Letters

RESEARCH LETTER

Prevalence of Housing Problems Among Community Health Center Patients

In 2016, the Health Resources and Services Administration (HRSA) Health Center Program provided primary care to more than 25 million medically underserved patients through a nationwide network of community health center (CHC), health care for the homeless, migrant health center, and public housing primary care clinics.[1] Although the latter 3 clinic types serve individuals with housing problems by definition, little is known about the scope of housing problems among CHC patients, who constitute 91% of Health Center Program patients nationally.[1] We used data from a national survey to assess the prevalence and health-related correlates of housing problems among CHC patients.

Methods | The Partners Human Research Committee exempted this study. We analyzed the 2014 Health Center Patient Survey, a nationally representative, cross-sectional, in-person survey of Health Center Program patients conducted by RTI International from September 2014 through April 2015 using a 3-stage sampling design.[2] First-stage sampling units were Health Center Program grantees, stratified by funding stream, substratified by other characteristics, and sampled with probability proportional to size. Second-stage sampling units were clinic sites within grantees. Third-stage sampling units were patients sampled consecutively at clinics if they had made 1 prior visit or more within the past year; 91.4% of those eligible completed interviews. We confined our analysis to CHC patients aged 18 years or older.

We used responses to items assessing living circumstances to create 5 mutually exclusive housing categories: (1) homeless—usually slept during the past week in an emergency shelter, transitional shelter, or car; anywhere outside; or any other place not meant for habitation; (2) doubled-up—past-week residence in a house, apartment, or room that they did not rent or own (doubled-up individuals are considered homeless by HRSA but not by the US Department of Housing and Urban Development[3]); (3) unstably housed—past-week residence in their own place but moved 2 or more times in the past year[4] or was unable to pay the rent or mortgage at any time;[5] (4) stably housed, previously homeless—past-week residence in their own place without the above difficulties but previously homeless, reflecting potential housing risk;[4] and (5) stably housed, never homeless—no current or prior housing problems.

Other variables included self-reported demographic characteristics, health status indicators, and measures of health care use and access, each defined in the **Table**.

We used Rao-Scott χ^2 tests with a 2-sided *P* value of less than .05 for significance to compare respondents with (categories 1-4) vs without (category 5) current or prior housing problems. We examined whether those with housing problems had ever received CHC assistance in finding a place to live. We conducted analyses in SAS (SAS Institute), version 9.4, using strata, cluster, and weight variables to account for the sampling design. Reported percentages are weighted.

Results | Of 3172 adult CHC patients, 3148 provided sufficient information to characterize their housing status. Of these, 1.2% (95% CI, 0.6%-1.8%) reported current homelessness, 9.0% (95% CI, 6.8%-11.2%) reported doubling-up, 26.8% (95% CI, 23.1%-30.6%) reported unstable housing, and 6.5% (95% CI, 4.6%-8.5%) reported stable housing but previous homelessness, totaling 43.6% (95% CI, 39.0%-48.1%) with any history of housing problems. Compared with those without housing problems, participants with housing problems were more likely to report health problems, emergency department use, and delays in care (Table). Twenty-nine percent (95% CI, 4.4%-52.9%) of homeless, 1.1% (95% CI, 0%-2.2%) of doubled-up, and 2.5% (95% CI, 0.8%-4.2%) of unstably housed patients reported CHC assistance in finding a place to live.

Discussion | In this cross-sectional study, 43.6% of adult CHC patients reported housing problems, including 1.2% who reported current homelessness. By comparison, the point prevalence of homelessness in the US population has been estimated at 0.18%.[6] Limitations of this study include reliance on cross-sectional self-report, the lack of a validated measure of housing instability, and the potential lack of generalizability to non-CHC clinic settings. Additionally, we did not examine the correlates of specific housing problems. Nonetheless, the high prevalence of housing problems and their association with adverse health metrics suggests that CHCs should consider universal screening of housing status.

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Table. Characteristics of Patients With vs Without Housing Problems Among Patients at US Community Health Centers

	Any Current or Prior Housing Problem (n = 1329)		No Current or Prior Housing Problem (n = 1819)		
	Unweighted No. of Patients	Weighted % (95% CI)	Unweighted No. of Patients	Weighted % (95% CI)	*P* Value[a]
Demographic					
Age, y					
18-44	554	54.2 (48.2-60.1)	676	52.0 (45.9-58.2)	.001
45-64	663	38.4 (32.1-44.6)	835	33.4 (26.7-40.1)	
≥65	112	7.5 (3.6-11.3)	308	14.6 (5.9-23.2)	
Women	919	67.3 (63.1-71.5)	1277	64.0 (58.0-69.9)	.30
Race/ethnicity					
Non-Hispanic white	432	57.6 (50.1-65.1)	448	47.2 (39.0-55.4)	<.001
Non-Hispanic black	284	16.1 (11.7-20.5)	378	20.4 (14.4-26.4)	
Non-Hispanic Asian	43	0.8 (0.2-1.3)	222	3.6 (0.7-6.5)	
Non-Hispanic other	163	5.4 (2.9-7.9)	216	4.6 (2.6-6.7)	
Hispanic	406	20.1 (14.2-26.0)	553	24.2 (17.4-30.9)	
High school diploma	854	68.2 (62.4-73.9)	1101	65.2 (60.1-70.2)	.28
Currently employed	432	35.4 (30.3-40.5)	713	41.9 (35.6-48.2)	.07
Federal poverty level, %					
≤100	859	60.1 (54.6-65.5)	919	50.9 (44.7-57.0)	<.001
101-199	359	31.5 (26.2-36.7)	580	28.4 (24.2-32.5)	
≥200	102	8.4 (5.3-11.6)	307	20.8 (15.7-25.8)	
Health insurance					
None	265	29.7 (21.8-37.5)	337	24.2 (18.9-29.4)	<.001
Public	779	50.6 (43.4-57.8)	922	44.8 (39.7-49.9)	
Private	262	19.4 (15.0-23.7)	559	30.1 (24.9-35.4)	
Health Indicators					
Fair or poor general health	697	44.8 (39.1-50.5)	786	37.6 (33.7-41.4)	.04
Multiple chronic conditions[b]	708	52.7 (46.9-58.5)	876	45.0 (40.1-50.0)	.02
Functional impairment[c]	236	17.6 (13.0-22.2)	185	9.1 (6.1-12.2)	<.001
Sensory impairment[d]	360	26.6 (21.3-31.8)	328	19.0 (14.4-23.5)	.007
Fair or poor oral health	679	46.8 (42.1-51.6)	749	35.5 (31.3-39.8)	.001
Serious mental illness[e]	236	19.0 (14.1-23.8)	112	6.2 (3.7-8.7)	<.001
High psychological distress[f]	265	22.2 (18.1-26.3)	153	7.5 (5.0-9.9)	<.001
Lifetime drug use[g]	729	58.7 (51.8-65.5)	541	36.8 (29.9-43.6)	<.001
Current alcohol use disorder[g]	122	10.8 (7.5-14.0)	84	3.6 (1.5-5.8)	<.001
Current cigarette smoking	462	36.1 (30.1-42.1)	358	21.4 (15.4-27.5)	<.001
Health Care Use and Access					
Health service use					
Emergency department use, past year	738	53.0 (47.2-58.9)	706	44.1 (39.5-48.7)	.02
Hospitalization, past year	246	17.5 (13.1-22.0)	228	13.6 (11.0-16.3)	.12
Medical care access[h]					
Delayed, past year	232	22.7 (16.8-28.6)	151	11.0 (7.6-14.4)	<.001
Unmet need, past year	173	15.7 (10.1-21.4)	121	11.3 (7.3-15.4)	.10
Prescription medication access[h]					
Delayed, past year	353	29.6 (22.2-36.9)	234	17.0 (12.7-21.3)	<.001
Unmet need, past year	280	27.6 (21.5-33.7)	172	14.0 (10.1-18.0)	<.001

[a] Two-tailed *P* values were obtained using the Rao-Scott χ^2 test with strata, cluster, and weight variables to account for the sampling design. *P* values for multicategory variables reflect general tests of between-group differences across all categories.

[b] ≥2 of asthma, cancer, kidney disease, chronic obstructive pulmonary disease, diabetes, congestive heart failure, hepatitis B or C infection, HIV infection, high cholesterol, hypertension, ischemic heart disease, or stroke.

[c] ≥1 of difficulty dressing or bathing, needing help with eating, getting in or out of bed or chairs, or toileting.

[d] Serious difficulty hearing seeing (even with glasses).

[e] Diagnosis of schizophrenia or bipolar disorder.

[f] Score of ≥13 on the Kessler 6-item scale of psychological distress in the past 30 d.

[g] Assessed with the WHO Alcohol, Smoking, and Substance Involvement Screening Test (ASSIST).

[h] Participants needing past-year medical care (n = 2262); participants needing past-year prescription medications (n = 2667); "delayed" indicates delay in obtaining and "unmet need" indicates unable to obtain.

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COMMENT & RESPONSE

Organ Dysfunction After Surgery in Patients Treated With Individualized or Standard Blood Pressure Management

To the Editor In a randomized clinical trial,[1] Dr Futier and colleagues assessed the effect of individualized vs standard blood pressure management strategies on postoperative organ dysfunction. We had concerns regarding the blood pressure goals that were established for the subgroup of patients that was assigned to the standard blood pressure group.

The authors chose to treat a systolic blood pressure (SBP) less than 80 mm Hg or less than 40% from a patient's resting blood pressure. However, it has been well described in the literature and is standard practice to maintain the intraoperative blood pressures within 20% of the patient's best estimate of preoperative blood pressure.[2] Only in healthy patients has a 25% to 35% decrease in blood pressure from immediate preoperative baseline values been found acceptable.[3] In a recent analysis,[4] maintaining intraoperative pressures below 20% of preoperative values was associated with myocardial and kidney injury. Thus, the authors' decision to allow the blood pressures to drop to less than 40% of preoperative values in the standard group might have predisposed these patients to a higher likelihood of postoperative organ dysfunction. The patient population studied by the authors had a high risk of perioperative complications and exposing these patients to a lower blood pressure threshold than what is standard practice might have artificially skewed the data in favor of the individualized blood pressure group.

The other concern we had was that patients in the standard group received a higher volume of crystalloid administration during surgery (2000 mL vs 1500 mL) compared with the individualized blood pressure group. Administration of a higher volume of fluids during the intraoperative period can be associated with worse postoperative outcomes.[5] The difference in fluid administration during the intraoperative period between the 2 groups could also have affected the postoperative outcomes.

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To the Editor Dr Futier and colleagues performed a study to evaluate the effects of targeting perioperative blood pressure based on patients' individual preoperative blood pressures compared with standard practice.[1] However, methodological issues raise questions about the results. The authors did not simply compare 2 groups with different perioperative blood pressure goals. Rather, they compared the outcomes of 2 completely different blood pressure management strategies.

First, the intervention group was managed with norepinephrine infusions to achieve blood pressure goals, whereas