Mental Health Care Use by Ethnicity and Preferred Language in a National Cohort of Community Health Center Patients

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Abstract

Objective: Disparities in U.S. mental health care by race and ethnicity have long been documented. The authors sought to compare specialty mental health service use among non-Hispanic White, English-preferring Hispanic, and Spanish-preferring Hispanic patients who accessed care in community health centers (CHCs).

Methods: Retrospective electronic medical records data were extracted for patients ages ≥18 years who received care in 2012–2020 at a national CHC network. Zero-inflated Poisson regression models were used to estimate the likelihood of receiving mental health services, which was compared with expected annual rates of mental health service use.

Results: Of the 1,498,655 patients who received care at a CHC during the study, 14.4% (N=215,098) received any specialty mental health services. English- and Spanish-preferring Hispanic patients were less likely to have had a mental health visit (OR=0.69, 95% CI=0.61–0.77, and OR=0.65, 95% CI=0.54–0.78, respectively). Compared with non-Hispanic White patients, Spanish-preferring Hispanic patients had an estimated annualized rate of 0.59 (95% CI=0.46–0.76) mental health visits.

Conclusions: Among patients who were likely to receive specialty mental health services, Spanish-preferring patients had a significantly lower rate of mental health care use. Although

overall access to mental health care is improving, unequal access to recurring specialty mental health care remains among patients who do not prefer to use English.

Referral to mental health services from primary care is an evidence-based intervention to reduce disability and to improve quality of life for those with mental disorders (1, 2). Hispanic populations have rates of psychiatric conditions (such as depression, anxiety, and posttraumatic stress disorder) that are similar to or higher than those of non-Hispanic Whites but are less likely to receive mental health treatment (3–7). Cultural and language barriers may contribute to underuse of mental health services in Hispanic populations, resulting in lower use of evidence-based interventions and driving persistent disparities in mental health outcomes (8). Mental health treatment in particular relies on verbal communication rather than on objective testing, such as blood work or imaging. As such, language barriers can present important challenges for the diagnosis and management of psychiatric concerns (5, 9, 10). Culture- and language-concordant health care has been suggested as a solution to these disparities. In one study (11), increased access to interpreter services among primary care patients improved access to mental health services for Hispanic and Asian patients.

Insurance status is a predictor of access to mental health care (12). By statute, community health centers (CHCs) provide care to all patients, regardless of insurance status or ability to pay, and therefore are key parts of the health care safety net (13). Because the Affordable Care Act increased funding for CHCs, potentially increasing availability of mental health services at CHCs, patients who receive care in CHCs may face fewer barriers to mental health care access (14). With the development and widespread adoption of the patient-centered medical home model, primary care providers, including CHCs, have been incentivized to colocate services with mental health care providers in order to offer a medical home for patients who require general medical and mental health care (15–17).

In this study of a large national sample of patients who received care at CHCs, we aimed to explore differences in specialty mental health care use by ethnicity and language preference. For the CHC patients who used mental health services, we evaluated associations between patient-level factors and mental health visit rates per year to better understand who uses mental health services and the factors that are associated with use of mental health services over time. On the basis of previous research, we hypothesized that Hispanic patients would have lower rates of ever having used mental health services compared with non-Hispanic White patients. We further hypothesized that Spanish-preferring Hispanic patients would have lower rates of mental health visits compared with non-Hispanic Whites.

METHODS

Study Population

We extracted data for 1,498,655 non-Hispanic White and Hispanic patients of any race who received care in the OCHIN network (2012–2020) of clinics in 26 U.S. states (the list of included states is available in the online supplement to this article). OCHIN is a network of CHCs that share electronic medical records (EMRs). Patients were excluded if they were age <18 years at the time of their first clinic visit, preferred a language other than English or Spanish, had no primary care visits during the study, or had visits associated with a

clinic type that did not offer direct primary care services (i.e., sites coded as administrative, dental, or enabling services). (Details on the study population are available in the online supplement.)

Measures

The primary outcome was number of specialty mental health visits over time. These visits were determined via encounter data (EMR-recorded data on each encounter provider, location, billing, and visit CPT codes; see the online supplement).

We included demographic characteristics, utilization data, comorbid conditions, and psychiatric diagnoses as variables in our model. Demographic data included age (continuous), sex, self-reported income (138% of the federal poverty level, >138% of the federal poverty level, or not collected—income data are not collected from privately insured patients), self-reported race-ethnicity (non-Hispanic White or Hispanic), and self-reported language preference (English preferred or Spanish preferred). Race-ethnicity and language data were combined to create the following independent variables of interest: non-Hispanic White and Hispanic; Hispanic patients were further categorized by English or Spanish language preference. Utilization data included insurance type (no insurance, some public insurance, some private insurance, or public and private insurance) and annualized number of primary care visits during the study, categorized into less than one visit per year, one to three visits per year, more than three and up to five visits per year, and more than five visits per year. Primary care visits were determined through a combination of CPT codes and provider type designations.

Study time for each patient was determined by the date of the first visit through the end of the data collection (December 2020) or 3 years after the last encounter recorded in the EMR. CHCs consider patients inactive after 3 years without a visit in the system, so we followed this convention in determining active study time in our population. Because a patient could enter the study sample in 2020, we conducted a sensitivity analysis that included only patients whose status was active for at least 1 year in the study. To account for chronic disease burden, we extracted 16 comorbid conditions from the *ICD-10* codes recorded in the EMR and created a modified Elixhauser Comorbidity Index (18), categorized into 0, 1, 2, and >2 comorbid conditions. Smoking status was categorized as never, former, current, secondhand, and unknown. Psychiatric diagnostic variables included the most recently recorded score on the nine-item Patient Health Questionnaire (PHQ-9), categorized as not done, no depression (PHQ-9 score=0), minor or mild depression (score <9), and moderate or severe depression (score 9). We extracted data on substance use diagnosis and buprenorphine prescription during the study as additional psychiatric diagnostic variables. This study was approved by the Oregon Health & Science University Institutional Review Board.

Statistical Analysis

We used descriptive statistics to examine characteristics of the sample. For our main analyses, we used generalized estimating equation–based, zero-inflated generalized Poisson (ZIP) regression models to assess the association between annual rate of mental health

visits and ethnicity and preferred language, after controlling the analyses for demographic characteristics, utilization, comorbid conditions, and psychiatric diagnoses. Because of an excess number of zeroes and data dispersion in mental health visits in our sample, the ZIP model fit the data better than the standard Poisson regression. Our use of ZIP models allowed for simultaneous modeling of having zero mental health visits (a binomial distribution that was modeled via logistic regression and yielded odds ratios) and evaluation of the number of mental health visits consistent with a count distribution (modeled via Poisson regression and yielding rate ratios [RRs]). In both steps of ZIP, robust standard errors were used to account for clustering of patients within clinics. All analyses were two-sided, statistical significance was set at a type I error of 5%, and analyses were conducted with R Core Team, 2021 version, and Stata, version 17.0.

RESULTS

This study included 1,498,655 patients from 1,691 CHCs; 15.9% of these patients identified as English-preferring Hispanic, 26.7% identified as Spanish-preferring Hispanic, and 57.4% identified as non-Hispanic White (Table 1). Overall, 56.6% of the patients were women, the mean±SD age at first study visit was 42±15 years, 53.3% were publicly insured, and 14.4% had a mental health visit during the study. Non-Hispanic White patients had a higher prevalence of buprenorphine prescriptions (1.7%) compared with English-preferring Hispanic (0.8%) and Spanish-preferring Hispanic (0.1%) patients.

Overall, 85.6% (N=1,283,557) of the patients had no mental health visits during the period studied. Table 2 presents both steps of the covariate-adjusted ZIP model: first, the relative likelihood of ever having a mental health visit estimated with the logistic regression component, and second, the estimated annualized visit RRs (i.e., mental health visits per year) derived from the Poisson regression component. English-preferring and Spanish-preferring Hispanic patients who received care in a CHC were significantly less likely to have had a mental health visit (OR=0.69 and 0.65, respectively), compared with the non-Hispanic White group. We observed no statistically significant difference in annualized mental health visit rates between non-Hispanic White and English-preferring Hispanic patients in our sample, but Spanish-preferring Hispanic patients had significantly lower annual rates of mental health visits compared with non-Hispanic White patients (RR=0.59).

Notably, an increasing number of primary care visits was associated with increased rates of mental health visits, with patients who had more than five primary care visits per year having an annual rate of mental health visits 11 times greater than that of patients who had one to three primary care visits per year (RR=10.60). Our findings remained robust in a sensitivity analysis limited to patients who were in the study for at least 1 year (see Table S1 in the online supplement).

DISCUSSION

In a national sample of patients who received care in a CHC, English- and Spanish-preferring Hispanic patients were less likely to have had a visit with a mental health provider during the study period than were non-Hispanic White patients, when the analyses were

controlled for age, sex, insurance, primary care use, PHQ-9 score, diagnosed substance use disorder, or documented buprenorphine prescription. These results support findings of previous work (5, 19–21) with weighted population surveys, which found that Hispanic populations had lower mental health service use than other minoritized or immigrant groups.

The available multistate EMR data from 1,691 CHCs enabled us to look beyond use versus no use of mental health services to identify patient-level correlates of annual rates of mental health service use, indicating recurring access to mental health care. Previous studies (22, 23) of survey data relied on patients' recalling of any visits with specialty mental health providers or general medical providers across a specified period. Our results highlight how language barriers may interfere with ongoing receipt of mental health services, particularly of specialty mental health services across time and beyond the initial access (24). Both English- and Spanish-preferring Hispanic patients had lower odds of ever having a mental health visit compared with non-Hispanic White patients. Yet when we analyzed data from patients who were predicted to have had a mental health visit, only Spanish-preferring Hispanic patients had lower annual rates of mental health visits. This finding suggests that even when Spanish-preferring Hispanic patients do overcome access barriers to mental health services, they remain less likely to routinely use such services compared with English-preferring Hispanic and non-Hispanic White patients. Language differences between patient and provider or a need for an interpreter may present barriers to conversations about complex problems or may signal cultural factors that contribute to lower continued mental health care use, including lower perceived need for mental health services (25), stigma (26), and lower confidence in the efficacy of mental health treatment (27).

Higher PHQ-9 scores and more primary care use during the study period were associated with higher rates of mental health service use after the analyses were controlled for age. Evidence (28, 29) suggests that patients ages 30–55 years are the most likely to use mental health services, yet although the Spanish-preferring Hispanic group in our sample had the largest proportion of patients in this age range, this group had the lowest rate of specialty mental health services use. Patients who had more than five CHC visits per year had an annual rate of mental health service use that was nearly 11 times higher than that of patients who had 1–3 CHC visits per year. However, we note that this result may have been due to our limiting the sample to patients who already were accessing CHC care. Accessing care is difficult for many patients, especially in communities that face socioeconomic disadvantage, such as undocumented immigrant populations. Previous studies (23, 30–33) of data from population-based surveys may have included respondents who had limited access to care, in particular specialty care, because of socioeconomic barriers, and these respondents therefore may have been more likely to substitute types of care (e.g., primary care for mental health care) because of limited availability and limited access to medical care.

This study had several limitations. First, the study design precluded an understanding of causation of repeated mental health service use across time. The annualized rates of mental health care use were calculated by evaluating all mental health services use during the study period. We were unable to assess whether mental health visits were clustered around specific time points and therefore did not represent regular use over time but rather a period of acute mental health crisis. Although the EMR data enabled accurate estimation of specialty mental

health services delivered by a mental health provider, they did not capture the rate of mental health services or treatments delivered in routine primary care or outside the CHC network and therefore may have undercounted the use of mental health services. Additionally, we could not control the analyses for whether mental health care was received in the CHC or offsite. As noted above, Hispanic patients are more likely to seek mental health services from their primary care provider, but the evidence-based treatment evaluated in this study was specialty mental health care (34). Although this study included nearly 1.5 million Hispanic and non-Hispanic White patients who sought care in a CHC, these patients may not have represented the entire mental health care–seeking population. Given our analyses' focus on Hispanic patients, the results of this study may not generalize to other minoritized groups (e.g., Black or Asian patients) who also experience disparities in receipt of specialty mental health care. Further research could focus on other minoritized groups as well as on the relationship between primary care access and mental health care access within and outside the health care safety net. Finally, we created a single category of mild depression for those who had a PHQ-9 score of 1–9. Although we acknowledge that a PHQ-9 score of ≤4 is classified as no or minor depression, and a score of 5–9 is classified as mild depression because mild depression can be managed with watchful waiting (35–37), we were unable to detect differences in outcomes between minor and mild depression.

CONCLUSIONS

Among patients who sought care at a CHC, English- and Spanish-preferring Hispanic patients were less likely to receive specialty mental health services. Among patients who were likely to seek specialty mental health services, Spanish-preferring Hispanic patients had a significantly lower annualized rate of receiving mental health care. Although overall access to care is improving with policy initiatives to integrate mental health care into primary care practices and to remove insurance carve-outs in order to increase mental health service coverage, we noted unequal access to recurring mental health care among the patients in our sample who do not prefer English. Further work could focus on discerning whether this result was caused by language and cultural barriers to care or was related to provider-driven referral to evidence-based mental health treatment.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

Acknowledgments

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HIGHLIGHTS

- Hispanic populations have rates of psychiatric diagnoses that are similar to or higher than those of non-Hispanic Whites but are less likely to receive mental health treatment.

- The authors aimed to understand differences, by ethnicity and language preference, in use of specialty mental health services in a national sample of community health center patients.

- Both English- and Spanish-preferring Hispanic patients were less likely to visit a specialty mental health provider than were non-Hispanic White patients, but only Spanish-preferring Hispanic patients had lower annual rates of specialty mental health service use.

- Access to care is not sufficient to decrease mental health treatment disparities due to ethnicity and language preference.

TABLE 1.

Patient characteristics, by ethnicity and preferred language (2012–2020)[a]

Characteristic	English-preferring Hispanic (N=238,285)		Spanish-preferring Hispanic (N=399,717)		Non-Hispanic White (N=860,653)		Total (N=1,498,655)	
	N	%	N	%	N	%	N	%
Age in years								
18–29	113,328	47.6	73,463	18.4	214,058	24.9	400,849	26.7
30–39	54,047	22.7	100,161	25.1	172,867	20.1	327,075	21.8
40–49	33,026	13.9	99,613	24.9	144,490	16.8	277,129	18.5
50–59	23,964	10.1	71,543	17.9	167,928	19.5	263,435	17.6
60–69	11,117	4.7	40,234	10.1	116,275	13.5	167,626	11.2
70–82	2,803	1.2	14,703	3.7	45,035	5.2	62,541	4.2
Female sex	138,543	58.1	246,610	61.7	462,384	53.7	847,537	56.6
Insurance								
No insurance	36,837	15.5	113,078	28.3	119,514	13.9	269,429	18.0
Private	32,557	13.7	52,830	13.2	202,687	23.6	288,074	19.2
Public	148,787	62.4	193,151	48.3	456,875	53.1	798,813	53.3
Private and public	20,104	8.4	40,658	10.2	81,577	9.5	142,339	9.5
Income (% FPL)								
138%	150,293	63.1	305,712	76.5	434,919	50.5	890,924	59.4
>138%	31,278	13.1	44,812	11.2	175,926	20.4	252,016	16.8
Not reported	56,714	23.8	49,193	12.3	249,808	29.0	355,715	23.7
Primary care visits per year								
<1	71,882	30.2	95,511	23.9	298,565	34.7	465,958	31.1
1–2	76,752	32.2	127,289	31.8	281,619	32.7	485,660	32.4
3–5	34,087	14.3	69,427	17.4	119,421	13.9	222,935	14.9
>5	55,564	23.3	107,490	26.9	161,048	18.7	324,102	21.6
Mean time in study (M±SD years), IQR	3.1±2.2	1.4–4.3	3.5±2.4	1.5–5.1	3.9±2.4	2.4–5.5	3.7±2.4	1.8–5.2
Smoking status								
Current	47,565	20.0	35,181	8.8	295,800	34.4	378,546	25.3
Former	23,626	9.9	34,549	8.6	150,586	17.5	208,761	13.9
Secondhand	1,068	.4	1,541	.4	4,429	.5	7,038	.5

Characteristic	English-preferring Hispanic (N=238,285)		Spanish-preferring Hispanic (N=399,717)		Non-Hispanic White (N=860,653)		Total (N=1,498,655)	
	N	%	N	%	N	%	N	%
Never	147,502	61.9	309,187	77.4	350,511	40.7	807,200	53.9
Unknown	18,524	7.8	19,259	4.8	59,327	6.9	97,110	6.5
Mental health service visit	30,268	12.7	40,578	10.2	144,252	16.8	215,098	14.4
PHQ-9 score								
Not recorded	145,542	61.1	229,961	57.5	503,996	58.6	879,499	58.7
0	26,943	11.3	64,853	16.2	69,104	8.0	160,900	10.7
<9	32,842	13.8	66,126	16.5	138,074	16.0	237,042	15.8
9	32,958	13.8	38,777	9.7	149,479	17.4	221,214	14.8
Buprenorphine prescription	1,847	.8	489	.1	14,360	1.7	16,696	1.1
Substance use disorder history	23,215	9.7	12,153	3.0	145,388	16.9	180,756	12.1

[a]FPL, federal poverty level; IQR, interquartile range. Scores on the nine-item Patient Health Questionnaire (PHQ-9) range from 0 to 27, with higher scores indicating more severe depression symptoms.

TABLE 2.

Likelihood of having a mental health visit during the study and annualized rates of mental health visits

Characteristic	Likelihood of having a mental health visit[a]		Annualized rate of mental health visits[b]	
	OR	95% CI	Rate ratio	95% CI
Language preference and ethnicity (reference: non-Hispanic White)				
English-preferring Hispanic	.69	.61–.77	.88	.77–1.01
Spanish-preferring Hispanic	.65	.54–.78	.59	.46–.76
Sex (reference: female)				
Male	.94	.88–.99	1.20	1.10–1.31
Insurance (reference: no insurance)				
Private	.58	.46–.74	1.29	1.06–1.58
Private and public	.93	.73–1.19	1.22	.99–1.50
Public	.88	.70–1.10	1.36	1.11–1.66
N of primary care visits per year (reference: 1–3 visits per year)				
<1	.52	.45–.59	.29	.25–.35
>3–5	1.68	1.59–1.78	1.95	1.88–2.03
>5	2.96	2.61–3.36	10.60	9.27–12.2
Federal poverty level (reference: 138%)				
>138%	.90	.82–.99	.86	.79–.93
Missing	.80	.66–.98	.80	.66–.97
PHQ-9 score (reference: 0)				
Not recorded	.70	.59–.83	1.18	.98–1.41
<9[c]	2.32	2.07–2.60	1.18	1.08–1.30
9[d]	4.26	3.73–4.86	1.23	1.09–1.39
Substance use disorder history	1.76	1.67–1.86	1.15	1.09–1.22
Buprenorphine prescription	1.34	1.07–1.67	1.26	.93–1.70
Smoking status (reference: current smoker)				
Unknown	.57	.45–.71	2.63	2.18–3.18
Former	.96	.91–1.01	.98	.92–1.05
Never	.84	.80–.89	.95	.89–1.00
Secondhand	.94	.78–1.13	.80	.65–.98

Characteristic	Likelihood of having a mental health visit[a]		Annualized rate of mental health visits[b]	
	OR	95% CI	Rate ratio	95% CI
Modified Elixhauser Comorbidity Index conditions (reference: 0)				
1	1.02	.97–1.06	.83	.79–.87
2	1.03	.97–1.11	.72	.68–.77
>2	.97	.88–1.08	.61	.52–.70
Age at first encounter	.98	.98–.99	1.00	1.00–1.00

[a]Estimated with logistic regression.

[b]Estimated with Poisson regression.

[c]Indicating no or mild depression.

[d]Indicating moderate to severe depression.