Prevalence of Patient-Reported Social Risk Factors and Receipt of Assistance in Federally Funded Health Centers

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INTRODUCTION

Interest in integrating social and medical care in the US health care system is growing.[1] This is especially true in Bureau of Primary Healthcare (BPHC)–funded health centers, which disproportionately serve patients whose health is affected by socioeconomic disadvantage. Little is known about the prevalence of social risks[2] or social care interventions in BPHC settings. The current study examines the prevalence of social risk factors and social care among patients served in BPHC-funded health centers.

METHODS

We analyzed data from the 2014 Health Center Patient Survey (HCPS), a cross-sectional survey administered by the Health Resources and Services Administration (HRSA). The HCPS was conducted with a random convenience sample of patients from health centers receiving BPHC grants, including Community Health Centers (CHCs), Migrant Health Centers (MHCs), Health Care for the Homeless (HCH), and Public Housing Primary Care (PHPC) programs. Details of HCPS sampling scheme and administration are described elsewhere.[3,4] Survey data were merged with annually reported 2014 Uniform Data System (UDS) data, which include health center–reported characteristics.[5]

HCPS asked multiple questions related to patients' social risks, including employment status, education level, housing stability, and household income. Patients were also asked if they had ever received social care, including assistance from their health center to obtain free medications, access medical transportation, apply for government benefits, or access other basic needs resources (e.g., housing, employment, childcare, food, or clothing/shoes). We examined patient- and health center–level predictors of both social risk and social assistance. Predictor variables from HCPS included patient sociodemographics, health status, health care utilization, clinic urbanicity, and grantee type. Health center–level predictors from UDS included proportion of total staff FTE dedicated to enabling services (non-clinical services to improve health care access and outcomes),[6] panel size, and regional location.

Weighted frequencies of patient demographics, health, and social risk factors, as well as health center–reported characteristics, were calculated in the full sample, then again in only those reporting receiving assistance, stratifying by type of assistance received. Chi-squared tests were used to compare differences between stratified samples. All data analyses were conducted using Stata/SE 15.0.

RESULTS

Of the 7002 survey respondents, 4225 (60.3%) adult patients from 167 health centers had recorded responses to the measures of social risk factors or key study demographic variables and were included in the final study sample. Respondent-reported demographics, health status and health care utilization, social risk factors and social care, and health center–level characteristics are shown in Table 1. Assistance with different types of social care varied by patient and health center characteristics (Table 2).

DISCUSSION

This study is the first to evaluate the prevalence of patient-reported social risk factors and delivery of social care in a nationally representative sample of federally funded health centers. The population surveyed reported relatively high levels of social risks and low levels of assistance. Patients

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Table 1 Descriptors of Patient Respondents to 2014 Health Center Patient Survey (*n* = 4225 Patients) and Matched Bureau of Primary Health Care-Funded Health Center Characteristics (*n* = 167 Health Centers)

	Descriptors	
	Unweighted (*n*)	Weighted (%) (95% CI)
Patient-reported demographics[a]		
Gender[b]: Female	2676	64.9 (60.4 to 69.2)
Race/ethnicity		
Non-Hispanic White	1147	51.0 (43.2 to 58.7)
Non-Hispanic Black	1095	21.2 (16.3 to 27.0)
Non-Hispanic Asian	234	1.67 (0.87 to 3.18)
Other[c]	173	2.64 (1.49 to 4.65)
Hispanic	1576	23.6 (18.1 to 30.2)
Age		
18–45	1542	48.0 (43.0 to 54.1)
45–65	2230	39.4 (33.7 to 45.4)
65+	453	12.6 (6.84 to 22.1)
Recent immigrant[d]	1867	28.4 (22.9 to 34.7)
Insurance		
Uninsured	1024	29.3 (22.5 to 37.2)
Public	1741	41.2 (34.0 to 48.9)
Private	1460	29.5 (23.1 to 36.8)
Patient-reported health status/utilization[a]		
Reported health status		
Excellent/very good/good	2057	55.9 (52.3 to 59.5)
Fair/poor	2168	44.1 (40.5 to 47.7)
Multiple chronic conditions[e]	2262	51.4 (46.9 to 55.8)
Functional deficits[f]	1151	26.8 (23.3 to 30.7)
Serious mental illness[g]	595	12.7 (9.83 to 16.2)
Significant emotional distress[h]	705	15.0 (12.3 to 18.1)
Lifetime drug use[i]	1855	46.3 (39.4 to 53.4)
Continuity with health center		
< 6 months	507	9.87 (7.73 to 12.5)
6 months to 1–3 years	1257	33.8 (29.5 to 38.3)
> 3 years, < 5 years	590	14.5 (11.9 to 17.6)
5+ years	1869	41.8 (36.1 to 47.7)
ED utilization last 12 months[j]	2150	59.8 (45.6 to 54.0)
Delay in medical care[k]	1655	40.7 (35.5 to 46.0)
Unable to access medical care[k]	1574	39.3 (34.2 to 44.7)
Delay in prescription access[l]	1540	35.8 (30.9 to 41.0)
Unable to access prescription[l]	1369	33.0 (28.8 to 37.4)
Health center–reported practice level variables		
State/region[m]		
Midwest	584	20.9 (12.0 to 34.0)
North East	720	19.7 (11.9 to 30.8)
South	1208	30.5 (19.4 to 44.3)
West	1713	28.8 (18.1 to 42.6)
Urbanicity[a] Urban	3015	47.3 (34.7 to 60.1)
Health center grantee type[a]		
Public Housing Primary Care (PHPC)	365	0.99 (0.68 to 1.44)
Migrant Health Center (MHC)	590	3.14 (2.08 to 4.73)
Health Care for the Homeless (HCH)	895	3.29 (2.23 to 4.82)
Community Health Center (CHC)	2375	92.6 (90.4 to 94.3)
Health center panel size[m]		
≤ 10k	583	16.1 (8.5 to 28.3)
> 10k to ≤ 40k	1912	51.2 (38.4 to 63.9)
> 40k	1730	32.7 (23.1 to 44.0)
Enabling services staffing < 10% FTE[m,n]	1834	51.7 (38.6 to 64.5)
Patient-reported social risk factors[a]		
Unstable employment[o]	3104	70.3 (64.8 to 75.2)
Unstable housing[p]	1866	32.1 (27.6. to 36.9)
Education: <high school diploma/GED[q]	1869	34.7 (30.4 to 39.2)
%Federal poverty level (FPL)[r]		
≤ 100	2732	57.9 (53.3 to 62.3)
101–199	1224	32.0 (28.1 to 36.2)
≥ 200	269	10.1 (6.98 to 14.4)
Patient report of assistance[a]		
Obtaining free medications	1407	28.0 (23.5 to 33.1)
Transportation to health center	774	11.6 (8.27 to 16.1)
Applying for government benefits	1177	23.7 (19.5 to 28.5)
Any basic needs	620	8.46 (6.24 to 11.4)
Food	439	5.68 (4.15 to 7.74)
Housing	296	2.57 (1.71 to 3.86)

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Table 1. (continued)

	Descriptors	
	Unweighted (*n*)	**Weighted (%) (95% CI)**
Employment	212	3.68 (2.38 to 5.67)
Childcare	61	1.22 (0.691 to 2.16)
Clothing/shoes	309	2.99 (1.88 to 4.72)

[a] *From 2014 Health Center Patient Survey (HCPS) dataset*
[b] *Gender (biological sex at birth)*
[c] *Non-Hispanic other race (patients who selected multiple races or a specific race group with too few respondents to maintain confidentiality)*
[d] *Recent immigration (speaking non-English language at home and/or being born outside of the USA)*
[e] *Multiple chronic conditions (≥ 2 reported diagnoses of asthma, cancer, kidney disease, COPD, DM, CHF, hepatitis B or C, HIV, HLD, HTN, ischemic heart disease, stroke)*
[f] *Functional impairment (≥ 1 difficulty with activities of daily living (ADLs))*
[g] *Serious mental illness (reported diagnosis of schizophrenia or bipolar disorder)*
[h] *High psychological distress in the past 30 days (score ≥ 13 on Kessler Psychological Distress Scale)*
[i] *Lifetime drug use: WHO Alcohol, Smoking and Substance Involvement Screening Test (ASSIST)*
[j] *One or more emergency department (ED) visits in past year*
[k] *Needing medical care in the past year but experiencing delay or unmet needs*
[l] *Needing prescription meds in the past year but experiencing delay or unmet needs*
[m] *From 2014 Uniform Data System*
[n] *Proportion of full-time equivalents (FTEs) designated as enabling services, per UDS reporting guidelines. Absolute numbers were unavailable given the need to maintain health center anonymity. Within enabling services staffing, individual types of staff included case managers, patient and community education specialists, outreach workers, transportation workers, eligibility assistance workers, interpretation staff, and personnel performing other enabling services activities*
[o] *Currently employed for pay vs. not*
[p] *Usually slept during the past week in either (1) in an emergency shelter, transitional shelter, or car, anywhere outside, or any other place not meant for habitation; (2) in a house, apartment, or room that they did not rent or own; (3) in their own place but moved two or more times in the past year or had been unable to pay the rent or mortgage at any time; (4) in their own place without multiple moves or difficulty paying rent/mortgage, but previously homeless versus stably housed without prior housing problems*
[q] *≥High school vs. not*
[r] *Measure of household income*

Table 2 Percentage of Patients Who Reported Receiving Assistance from Their Bureau of Primary Health Care–Funded Health Center, by Patient Demographics, Self-Reported Health Status and Health Care Utilization, Practice-Level Characteristics, and Self-Reported Social Risk Factors

	Type of reported assistance											
	Obtaining free medications			**Health center transportation**			**Applying to government benefits**			**With basic needs***		
	Unwtd[†] (*n*)	**Wtd‡ (%)**	***p* value§**	**Unwtd (*n*)**	**Wtd (%)**	***p* value**	**Unwtd (*n*)**	**Wtd (%)**	***p* value**	**Unwtd (*n*)**	**Wtd (%)**	***p* value**
Patient-reported demographics												
Gender												
Female	624	31.7	0.24	358	11.4	0.92	751	23.6	0.87	564	27.9	0.90
Male	783	26.0		416	11.7		426	24.0		910	27.6	
Race/ethnicity												
Non-Hispanic White	430	27.1	0.32	191	6.3	< 0.01	287	18.9	0.01	374	22.0	0.02
Non-Hispanic Black	446	29.4		282	24.4		283	28.8		393	34.7	
Non-Hispanic Asian	63	21.9		24	14.8		97	39.9		109	43.7	
Other	63	4.5		56	18.5		51	15.1		64	38.3	
Hispanic	405	26.9		221	10.4		459	29.4		534	31.4	
Age												
18–44	413	24.5	< 0.01	239	11.3	0.05	440	25.1	0.34	530	28.0	0.12
45–65	894	35.9		481	13.9		640	23.8		830	30.1	
65+	100	17.1		54	5.5		97	16.3		114	19.3	
Recent immigrant												
Yes	498	28.0	0.97	255	10.8	0.65	568	29.3	0.04	661	31.2	0.241
No	909	28.1		519	11.9		609	21.5		813	26.3	
Insurance												
Public	588	35.8	0.01	365	18.5		566	28.5	0.12	693	32.0	0.53

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Table 2. (continued)

	Type of reported assistance											
	Obtaining free medications			Health center transportation			Applying to government benefits			With basic needs*		
	Unwtd† (*n*)	Wtd‡ (%)	*p* value§	Unwtd (*n*)	Wtd (%)	*p* value	Unwtd (*n*)	Wtd (%)	*p* value	Unwtd (*n*)	Wtd (%)	*p* value
Private	420	21.9		245	7.5	< 0.01	380	19.1		470	22.2	
Uninsured	399	37.4		164	6.1		231	21.7		311	27.2	
Patient-reported health status/utilization												
Reported health status												
Excellent/ very good/good	606	24.2	< 0.01	342	10.1	0.15	542	22.5	0.38	679	26.8	0.53
Fair/poor	801	33.0		432	13.5		635	25.3		795	28.9	
Multiple chronic conditions												
Yes	852	33.4	0.01	457	12.4	0.42	636	22.8	0.59	809	26.9	0.59
No	555	22.4		317	10.7		541	24.7		665	28.6	
Functional deficits												
Yes	466	37.2	< 0.01	273	15.4	0.03	358	27.4	0.17	457	32.7	0.05
No	941	24.7		501	10.2		819	22.4		1017	25.9	
Serious mental illness												
Yes	267	45.0	0.01	165	20.1	0.02	168	25.8	0.66	233	32.4	0.32
No	1140	25.6		609	10.4		1009	23.4		1241	27.0	
Significant emotional distress												
Yes	287	34.7	0.12	170	20.7	< 0.01	209	28.6	0.18	274	36.4	0.03
No	1120	26.9		604	10.0		968	22.9		1200	26.2	
Lifetime drug use												
Yes	802	35.4	< 0.01	438	14.4	0.02	559	22.6	0.55	735	26.5	0.55
No	605	21.7		336	9.2		618	24.7		739	28.8	
Continuity at health center												
< 6 months	169	17.8	0.22	86	5.6	0.01	103	13.5	0.09	157	19.9	0.23
6 months to 1–3 years	409	30.3		205	8.3		317	23.4		408	26.1	
> 3 years, < 5 years	213	31.5		117	11.1		177	23.3		215	26.7	
5+ years	616	27.6		366	16.0		479	26.2		693	30.9	
Emergency department utilization last 12 months												
Yes	818	32.5	0.04	481	14.0	0.01	660	26.5	0.04	848	30.2	0.10
No	589	23.6		293	9.3		517	21.0		626	25.3	
Delay in medical care												
Yes	461	20.5	< 0.01	265	10.7	0.62	425	23.7	0.97	522	26.2	0.45
No	946	33.2		509	12.2		752	23.8		952	28.8	
Unable to access medical care												
Yes	453	21.5	0.01	259	11.5	0.96	405	23.7	0.99	503	26.3	0.55
No	954	32.3		515	11.7		772	23.8		971	28.6	
Delay in prescription access												
Yes	515	28.3	0.89	292	11.7	0.96	434	26.7	0.16	559	31.4	0.14
No	892	27.9		482	11.6		743	22.1		915	25.7	
Unable to access prescription												
Yes	457	30.0	0.46	261	10.7	0.60	382	25.7	0.29	484	30.2	0.24
No	950	27.1		513	12.0		795	22.8		990	26.5	
Health center–reported practice level variables												
Region												
North East	221	24.7	0.53	205	24.1	< 0.01	226	32.2	0.15	289	37.3	0.08
South	386	27.5		151	4.3		209	18.9		283	20.9	
Midwest	236	34.0		152	15.0		183	20.0		237	24.1	
West	564	26.6		266	8.3		559	25.8		665	31.0	
Urbanicity												
Urban	1053	28.7	0.78	595	18.5	< 0.01	865	27.6	0.09	1102	32.1	0.07
Rural	354	27.4		179	5.39		312	20.3		372	23.8	
Health center type												
PHPC	119	35.4	< 0.01	73	21.4	< 0.01	106	28.2	< 0.01	128	34.5	< 0.01
MHC	124	16.9		87	12.6		165	29.1		190	32.2	
HCH	536	62.9		336	39.9		313	36.6		457	53.1	
CHC	628	27.1		278	10.5		593	23		699	26.6	
Health center panel size												
≤ 10k	225	33.7	0.53	112	11.0	0.45	169	21.8	0.47	214	31.0	0.56
> 10k to ≤ 40k	648	27.7		340	9.5		527	22.0		672	25.4	
> 40k	534	25.8		322	15.3		481	27.4		588	29.7	
Enabling services < 10% FTE												
< 10%	536	23.6	0.06	301	9.0	0.14	441	18.5	0.02	556	21.0	< 0.01
≥ 10%	871	32.8		473	14.4		736	29.3		918	34.9	
Patient reported social risk factors												
Unstable job												

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Table 2. (continued)

	Type of reported assistance											
	Obtaining free medications			Health center transportation			Applying to government benefits			With basic needs*		
	Unwtd[†] (*n*)	Wtd‡ (%)	*p* value§	Unwtd (*n*)	Wtd (%)	*p* value	Unwtd (*n*)	Wtd (%)	*p* value	Unwtd (*n*)	Wtd (%)	*p* value
Yes	1103	28.0	0.96	646	12.6	0.21	886	23.8	0.98	1126	27.4	0.75
No	304	28.2		128	9.2		291	23.7		348	28.6	
Unstable housing												
Yes	858	38.5	< 0.01	493	16.4	< 0.01	575	26.1	0.35	793	33.0	0.04
No	549	23.1		281	9.4		602	22.6		681	25.2	
Education: < high school diploma/ GED												
Yes	592	26.7	0.52	359	13.2	0.32	518	24.5	0.77	647	28.4	0.80
No	815	28.8		415	10.8		659	23.3		827	27.4	
%Federal poverty level (FPL)												
≤ 100	1002	27.7	0.13	587	14.3	0.05	794	25.9	0.01	1026	30.9	< 0.01
101–199	338	31.6		155	7.3		325	23.9		383	27.0	
≥ 200	67	18.5		32	10.1		58	10.4		65	11.5	

[*] *Basic needs assistance with housing, job, food, childcare, clothing/shoes*
[†] *Untd unweighted*
[‡] *Wtd weighted*
[§] *Two-tailed p values obtained from weighted chi-square analyses comparing differences in patients who reported receiving assistance from their health center vs. those who did not report assistance. When variables have multiple categories, p values reflect between-group differences across all categories*

primarily reported receiving assistance with health care access and other medical care–related social risks, like transportation. Fewer patients reported assistance around basic material needs like food or housing. Receiving assistance varied by sociodemographic, health care utilization, and health center characteristics. In general, higher proportions of patients with poorer health status reported assistance accessing medical transportation and obtaining free medications. At the health center level, patients of clinics with more enabling services staffing reported receiving more assistance with basic material needs resources.

The HCPS survey design should influence the interpretation of these findings. The cross-sectional survey relied entirely on patient-reported health indicators. Questions about assistance were not temporally bounded (e.g., “Have you ever received assistance with...”), nor did they have a corresponding question about whether the patient perceived a need for assistance. Additionally, questions about applying for benefits were ambiguous, but likely mostly pertained to enrolling in health insurance. Despite these limitations, the survey is a useful indicator of the prevalence of social risk factors and delivery of social care in federally funded health centers. We found that delivery of social care is uneven across health center settings, driven both by patient- and health center–level variables. This may suggest that equally complex patients may receive different services in different settings. As interest grows around integrated social and medical care delivery, policy innovations can use data about the prevalence of social risk and availability of social care initiatives to improve comprehensive health programs.

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Compliance with Ethical Standards:

Conflict of Interest: *The authors declare that they do not have a conflict of interest.*

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