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# Practice Capacity to Address Patients' Social Needs and Physician Satisfaction and Perceived Quality of Care

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## ABSTRACT

Recent studies have explored clinician impacts of health care–based interventions that respond to patients' social and economic needs. These studies were limited by available clinician data. We used the Commonwealth International Health Policy Survey of 890 primary care physicians to examine associations between clinic capacity to respond to patients' social needs and physician satisfaction, stress, and perceived medical care quality. Results suggest that perceived capacity to address social needs is strongly associated with both clinician satisfaction and perceived medical care quality. Our findings add to a growing literature on the potential return on investment of clinical interventions to address social needs.

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## INTRODUCTION

A growing body of evidence explores how addressing patients' adverse social circumstances in the context of health care delivery may affect their health and decrease avoidable health care cost and use.<sup>1</sup> Two recent studies suggest that the impacts of greater clinical capacity to intervene on patients social and economic needs can extend beyond patients to clinicians, including a reduction in symptoms of burnout.<sup>2,3</sup> These studies were limited in that they included few clinician-level variables. Using a large health policy study of primary care physicians, we explored associations between clinic capacity to address patients' social and economic needs and physician job satisfaction, stress, and perceived quality of medical care.

## METHODS

Data came from the Commonwealth Fund's 2015 International Survey of Primary Care Physicians,<sup>4</sup> in which questionnaires were distributed to a random sample of primary care physicians in 11 countries. This study included US physicians only. Initial recruitment was through mail; questionnaires were self-completed on paper or online. A total of 1,001 US physicians responded (response rate = 30.9%), of whom 170 had missing data on relevant variables. We used multiple imputation to impute missing data for 59 physicians, yielding a final analytic sample of 890 (11.1%).

Two measures were used to capture capacity to address patient social needs. The first measure was preparedness to manage patients with social needs, defined as answering "well prepared" or "somewhat prepared" vs "not prepared" to the question, "How prepared is your practice to manage care for patients in need of social services in the community (eg, housing, meals, and transportation)?" The second measure was ease of care coordination, defined as answering "very easy" or "easy" vs "somewhat difficult" or "very difficult" to the question, "How easy or difficult is it to coordinate your patient's care with social services or other community providers when needed (eg, housing, meals, and transportation)?"

We assessed 6 physician outcomes: job satisfaction; job stress; general income satisfaction; relative income satisfaction compared with special-

*Conflicts of interest: authors report none.*

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ists; satisfaction with time spent with patients; and views on whether the quality of medical care has declined over the past 3 years.

All analyses were performed using Stata version 15.0 (StataCorp LP). To evaluate associations between perceived clinic capacity to address patient social needs and physician outcomes, we conducted bivariate and multivariate logistic regression analyses adjusting for demographic and practice variables. All models used survey weights to adjust for non-response based on known sociodemographic parameters of clinician sex, age, region, and specialty. Multiple imputation was performed to impute missing data for all variables except sex and outcomes. The study was considered exempt by our institutional review board.

## RESULTS

Characteristics of the study sample are in Table 1. The largest share of the 890 physicians worked in a practice located in a city. Most reported often (36.6%) or sometimes (45.4%) caring for patients needing social services. On average, 33.7% felt that their clinic was prepared (well or somewhat) to manage patients needing these services, and 37.5% felt it was easy (very easy or easy) to coordinate patient care.

Physicians who reported practicing in a clinic prepared to manage patients with social needs had higher job satisfaction (adjusted odds ratio [aOR] for very satisfied vs very dissatisfied = 3.23; 95% CI, 1.47-7.09), were more satisfied with amount of time spent with patients, (aOR for very satisfied vs very dissatisfied = 2.86; 95% CI, 1.37-6.00), and were more likely to think that the quality of medical care patients receive has improved (aOR = 1.72; 95% CI, 1.19-2.49) (Table 2). Income satisfaction in general and relative to specialists was significantly associated with clinic preparedness to address patients with social needs initially, but not after controlling for how frequently the practice saw patients with social needs. There was no association with job stress.

**Table 1. Physician and Practice Characteristics (N = 890)**

Characteristic	Physicians, No., Unweighted	Physicians, %, Unweighted	Physicians, %, Weighted
Age, y			
<35	45	5.1	5.7
35-44	192	21.6	20.1
45-54	244	27.4	29.4
55-64	296	33.3	29.3
≥65	110	12.4	15.5
Missing/Imputed	3	0.3	–
Sex			
Female	345	38.8	39.1
Male	545	61.2	60.9
Practice environment			
City	345	38.8	41.0
Suburb	269	30.2	29.6
Small town	167	18.8	18.6
Rural	103	11.6	10.7
Missing/Imputed	6	0.7	–
Year of graduation from residency			
Before 1986	222	24.9	26.5
1986-1995	229	25.7	25.0
1996-2003	221	24.8	25.9
2004 or later	206	23.1	22.6
Missing/Imputed	12	1.3	–
Part of larger integrated provider system			
No	614	69.0	69.4
Yes	273	30.7	30.6
Missing/Imputed	3	0.3	–
US region			
Northeast	206	23.1	21.9
Midwest	199	22.4	23.5
South	290	32.6	33.0
West	195	21.9	21.6
Missing/Imputed	0	0.0	–
Medical specialty			
Family medicine/ Medicine-pediatrics/ General practice	448	50.3	42.8
Internal medicine	263	29.6	38.4
Pediatrics	179	20.1	18.8
Missing/Imputed	0	0.0	–
Size (full-time equivalent clinicians)			
≤1	238	26.7	28.2
>1 to 3	242	27.2	26.7
>3 to 7	191	21.5	20.8
>7	208	23.4	24.3
Missing/Imputed	11	1.2	–

*continues*

Physicians who reported that it was easy to coordinate patients' care with social services or other community clinicians had higher job satisfaction (aOR for very satisfied vs very dissatisfied = 2.75; 95% CI, 1.33-5.67), personal income satisfaction (aOR for very satisfied vs very dissatisfied = 2.28; 95% CI, 1.22-4.26), relative income satisfaction (aOR for very satisfied vs very dis-

**Table 1. Physician and Practice Characteristics (N = 890)** (continued)

Characteristic	Physicians, No., Unweighted	Physicians, %, Unweighted	Physicians, %, Weighted
Frequency of caring for patients needing social services			
Often	325	36.5	36.6
Sometimes	399	44.8	45.4
Rarely	140	15.7	15.2
Never	23	2.6	2.7
Missing/Imputed	3	0.3	–
Job satisfaction			
Very satisfied	156	17.5	18.1
Satisfied	411	46.2	46.8
Somewhat dissatisfied	264	29.7	29.0
Very dissatisfied	55	6.2	6.0
Missing/Imputed	4	0.4	–
Job stress			
No stress	94	10.6	10.9
Moderately stressed	393	44.2	45.1
Very stressed	282	31.7	31.2
Extremely stressed	115	12.9	12.8
Missing/Imputed	6	0.7	–
Satisfaction with income			
Very satisfied	137	15.4	15.5
Satisfied	449	50.4	51.0
Somewhat dissatisfied	209	23.5	23.2
Very dissatisfied	90	10.1	10.3
Missing/Imputed	5	0.6	–
Satisfaction with income relative to specialists			
Very satisfied	59	6.6	7.1
Satisfied	187	21.0	22.0
Somewhat dissatisfied	358	40.2	41.1
Very dissatisfied	274	30.8	29.8
Missing/Imputed	12	1.3	–
Satisfaction with amount of time spent with patients			
Very satisfied	69	7.8	8.5
Satisfied	392	44.0	45.0
Somewhat dissatisfied	330	37.1	36.7
Very dissatisfied	92	10.3	9.8
Missing/Imputed	7	0.8	–
Believes patient medical care quality is improving			
No	663	74.5	74.8
Yes	225	25.3	25.2
Missing/Imputed	2	0.2	–
Preparedness to manage patients in need of social services			
Well prepared/some- what prepared	293	32.9	33.7
Not prepared	597	67.1	66.3
Ease of care coordination			
Very easy/easy	326	36.6	37.5
Somewhat difficult/ very difficult	564	63.4	62.5

Note: Characteristics are as reported by physicians.

satisfied = 3.08; 95% CI, 1.67-5.67), and satisfaction with amount of time spent with patients (aOR for very satisfied vs very dissatisfied = 3.39; 95% CI, 1.63-7.06), and they were more likely to perceive the quality of medical

care as recently improved (aOR = 1.66; 95% CI, 1.20-2.30) in Table 2a and Supplemental Table 2b, available at <http://www.AnnFamMed.org/content/17/1/42/suppl/DC1/>. There was no significant association with job stress.

## DISCUSSION

Clinic capacity to address patients' social needs was associated with higher physician job satisfaction and the perception that patient medical care has recently improved. Similarly, physicians reporting that care coordination (facilitating connection with social/community resources) was easy were more likely to endorse higher job satisfaction. These findings suggest that the return on investment of activities related to patients' social and economic needs may extend beyond patient health and use of care to clinician satisfaction—closely tied with clinician burnout and retention.<sup>5-7</sup> Health systems should consider clinician impacts when calculating costs and benefits of clinical team-based activities to respond to patients' social needs.

These data do not enable causality inferences; possibly, more satisfied physicians are more likely to believe that their clinics have the capacity to intervene on patients' social needs. The data are also self-reported by a small sample of US physicians, which may result in both selection and response bias, limiting generalizability. Finally, the data do not include information on time and efficiency burdens that may be associated with interventions around patients' social needs.<sup>8-10</sup> Future work could link more objective measures of capacity to address social needs with other clinician outcomes.

**To read or post commentaries in response to this article, see it online at <http://www.AnnFamMed.org/content/17/1/42>.**

**Key words:** social needs; care coordination; vulnerable populations; acommunity/population health; job satisfaction; quality of care; health policy; professional practice; disparities in health & health care; practice-based research; primary care

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**Table 2a. Odds of Physician Outcomes Based on Practice Prepared to Address Patients' Social Needs (N = 890)**

Outcome	Practice is Well-Prepared to Address Patients With Social Needs					
	Model 1		Model 2		Model 3	
	OR (95% CI)	P Value	OR (95% CI)	P Value	OR (95% CI)	P Value
Job satisfaction						
Very satisfied	2.22 (1.10-4.51)	.03	2.21 (1.07-4.56)	.03	3.23 (1.47-7.09)	.004
Satisfied	1.44 (0.74-2.78)	.28	1.43 (0.73-2.82)	.30	2.05 (0.99-4.25)	.053
Somewhat dissatisfied	1.24 (0.63-2.45)	.53	1.18 (0.59-2.36)	.64	1.61 (0.77-3.37)	.21
Very dissatisfied	Ref	–	Ref	–	Ref	–
Job stress						
No stress	1.04 (0.57-1.89)	.90	0.99 (0.54-1.83)	.98	1.45 (0.76-2.73)	.26
Moderately stressed	0.81 (0.52-1.29)	.38	0.82 (0.51-1.30)	.40	1.02 (0.62-1.70)	.93
Very stressed	0.99 (0.62-1.58)	.96	1.03 (0.64-1.66)	.89	1.10 (0.67-1.81)	.71
Extremely stressed	Ref	–	Ref	–	Ref	–
Satisfaction with income						
Very satisfied	1.87 (1.03-3.37)	.04	2.02 (1.08-3.80)	.03	1.81 (0.92-3.58)	.09
Satisfied	1.32 (0.78-2.21)	.30	1.38 (0.80-2.39)	.25	1.38 (0.78-2.44)	.27
Somewhat dissatisfied	1.26 (0.72-2.21)	.43	1.30 (0.72-2.35)	.39	1.21 (0.65-2.25)	.54
Very dissatisfied	Ref	–	Ref	–	Ref	–
Satisfied with income relative to specialists						
Very satisfied	2.22 (1.21-4.07)	.01	2.22 (1.18-4.16)	.01	1.91 (0.92-3.96)	.08
Satisfied	1.13 (0.74-1.72)	.57	1.08 (0.70-1.66)	.73	1.03 (0.64-1.66)	.89
Somewhat dissatisfied	1.17 (0.82-1.66)	.39	1.16 (0.80-1.68)	.43	1.17 (0.79-1.73)	.43
Very dissatisfied	Ref	–	Ref	–	Ref	–
Satisfied with amount of time spent with patients						
Very satisfied	2.65 (1.35-5.20)	.005	2.36 (1.17-4.75)	.02	2.86 (1.37-6.00)	.005
Satisfied	1.06 (0.64-1.76)	.82	0.98 (0.58-1.64)	.93	1.34 (0.77-2.34)	.30
Somewhat dissatisfied	1.09 (0.65-1.83)	.74	1.04 (0.61-1.76)	.89	1.20 (0.69-2.08)	.52
Very dissatisfied	Ref	–	Ref	–	Ref	–
Patient medical care received is improving	1.75 (1.26-2.42)	.001	1.79 (1.28-2.52)	.001	1.72 (1.19-2.49)	.004

OR = odds ratio; Ref = reference group.

Notes: Using multiple imputation for all missing variables except sex and outcome variables. Model 1 covariates: none. Model 2 covariates: age, sex, era training completed, specialty, clinic location, region of country, clinic part of integrated provider network, full-time equivalent clinicians in practice. Model 3 covariates: model 2 covariates plus frequency practice sees patients with social needs.

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