proficient	English proficient
Race and ethnicity				
Non-Hispanic White	Reference	Reference	Reference	Reference
Hispanic	0.95 (0.31, 2.90)	0.97 (0.83, 1.13)	6.90 (1.71, 27.86)**	1.07 (0.89, 1.28)
Non-Hispanic Asian	1.10 (0.31, 3.97)	0.64 (0.52, 0.79)***	6.71 (1.36, 33.18)*	0.64 (0.51, 0.80)***
Non-Hispanic Other	0.51 (0.04, 6.91)	0.95 (0.83, 1.09)	2.88 (0.21, 38.94)	1.17 (1.01, 1.35)*
Age				
18–44 years	Reference	Reference	Reference	Reference
45–64 years	1.10 (0.68, 1.79)	1.06 (0.95, 1.18)	1.05 (0.4, 1.74)	0.97 (0.87, 1.09)
65+ years	0.56 (0.28, 1.12)	0.62 (0.53, 0.72)***	0.46 (0.23, 0.94)*	0.48 (0.41, 0.57)***
Sex				
Male	Reference	Reference	Reference	Reference
Female	1.28 (0.85, 1.93)	1.59 (1.46, 1.74)***	1.31 (0.88, 1.93)	1.54 (1.40, 1.69)***
Education				
College degree or higher	Reference	Reference	Reference	Reference
Some college	1.48 (0.63, 3.43)	0.79 (0.71, 0.87)***	1.29 (0.49, 3.42)	0.94 (0.83, 1.05)
High school diploma	0.92 (0.39, 2.13)	0.67 (0.60, 0.75)***	1.09 (0.45, 2.66)	0.77 (0.67, 0.87)***
Less than high school diploma	0.77 (0.35, 1.67)	0.58 (0.47, 0.71)***	0.89 (0.37, 2.13)	0.65 (0.53, 0.81)***
Poverty status				
≥200% FPL	Reference	Reference	Reference	Reference
100%–199% FPL	0.93 (0.56, 1.56)	1.37 (1.20, 1.56)***	1.06 (0.65, 1.72)	1.64 (1.42, 1.89)***
<100% FPL	1.12 (0.65, 1.94)	1.33 (1.10, 1.59)**	1.54 (0.88, 2.68)	1.51 (1.24, 1.82)***
Insurance				
Private	Reference	Reference	Reference	Reference
Public	2.02 (1.16, 3.53)*	1.24 (1.09, 1.41)**	1.22 (0.66, 2.26)	1.34 (1.17, 1.54)***
Not insured	4.32 (2.39, 7.84)***	2.33 (1.92, 2.82)***	2.98 (1.63, 5.46)***	2.37 (1.95, 2.86)***
Worked last week				
Yes	Reference	Reference	Reference	Reference
No	0.80 (0.49, 1.28)	0.92 (0.82, 1.03)	0.72 (0.45, 1.16)	0.98 (0.87, 1.11)
Disability				
No disability	Reference	Reference	Reference	Reference
Has a disability	1.92 (1.00, 3.66)*	1.93 (1.67, 2.22)***	1.85 (1.01, 3.39)*	2.23 (1.92, 2.59)***
Has ≥1 chronic condition				
No	Reference	Reference	Reference	Reference
Yes	2.42 (1.49, 3.93)***	1.71 (1.53, 1.90)***	3.15 (1.83, 5.41)***	1.88 (1.67, 2.12)***
Has a usual place of care				
Has a usual place of care	Reference	Reference	Reference	Reference
No usual place of care	1.25 (0.73, 2.13)	1.29 (1.08, 1.54)**	0.97 (0.50, 1.88)	1.25 (1.03, 1.53)*

*$P < 0.05$.
**$P < 0.01$.
***$P < 0.00$.
FPL indicates federal poverty level.
Data Source: National Center for Health Statistics, National Health Interview Survey, 2020.

with private insurance; LEP adults with public insurance also had greater odds of delayed health care (aOR: 2.02, 95% CI: 1.16, 3.53). Similarly, compared to LEP adults without a disability or chronic conditions, LEP adults with a disability and chronic conditions had greater odds of reporting delayed [disability (aOR: 1.92, 95% CI: 1.00, 3.66); chronic conditions (aOR: 2.42, 95% CI: 1.49, 3.93)] and forgone [disability (aOR: 1.85, 95% CI: 1.01, 3.39); chronic conditions (aOR: 3.15, 95% CI: 1.83, 5.41)] health care. In addition, race/ethnicity and age were also associated with reports of any forgone health care among LEP adults. Hispanic (aOR: 6.90, 95% CI: 1.71, 27.86) and Asian (aOR: 6.71; 95% CI: 1.36, 33.18) LEP adults had greater odds of forgoing any health care service use than White, non-Hispanic LEP adults, while adults 65+ years had lower odds than adults 18–44 years (aOR: 0.46; 95% CI: 0.23, 0.94).

Among English proficiency adults, experiencing delayed health care varied across multiple factors. Like LEP adults, English proficiency adults who were uninsured (aOR: 2.33, 95% CI: 1.92, 2.82) or had public insurance (aOR: 1.24, 95% CI: 1.09, 1.41), had a disability (aOR: 1.93, 95% CI: 1.67, 2.22), and one or more chronic conditions (aOR: 1.71, 95% CI: 1.53, 1.90) had greater odds of delaying health care than English proficiency adults who had private insurance, no disabilities, and no chronic conditions, respectively. In addition, English proficiency adults who were Asian (aOR: 0.64, 95% CI: 0.52, 0.79), 65+ years (aOR: 0.62, 95% CI: 0.53, 0.72), and lower education levels had lower odds of delaying health care than their respective English proficiency adult counterparts. In contrast, English proficiency adults who were female (aOR: 1.59, 95% CI: 1.46, 1.74), had lower family

income [less than 100% FPL (aOR: 1.33, 95% CI: 1.10, 1.59); between 100% and 199% FPL (aOR: 1.37, 95% CI: 1.20, 1.56)], and did not have a usual place of care (aOR: 1.29, 95% CI: 1.08, 1.54) had greater odds of delaying health care than their respective English proficiency adult counterparts.

The associations in delayed health care for English proficiency adults translated to similar associations in significance, magnitude, and direction to forgone health care for almost all characteristics (Table 3).

DISCUSSION

Using a nationally representative sample of US adults, this study examined differences in delayed and forgone health care services by English proficiency, early in the COVID-19 pandemic. We found that while 45% of all adults experienced delayed or forgone health care during the period, a significantly greater percentage of LEP adults experienced delayed or forgone health care (54%) compared to English proficiency adults (44%). The differences between the two groups were explained by differences in their health, socioeconomic status, and demographic characteristics. For LEP adults, insurance, health (ie, having a disability or a chronic condition), race and ethnicity, and age were significantly associated with delayed and forgone health care.

The study findings showed that almost half of all adults put off or missed health care during the early period of the COVID-19 pandemic and that the pandemic disproportionately affected LEP adults compared to English proficiency adults. Previous studies examining a range of health care services found that 36%–38% of adults had delayed or forgone health care in 2020.[9,10] Our findings are higher than previous reports conducted during this period, likely because we included a greater range of health care services and reasons.

Consistent with earlier studies,[9,10] dental care was the most frequently delayed or forgone service for LEP adults, while medical care was the most frequently delayed or forgone service for English proficiency adults. Access to dental care was particularly exacerbated among LEP adults during the pandemic; our study found 29% of LEP adults did not receive needed dental care compared to the previously reported 13% among nonelderly adults.[13,19] Avoiding needed dental care can have adverse effects on general health and will contribute to future health care costs.[19] Notably, the percentages of LEP and English proficiency adults who reported delayed and forgone mental health care were low and not significantly different; the percentages reported here are lower than the 6% previously reported by Gonzalez et al.[9]

Our inclusion of both cost-related and pandemic-related delayed or forgone health care is particularly important for LEP adults and other disadvantaged populations because the pandemic impacted all aspects of life, including the economy. Previous studies identified the financial repercussions of the pandemic as one of the main reasons why people forwent care.[5] Similarly, our finding that 10% of LEP adults forwent medical care solely based on costs compared to 4% of English proficiency adults reinforces that cost continued to be a greater barrier to medical care for disadvantaged populations during the pandemic. LEP adults were primarily employed in low-paying jobs where high levels of English were not required.[20] During the pandemic, many of the jobs employing a large percentage of LEP adults disappeared (eg, cleaning and maintenance, food preparation, and personal care and service).[20,21] In addition, limited eligibility for health insurance, and sanctions imposed for the use of public programs early in the pandemic, further inhibited insurance coverage among immigrant adults.[22,23] Understanding the dual reasons for delaying and forgoing health care is necessary for gaining a complete picture of how the pandemic impacted health care access.

Contrary to our hypothesis, after adjustment for potential confounding, there was no difference in delayed or forgone health care between LEP and English proficiency adults. While surprising given the large unadjusted differences, like Shi et al[11], we hypothesize that LEP adults may have had other characteristics not accounted for in the study that may have led them to have a lower perceived need for health care services or to assess delays or forgone health care less severely than English proficiency adults. For example, accurate, translated public health information about COVID-19 was lacking during the early period of the pandemic; this may have limited LEP adults' sense of risk of COVID-19 and their perceived need for health care services.[24,25] Finally, LEP patients may access care differently based on their cultural habits or preferences from their home country.[26,27] Since many of these cultural preferences are not captured in survey data, follow-up research is needed to understand how these differences may have influenced delayed and forgone health care during this time.

While factors associated with delayed and forgone care were mixed among previous studies assessing LEP populations,[11,12] the proficiency-specific multivariate results suggested that delayed and forgone health care among LEP adults were driven by lack of insurance, poor health (ie, having a disability or a chronic condition), Asian race, and Hispanic ethnicity. Particularly, more research is needed to understand why while Asian English proficiency adults were less likely to forgo health care, Asian LEP adults were more likely to forgo health care than their White counterparts during the pandemic. While this finding likely partially reflects the differential levels of health care access and use between US-born and foreign-born Asian Americans,[28,29] it is unclear whether this difference arises from differences in care-seeking behavior or perceived need or risk.

The high prevalence of delayed and forgone health care including medical, dental, and pharmacy care observed among LEP adults during the early period of the pandemic underscores the pressing need for policymakers, health care systems, payers, and other stakeholders to develop strategies now that would help protect against differences in access to health care for LEP individuals during future health crises. Postponing or missing needed services has long-term implications on the health and well-being of LEP individuals and the health care system. Having both health insurance and a regular primary care provider (or usual source of care) are essential for ensuring individuals have timely access to health care.[30] This study found that almost 40% of LEP adults were

uninsured and over 30% were on public insurance during the early pandemic period. Specifically, millions of LEP individuals are expected to lose insurance coverage with the ending of the Medicaid continuous enrollment provision on March 31, 2023, and policymakers to community organizations will need to help ensure eligible LEP individuals maintain Medicaid coverage or transition to other coverage.[31] Crucial to the efforts to improve access will be providing culturally and linguistically appropriate public health outreach and education campaigns and direct language assistance.[32]

Stakeholders also need to work to improve the health care experience of LEP individuals. First, policymakers need to rescind a Trump-era administrative rule that removed protections for access to interpretation and translation services in Section 1557 of the Affordable Care Act.[33] The rule removes video remote interpreting standards, provisions that require federally funded entities to notify individuals of the availability of language assistance, and requirements to provide language access services to all individuals.[34] In addition, health care systems strategies for improving communication and fostering engagement of LEP patients recommended by The Joint Commission include integrating language services (ie, video and phone interpreters) into the workflow, integrating interpreters into the care team, promoting the use of patient portals, and involving families in patients' care.[35] Embedding bilingual providers into care teams would help provide both language and cultural representation. Finally, physician offices are expected to cover the cost of interpreters as the cost of doing business, but high costs of interpreters (from $45 to over $200 per hour) disincentivize their use.[36] The clear evidence that medical interpreters reduce medical errors,[37] suggests that all payers, including Medicaid, Medicare, and private payers, should reimburse clinicians for the cost of interpreter services.[36]

Our study has several limitations. First, our measure of English proficiency was based on the survey interview language. This may reflect respondents' preferred language rather than their ability to communicate in English; in other words, our LEP sample may include bilingual individuals with high English proficiency. However, all respondents in the LEP sample were foreign-born, and previous research has found interview language to be a reliable proxy for acculturation among foreign-born respondents.[38] This language choice by respondents may also be more appropriate for health care research than self-reported English proficiency because respondents who believe that they would have difficulty responding to a survey in English would likely need language-concordant providers or medical interpreters in health care settings.[17,39] Relatedly, our study could not account for unobserved patient and provider health system factors such as patient-provider concordance that may contribute to health care access among LEP adults. Second, the NHIS only asked several pandemic-specific questions in the latter half of 2020. Given the timing of the questions and the changing circumstances of the pandemic, including the various policies implemented by states and cities and the rapidly changing social environment, our findings may not be generalizable beyond the last two quarters of 2020. We were also unable to include geographic indicators to assess how policies may have differentially impacted health care access in different areas. Finally, the recall period for some of the questions extended further back than the beginning of the pandemic so some respondents may have responded about delayed or forgone health care that occurred before the pandemic.

Our study found that over half of all LEP adults reported delaying or forgoing health care during the pandemic and LEP adults were more likely than English proficiency adults to delay or forgo service use because of cost. Although multivariate differences between the groups in delayed or forgone care were not explained by language proficiency but by low socioeconomic status and health-related characteristics, this is likely due to cultural differences in the perceived need for care and other unmeasured barriers. These findings highlight how pre-existing deficiencies in the health care system exacerbate inequitable access to care among LEP adults. Policymakers must continue to identify effective strategies for increasing accessibility and affordability of needed care.

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