

The Impact of Threshold Language Assistance Programming on the Accessibility of Mental Health Services for Persons With Limited English Proficiency in the Medi-Cal Setting

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Background: Title VI of the 1964 Civil Rights Act prohibits federal funds recipients from providing care to limited English proficiency (LEP) persons more limited in scope or lower in quality than care provided to others. In 1999, the California Department of Mental Health implemented a “threshold language access policy” to meet its Title VI obligations. Under this policy, Medi-Cal agencies must provide language assistance programming in a non-English language where a county’s Medical population contains either 3000 residents or 5% speakers of that language.

Research Design: We examine the impact of threshold language policy-required language assistance programming on LEP persons’ access to mental health services by analyzing the county-level penetration rate of services for Russian, Spanish, and Vietnamese speakers across 34 California counties, over 10 years of quarterly data. Exploiting a time series with nonequivalent control group study design, we studied this phenomena using linear regression with random county effects to account for trends over time.

Results: Threshold language policy-required assistance programming led to an immediate and significant increase in the penetration rate of mental health services for Russian (8.2, $P < 0.01$) and Vietnamese (3.3, $P < 0.01$) language speaking persons.

Conclusions: Threshold language assistance programming was effective in increasing mental health access for Russian and Vietnamese, but not for Spanish-speaking LEP persons.

Key Words: limited English proficiency, access to care, mental health services, Medicaid, California

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Persons with limited English proficiency (LEP) have “limited ability to read, write, speak, or understand English.”¹ In English-speaking countries, LEP persons often ex-

perience communication difficulties as a barrier to high-quality health care delivery.^{2–4} At least 13.5 million Americans report speaking English not well or not at all⁵ LEP persons use less preventive care than English proficient persons^{6–10} and they make fewer physician visits overall.^{7,11,12}

LEP may interfere especially with mental health treatment-seeking and high-quality mental health care delivery, because mental health evaluations and treatments—many consisting of psychological “talk therapies”—are highly communication dependent.^{13,14} LEP persons with mental disorders are also significantly less likely to identify a need for mental health care compared with English proficient persons,¹⁵ and have demonstrably lower treatment rates.¹⁶

Even so, some studies have failed to show that LEP is significantly associated with mental health treatment access.^{17,18} LEP seemingly interferes with treatment seeking. Thus, the inconsistent evidence behind whether LEP influences the accessibility of mental health care warrants further research.

Title VI of the 1964 Civil Rights Act,¹⁹ as interpreted and enforced by the US Office of Civil Rights, holds that nonresponse to language-related needs represents discrimination based on national origin.^{20–23} Following Title VI and the National Standards for Culturally and Linguistically Appropriate Services recommendations,²⁴ the California Department of Mental Health (DMH) adopted a “threshold language access policy” to meet its Title VI obligations in 1997. Threshold status is reached when either 3000 or 5% of county residents speak a non-English language.²⁵ When a language reaches threshold, county-operated mental health departments are notified and they must provide threshold language access programming, consisting of: (1) a 24-hour, toll-free phone line with linguistic capability; (2) translated written materials to assist medically necessary specialty mental health services; (3) linguistically capable staff or interpreters at key contact points; and 4) information about the availability of these linguistic services, free of charge.²⁵

An earlier study by Snowden et al²⁶ found a strong association between a county’s surpassing threshold and mental health care accessibility for the county’s Asian LEP persons. However, the study did neither distinguish among individual Asian languages nor did it determine whether the study’s positive findings generalize to non-Asian language speaking groups, including white LEP groups such as Russians. The

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earlier study covered only 13 quarters, and it did not directly assess whether programming had been implemented or assess its scope.

This study uses data from 39 quarters and encompasses 3 ethnically and racially distinct LEP groups—primary speakers of Russian, Spanish, and Vietnamese. The study directly assesses the presence of language access programming and measures whether there was full implementation of required programming. Russian, Spanish, and Vietnamese were studied because they met key methodologic criteria: they (1) surpassed threshold concentrations in at least 2 counties during the study period and (2) had at least 50 Medi-Cal enrollees in 10 or more counties during the study period. The languages also reflect diverse racial, ethnic, and cultural distinct traditions, so the resulting selection of languages is opportune.

We hypothesize that implementation of minimally adequate threshold language access programming will overcome language-related barriers, thereby increasing the “penetration” of mental health care received by LEP persons.

METHODS

Study Design

This study uses a nonequivalent control group, time series design. County plans, observed before the implementation of threshold language access programming, served as their own control groups. Counties not implementing threshold language access programming at all served as a nonequivalent control group. Finally, counties implementing programming for some, but not all, languages also served as a nonequivalent control group for languages for which they implemented no programming. The onset of threshold language access programming was staggered over 39 quarters from 1997 to 2006. The research design exploited California’s decentralized Medicaid structure, in which county plans act independently.

Variables and Data Sources

To conduct this analysis, we assembled 5 distinct panel datasets: (1) county-by-quarter data obtained from the DMH, containing quarterly counts of how many of each county’s Medical mental health clients declared each language studied as a primary language; (2) county-by-quarterly data obtained from the California Department of Health Services containing quarterly counts of how many of each county’s Medical enrollees declared each language studied as a target language; (3) county-by-quarter data, from a survey of county Medi-Cal mental health plans, about the language access programs offered in each county; (4) county-by-year data from the DMH, marking which counties surpassed threshold and were notified for each fiscal year; and (5) county-by-year-census data for several county-level demographic characteristics to measure certain time-varying controls.

Dependent Variable: Penetration Rates by Quarter and Primary Language

Penetration rates, proportions of eligible beneficiaries who receive services, have frequently been used to measure care accessibility.²⁷ We calculated penetration rates for each lan-

guage group as the number of LEP clients aged 19 to 64 years who received specialty mental health care in a given county and quarter (the numerator), divided by the number of LEP Medi-Cal beneficiaries aged 19 to 64 years who were eligible to use services in that county and quarter (the denominator).

To measure the penetration rate numerator, we used primary language-specific California DMH Medi-Cal Specialty Mental Health Claims. To measure the denominator, we used a file provided by the California Department of Health Services that contained, with primary language specified, the number of people who were Medi-Cal enrolled and therefore eligible for mental health treatment. To minimize extreme rate fluctuations caused by small denominators, counties with <50 enrolled Medi-Cal beneficiaries were eliminated.

Principle Independent Variable: Threshold Policy’s Language Assistance Programming

We constructed a binary indicator to assess whether each county had implemented all required elements of threshold language access programming for each language, in each quarter.²⁵ We also constructed an interaction variable—time (quarters) \times programming—to test for trends resulting from the implementation of threshold language access programming.

To obtain information on threshold language access programming, we surveyed all 57 county mental health departments. Working with county Ethnic Service Managers and the state Chief of Multicultural Services in conjunction with the California Mental Health Directors Association Ethnic Services Committee as consultants and co-sponsors, we developed a survey to measure when and how each county implemented each of the 4 policy requirements for adult services. For each threshold language, we asked closed-ended questions regarding services implemented for each threshold language in each year from 1997 to 2006, supplemented by open-ended questions. The self-administered survey was emailed as a text document in April 2008. Each survey took 1 to 2 hours to complete. Follow-up reminder emails and calls were used for nonrespondents until November 2008, when the response period was closed.

Completed surveys were received from 35 counties with at least 1 language surpassing threshold levels (61.4% response rate); however, 1 did not meet the minimum number of beneficiaries for inclusion, resulting in a final analytic sample of 34 counties. The *t* test results showed that nonresponding counties had, on average, lower per-capita incomes, more Republican voters, higher rate of English-speaker penetration, and fewer eligible Spanish and Vietnamese-speaking LEP persons than other counties. Thus, our findings may not generalize to such counties.

Control Variables

Threshold language status and county notification: From DMH data available online, we created a dummy variable assessing, for each county-quarter, whether Russian, Spanish, or Vietnamese surpassed threshold with resulting county notification: 1 = threshold notification and 0 = no threshold notification. Reflecting the policy’s 1999 onset, all threshold dummies took on “0” values before the third

TABLE 1. Descriptive Characteristics by County-quarter, Stratified by Language, July 1996 to January 2006

	Russian (N = 390) [†]	Spanish (N = 1326) [†]	Vietnamese (N = 663) [†]	F Statistic [‡]
Programming [§]	0.30 (0.46)	0.70 (0.46)	0.22 (0.41)	9.11**
Threshold notification	0.17 (0.37)	0.64 (0.48)	0.20 (0.40)	22.70**
English penetration rate	6.37 (4.18)	6.10 (3.13)	5.83 (3.60)	0.01
Eligible beneficiaries (1000)	1.04 (1.81)	15.15 (51.58)	2.10 (3.90)	4.32*
Per-capita income (1000)	32.75 (9.81)	28.93 (8.98)	31.76 (10.09)	0.01
Republican party	0.52 (0.50)	0.50 (0.50)	0.45 (0.50)	0.01

Values are mean (SD).

* $P < 0.05$.

** $P < 0.01$.

[†]Number of county-quarter observations.

[‡]Determined using repeated measures analysis of variance, controlling for county groupings, to compare across the 3 language groups.

[§]Defined as offering: (1) a 24-hour toll-free phone line with linguistic capability; (2) translated written materials; (3) interpreters at key points of contact; and (4) community outreach.

quarter of 1999. The indicators for threshold notification and programming were highly correlated (0.83 for Russian, 0.50 for Spanish, and 0.78 for Vietnamese), indicating that most counties implemented language access programming in response to the triggered threshold requirement.

County-level covariates: We also included time-varying covariates relating to penetrations rates to control for potentially confounding county and county plan-level characteristics: (1) a quarterly time trend variable; (2) English-speakers' penetration rate in each county; and (3) the number of eligible beneficiaries per 1000 population.

Two additional control variables, per-capita income and majority Republican voters, assessed characteristics of the county socio-political environment linked in theory and earlier research, to mental health policy response.²⁸

Analysis

To assess the impact of threshold language access policy itself on penetration rates of LEP persons, we first looked at summary statistics for each language. We then conducted linear multivariate regressions for each language, with random county intercepts.²⁹ The unit of analysis was the county as observed during a quarter: county-quarters.

RESULTS

For Russian, Spanish, and Vietnamese, respectively, 17%, 64%, and 20% of eligible county-quarters were above threshold concentrations (Table 1). Similarly, minimum programming requirements were in place for 30%, 70%, and 22% of county-quarters for Russian, Spanish, and Vietnamese, respectively.

Following threshold language policy's enactment (beginning in July 1999), the mean penetration rates increased by 4.92 (Russian), 0.15 (Spanish), and 1.96 (Vietnamese) points (Table 2). Confirming our primary hypothesis, language access programming significantly increased the mean penetration rate of mental health services for Russian and Vietnamese language communities (Table 3). Implementation of all 4 language access programming elements immediately increased the mean penetration rate by 8.2 points for Russian ($P < 0.01$) and 3.3 points for Vietnamese ($P < 0.01$) per quarter. However, no significant effect was found for Spanish.

In addition, for Russian speakers, the significant interaction of minimum threshold language access programming requirements and the time-trend indicator signifies that language access programming implementation also improved penetration rates over time (0.3 points each quarter; $P < 0.01$).

DISCUSSION

We find that when county mental health plans implement required programming, Russian and Vietnamese speakers' representation in mental health service systems increases and barriers to mental health care decreases, as indicated by increasing Medi-Cal penetration rates. Furthermore, the capacity of programming to increase access confirms our hypothesis that LEP was initially a barrier to accessing mental health care treatment.

For Russian speakers, implementing language access programming continued to effectively increase penetration rates, after controlling for covariates. This suggests that Russian language programming exhibited increasing efficacy over time.

TABLE 2. Penetration Rates by Language, Before and After Implementation of Threshold Language Access Policy

	Before Policy*		After Policy*		Change in Mean Penetration Rate, Before to After
	No. [†]	Mean (SD)	No. [†]	Mean (SD)	
Russian	120	1.74 (3.03)	270	6.66 (8.12)	4.92
Spanish	408	1.01 (0.94)	918	1.17 (0.82)	0.15
Vietnamese	204	2.53 (3.83)	459	4.49 (4.99)	1.96

*July 1996 to April 1999 (quarters 1 to 12) fall into the pre-policy period, whereas July 1999 to January 2006 (quarters 13 to 39) are in the post-policy period.

[†]Number of county-quarter observations.

TABLE 3. Predictors of County-quarter Penetration Rates: Results from Linear Regressions With Random County Effects, Stratified by Language

Predictor	Russian (N = 390) [†]	Spanish (N = 1326) [†]	Vietnamese (N = 663) [†]
	Coefficient (SE)	Coefficient (SE)	Coefficient (SE)
Time (quarters)	−0.025 (0.023)	0.006 (0.004)	−0.009 (0.015)
Programming [‡]	8.173 (2.551)**	0.110 (0.072)	3.266 (0.987)**
Programming [‡] * time (quarters)	0.296 (0.038)**	−0.001 (0.003)	0.018 (0.027)
Threshold notification	0.787 (0.827)	−0.105 (0.055)	−0.117 (0.614)
English penetration rate	0.535 (0.094)**	0.096 (0.009)**	0.444 (0.049)**
Eligible beneficiaries (1000)	−3.439 (0.346)**	0.000 (0.001)	−0.196 (0.173)
Per-capita income (1000)	0.260 (0.075)**	−0.018 (0.008)*	0.117 (0.046)*
Republican party	−0.397 (0.551)	−0.005 (0.077)	0.343 (0.417)
Constant	−6.846 (2.293)**	0.954 (0.223)**	−2.737 (1.902)
Random-effects parameters			
County-level, SD (SE)	1.170 (0.280)**	−0.465 (0.130)**	1.693 (0.186)**
Residual, SD (SE)	0.892 (0.037)**	−0.652 (0.020)**	0.813 (0.028)**

*P < 0.05.

**P < 0.01.

[†]Number of county-quarter observations.[‡]Defined as offering: (1) any 24-hour toll-free phone line with linguistic capability; (2) translated written materials; (3) interpreters at key points of contact; and (4) community outreach.

In contrast, language access programming showed no impact for Spanish-speaking Medi-Cal beneficiaries. Many factors may explain this difference, including ethnic and culturally rooted differences in seeking mental health care,³⁰ the prior availability of language assistance for Spanish speakers due to the relatively larger population of Spanish-speaking LEP persons, or mental health treatment accessed through other means, such as primary care.³¹ Future research should explore Spanish-speakers' use of mental health services in a broader context that includes these and other factors.

This study presents several limitations. First, the study did not distinguish among the 4 components of threshold language access programming and cannot determine which components were necessary or sufficient for penetration rate impact. Second, the study was not experimental. Despite extensive controls and staggered programming implementation, the possibility remains that unobserved influences better explain the study's principle findings. Third, language access programming does not target cultural attitudes but it might change attitudes inadvertently, and changing cultural attitudes might increase treatment access more than language assistance itself.³² Finally, our findings may not apply to poorer, more conservative counties with fewer LEP persons, as such counties were less likely to respond to our survey and were thus weighted less in our analysis. Our findings reflect these limitations.

Despite these limitations, this study shows that a package of language assistance programming that can be implemented under widely varying conditions can overcome barriers preventing Russian and Vietnamese speakers from receiving mental health care treatment.

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