The Four Community Dimensions of Primary Care Practice

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BACKGROUND. Despite the growing belief that "the community" should play a larger role in the work of physicians, there is no clear understanding of exactly how physicians should participate in their communities. The primary goals of this study were to propose and test an organizing framework that identified four distinct categories of activities whereby physicians can interact with their communities: (1) identifying and intervening in the community's health problems; (2) responding to the particular health issues of local cultural groups when caring for patients; (3) coordinating local community health resources in the care of patients; and (4) assimilating into the community and its organizations. Other goals were to characterize physicians' level of involvement in each of these four types of community activities, and to identify the correlates of greater and lesser involvement.

METHODS. A questionnaire was mailed to a random sample of 500 young primary care physicians in the United States. The response rate was 66.6%. Physicians reported how confident they were in performing each of 15 specific community-relevant activities. Confidence ratings were factor-analyzed to test the hypothesis that physician involvement in community activities can be organized into the four proposed categories. Physicians also self-rated their involvement in various community activities within each of these four categories, and predictors of involvement were identified through ordinary least-squares regression models.

RESULTS. Using factor analysis, the community activities sorted cleanly into the four postulated community dimensions of medical practice, providing a measure of validation for the distinctiveness of the four dimensions. Physicians reported active involvement in some activities (eg, speaking to community groups and gaining acceptance in their communities) and little involvement in other activities (eg, working with community groups to address local health problems, familiarity with local women's shelters). Contrary to expectations, physicians who worked with minority and poorer patient populations and counties generally reported less community involvement. Physicians caring for more patients covered by HMO or capitated health insurance plans also reported lower participation in their communities.

CONCLUSIONS. This study provides support for the hypothesis that the community plays a role in the work of physicians that can be categorized into four types of activities. This framework may help physicians and practices recognize the breadth of ways they can meet the growing demand that they approach their work with a community perspective.

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There is intuitive appeal to the notion that physicians should be involved in the communities where they live and work. The Institute of Medicine recently listed the community context of medical practice as a defining feature of primary care.[1] The Pew Health Professions Commission has called for a greater balance between "the current individual and curative orientation of the medical system with a more community- and prevention-oriented health care system."[2] Similarly, the American Medical Association's House of Delegates recently called on medical schools to incorporate population-based medicine in primary care curricula.[3]

Despite the general sentiment that "the community" should play a larger role in the work of physicians, there is little agreement among national groups and physicians about which community activities physicians should become involved with. Some envision outreach activities, where physicians join in collaborative health initiatives with community-based organizations.[4-6] Others would have physicians routinely recognize and

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respond to the health consequences of their patients' social situations.[7-10] Still others* call for closer collaboration between physicians and other health professionals in the community.[2,11]

As long as there is no clear and uniform understanding of what constitutes the community dimensions of physicians' work, it is unlikely that most physicians will be appropriately involved in their communities. Without understanding the community aspects of care, it is also impossible to measure physicians' involvement in their communities in order to know whether this involvement falls short of the ideal. A framework for physician-community interactions would allow us to recognize and promote appropriate involvement.

The goals of this study were to (1) propose and test an organizing framework to understand how the community fits into the physician's role, (2) assess the level of physicians' involvement in their communities, and (3) identify the factors associated with greater and lesser involvement. Four community dimensions of medical practice are described, with each dimension representing a distinct set of activities whereby physicians can interact with their communities.

PROPOSED FRAMEWORK

We propose that physicians can interact with their communities in the following four ways: (1) by identifying and intervening in the community's health problems; (2) by being aware when treating patients of the particular health issues of local cultural groups; (3) by coordinating the community's health resources in the care of patients; and (4) by assimilating into the community and participating in its organizations. Collectively, these four areas define the scope of community involvement for physicians. Various authors in the community medicine and sociology literatures have written previously on one or occasionally two of these community aspects of practice. The framework offered here is new and different in that it identifies and distinguishes four broad types of physician-community interactions. These four dimensions are characterized below.

Dimension 1: Participating in health activities in the community. The nature, causes, patterns, and extent of many of a community's health problems are difficult to recognize for physicians who only encounter illness as it presents in patients in their office or hospital.[12,13] Many ill persons fail to seek medical care because of financial or other barriers, or because they do not see their problem as falling within the physicians' purview.[7,9,14,15] Some health problems are easily recognized by the physician, but are difficult to prevent and treat within the office or hospital setting, such as malnutrition, drug use, and high-risk sexual behavior.[16,17]

To identify and intervene in some of the most important health problems facing communities, physicians need to step out of their offices and into the neighborhoods where their patients live and work. The process by which physicians work with others to assess and prioritize the community's health problems, and then collaboratively undertake community-based interventions, has been extensively described in the literature under the title of "community-oriented primary care" (COPC).[4,13,18-21]

Some have seen COPC as the only way physicians can be involved with their communities. In the framework proposed here, COPC is only one of four ways that the community comes into play in the physician role. The next two community dimensions of medicine are carried out by physicians even as they provide care within their offices.

Dimension 2: Sociocultural awareness in the care of patients. People from varied social and cultural groups often differ in their health beliefs, health habits, illnesses, and health-care–seeking behaviors.[7,9,22-24] Therefore, the practice of medicine cannot be applied to all patient groups in a single, standardized way, but must be adapted to patients' cultural sensitivities and expectations, educational backgrounds, financial resources, living and working situations, family situations, and personal styles.[7-10,23-25]

Physicians who work within specific communities need to be aware of the identities, customs, and health issues of all local cultural groups.[22,25] For example, physicians who provide care for Native Americans should know that Native Americans

*National Rural Health Association. Study of models to meet rural health care needs through mobilization of health professions education and services resources. Unpublished report prepared for the Health Resources and Services Administration, Contract No. HRSA-240-89-0037, June 1992.

Pew Health Professions Commission & California Primary Care Consortium. Interdisciplinary collaborative teams in primary care: a model curriculum and resource guide. Unpublished document, January 1995.

nationwide experience injury and poisoning-related mortality at rates double that of the US population,[26] and they should know the most common types of preventable injuries that occur locally.

Dimension 3: Informed and appropriate use of the community's health resources. The office-based physician of the 1990s collaborates with home health nurses, physical therapists, mental health workers, hospice staff, pharmacists, self-help groups, nontraditional healers, insurers, medical equipment suppliers, social service agencies, and other community-based health professionals and agencies.[11,27,28] Outpatient care requires physicians to be aware of the resources available in their particular communities, select the best among the local agencies and individuals, and know how to refer to and work with each. Seamless interdisciplinary care is the goal. The importance of community-based health resource use has grown with the rising number of elderly and as the care of patients has shifted from the inpatient to the outpatient setting.[27,29]

Dimension 4: Community participation and assimilation. Physicians' contributions to their communities extend beyond what they give through their care to individual patients and even through their participation in the community-based health initiatives of COPC. As educated, accomplished, and well-placed members of a community, physicians contribute as civic leaders through their involvement in neighborhood organizations, church groups, service organizations, elected offices, and membership on school boards.[30-33] Physicians typically receive respect for their knowledge and training, so they are particularly apt to have their views heard by members of the community.[34] Communities benefit from physicians' involvement in both health and nonhealth-related organizations.[35] Physicians also benefit by participating in their communities, which fosters a sense of belonging and fulfillment that builds attachment to their families and the community.[32,33]

METHODS

Questionnaire Construction

We used factor analysis to begin to validate the hypothesis that the community aspects of the physician role are appropriately understood within the four proposed dimensions. Our initial task was to construct a bank of questionnaire items addressing a variety of community-relevant activities for physicians. To avoid a "framing effect" in factor analysis (where the factor solution is influenced by the wording and structure of the questionnaire items themselves), a single question stem and common set of response categories were needed for all items. We could identify no single stem and uniform response categories appropriate for querying the wide range of behaviors reflecting physicians' interactions with their communities. Instead, we measured physicians' self-efficacy in a variety of activities related to the community.[36,38] Self-efficacy (ie, the physician's belief that he or she can successfully complete a given activity) reflects, in part, an individual's past accomplishments in that activity, and predicts future performance and perseverance.[36,38,39] Physicians responded to the questions that began with "How confident are you in your abilities to. . .", using a 5-point Likert scale with response options ranging from "not at all confident" to "very confident." Items in this bank of questions addressing the community aspects of care were assembled de novo, as we could not find any previously developed and suitable items.

Additional banks of questions were developed to measure physician involvement in each of the four community dimensions of practice. Questions were designed to capture a wide range of activities within each dimension and to be relevant to physicians in each of the primary care specialties and in all types of practice situations.

A focus group of 11 community-based, primary care physicians in North Carolina helped us clarify the wording and layout of the questionnaire. A draft version of the survey instrument was then pilot-tested with 50 primary care physicians to verify item clarity and to eliminate unnecessary items.

The final survey instrument also queried physician backgrounds, practices, and patient populations. The Area Resource File (US Office of Health Professions Analysis and Research, February 1996) was used as a source of secondary demographic and health information on the counties where physicians worked.

Study Population and Survey Mailings

Physicians selected for the final survey were a simple random sample of those listed on the AMA

Physician Masterfile who met the following inclusion criteria: (1) they maintain a self-designated primary practice specialty of either family practice, internal medicine, or pediatrics; (2) they have a professional mailing address within the 50 states; and (3) they graduated from a US medical school during the years 1985 through 1990. Physicians listed as federal employees and those not providing patient care were excluded. Of the 24,765 physicians who met the inclusion criteria, 500 were sampled.

In the fall and winter of 1995-1996, the 500 sampled physicians were mailed questionnaires. Subjects were asked to indicate on the cover of the questionnaire if they were ineligible for the survey because they were not practicing primary care medicine. Second and third mailings and phone calls were made to nonrespondents to prompt their participation and to ascertain eligibility.

Analysis

Descriptive analyses characterized the study participants, their practice settings, and their perceived competencies and involvement in a variety of activities of the community aspects of care. Exploratory factor analysis of the community competency items was then performed. Factor analysis is a statistical technique that uses correlations among a group of variables to identify subgroups of variables whose closer correlations suggest that they share some underlying construct or factor. An oblique factor rotation was used (ie, Oblimin), anticipating that there would be some association between physicians' confidence levels in the various community dimensions of medical practice.[40] Confirmatory factor analysis was also performed as a more direct and stringent test of the proposed model.[41,42]

Individual community involvement items were collapsed into four nonweighted summative scales of community involvement. Using factor and correlation analysis, four items that did not contribute to scale internal reliability were eliminated. (A list of the four eliminated items is available from the authors.) Multivariate ordinary least-squares regression models were run to identify factors associated with community involvement while controlling for the effects of other factors. A statistical significance level of .05 was used.

RESULTS

Respondents

Of the 500 physicians who were mailed questionnaires, 82 were found to be ineligible, 247 were eligible and returned completed questionnaires, 18 were eligible but declined participation, and 153 did not return questionnaires and their eligibility remained unknown. The overall response rate was 66.6%, after eliminating both known ineligible subjects and those calculated to be ineligible among nonrespondents (Council of American Survey Research Organizations, unpublished report, 1982.) Response rates were similar for the three primary care disciplines (pediatrics, 69.2%; family practice, 67.9%; internal medicine, 63.3%).

The 247 eligible respondents were predominantly non-Hispanic white (86%) and young (mean age, 36 years) (Table 1). Forty-four percent were family physicians, 31% internists, and 25% pediatricians. Ninety-six percent were board-certified. Their practices varied widely in size and patient characteristics, and their communities varied greatly in size, income levels, and ethnicity.

Community Medicine Confidence and Dimensions

Physicians expressed greatest confidence in their ability to locate (item mean, 3.06), employ (3.11), and collaborate (3.31) with other health workers in their communities (Likert-type scale, from 0=not confident; 2=somewhat confident; 4=very confident). Physicians expressed least confidence in their ability to perform the activities required of COPC; specifically, understanding their communities' perceptions of their health problems (2.17), the use of the tools of epidemiology to understand their communities' health needs (1.95), engaging community members in efforts to address local health problems (1.94), and documenting the effects of a community health intervention (1.93). Physicians provided mid-range ratings of their confidence in all other items (2.45 to 2.88). Confidence levels varied widely across physicians; some were "very confident" in every aspect of community involvement, and others were "not at all confident" in almost every aspect.

To test whether physicians' level of confidence in each of the 15 community-relevant activities varied according to the four hypothesized dimensions,

physicians' ratings were factor-analyzed. In a principal components exploratory factor analysis, four factors were associated with eigenvalues >1, implying that there were four constructs underlying the 15 items. Together, the four factors explained 72.2% of the variance. In an obliquely rotated factor matrix (Table 2), the questionnaire items sorted themselves into the four groupings reflecting the four hypothesized community dimensions.

As a second, more stringent test of the four hypothesized dimensions, a confirmatory factor analysis was also performed. The confirmatory factor analysis results generally supported the hypothesized factor structure. The factor loadings of all items on their hypothesized factors were each more than 0.70. The overall fit of the model was moderate, with a normed fit index of 0.83, an incremental fit index of 0.86, and a root mean square residual of .087. The general standard for a well-fitting model is for the normed fit index and incremental fit index to fall above 0.90,[41] with somewhat lower indices acceptable for new and exploratory models.[42]

TABLE 1

Description of Respondents and their Practices, Patients, and Communities (N=247)

Characteristics	Dichotomous Variables N (%)	Continuous Variables Mean	Median	Range
Physician				
Male (vs female)	145 (58.7)	—	—	—
White, non-Hispanic (vs minority)	244 (86.1)	—	—	—
Age, years	—	36	35	31 - 54
Child less than 19 years at home	177 (71.7)	—	—	—
Raised in rural area	67 (27.1)	—	—	—
Family physician	108 (43.7)	—	—	—
General internist	76 (30.8)	—	—	—
Pediatrician	63 (25.5)	—	—	—
Years since medical school graduation	—	8	8	5 - 10
Initial interest in being part of a community*	—	3.56	3	1 - 5
Initial interest in cultural aspects of health*	—	3.55	4	1 - 5
Practice and Work				
Years physician has worked in practice	—	3.1	3	0 - 9
No. of outpatients physician sees each day	—	24.1	25	2 - 50
No. of physicians in practice	—	23.3	4	1 - 3000
Patient Population				
Patients with HMO or capitation coverage, %	—	30.5	20	0 - 100
Minority patients, %	—	25.6	15	0 - 100
Community and Community-Physician Fit				
Distance from office to town of upbringing, miles	—	580	200	0 - 7000
Distance from home to office, miles	—	9.8	7	0 - 82
County population, in thousands	—	898	443	6 - 9150
County population white, non-Hispanic, %	—	81.3	84.2	29.6 - 99.6
County population non–English-speaking, %	—	2.2	0.9	0.1 - 19.1
County average per capita income, in $1000.	—	21.6	20.8	10.1 - 52.3

*Scale values: 1= not interested; 3= moderately interested; 5= very interested.

Physician Involvement in Community Activities

Physicians' self-reported level of involvement varied widely within each dimension (Table 3).

Participation in health activities in the community. In regard to the health-related community activities physicians can undertake outside their offices, nearly two thirds had spoken to a community group about a health issue within the previous 2 years, but only one third had worked with a community group to address a local health problem—a cardinal component of COPC.[19,20]

Attention to sociocultural aspects of patient care. Among patients' various social and cultural needs, physicians reported that they most often inquired about the impact of illness on patients' lives and about their social supports, and they inquired least often about transportation problems and the use of unconventional medical treatments.

Familiarity with the community's health resources. Among the community health resources, physicians were most familiar with local physical therapists, social workers, and nutritionists. Physicians were least familiar with the less traditional or mainstream health resources for patients: local chiropractors, women's shelters, and clergy.

TABLE 2

Factor Analysis of Items Assessing Physicians' Levels of Confidence in the Community-Relevant Activities: Factor Loading Scores

Item	Factor 1 Sociocultural Aspects of Patient Care	Factor 2 Use of Community Health Resources	Factor 3 COPC*	Factor 4 Community Participation
Recognize when patients are having problems with transportation to your office	.699	.019	−.023	.129
Know about health issues important to particular patient populations	.675	.220	−.005	.059
Recognize when cultural differences between you and your patients affect your communication	.881	.015	.001	−.129
Understand the health beliefs of your patients	.844	−.094	.074	.043
Employ the full range of community health services for your patients (eg, home health care)	−.113	.916	−.002	.078
Work collaboratively with health workers in the community (eg, social workers or hospice workers)	.028	.890	.063	−.046
Locate the health resources available in your community when your patients need them	.265	.650	.005	.028
Use the tools of epidemiology to understand the health needs of your community	−.050	.045	.853	−.051
Understand the community's perception of its health problems	.104	.081	.747	−.023
Engage community members in efforts to address a local health problem	−.068	.022	.662	.219
Use data to document the effects of a community health intervention	.037	−.080	.880	−.004
Be a positive force in the community	.081	.093	.136	.663
Become an active part of the community	−.002	−.038	−.083	1.003
Build relationships in the community	−.065	.056	−.007	.911
Work in the community on issues that are important to you	.128	−.007	.165	.717

* COPC denotes community-oriented primary care.

Note: Physicians' levels of confidence were measured by Likert-scaled responses: 0=not at all confident; 2=somewhat confident; 4=very confident.

Community participation and assimilation. Physicians generally felt assimilated into their communities in terms of acceptance, feeling appreciated, and having valued friends. However, physicians generally felt they had not received formal recognition for their community work, and indicated that they were not active in community organizations.

Correlates of Physician Level of Involvement in Each Community Dimension

Correlates of involvement in the community's health. When controlling for other factors, it was found that pediatricians and those with early interests in being a part of their community were more likely to have been involved in recent health-related community activities (Table 4). Involvement in community health needs was less when ethnic minorities constituted a greater proportion of physicians' patient populations.

Correlates of attending to the sociocultural aspects of care. Sociocultural issues were more often attended to by physicians who saw fewer patients each day and by those who recalled having higher levels of interest in the cultural aspects of health when they started medical school.

Correlates of familiarity with community health resources. Familiarity with specific local health care workers and agencies was greater for those interested in the sociocultural aspects of health when they started medical school, for family physicians and internists as contrasted with pediatricians, and for those who had worked longer in their practices. Local resource familiarity

was less for those in counties with more minorities.

Correlates of community participation and assimilation. Physicians who were more interested in being part of their communities during their early medical school training reported being more active in and assimilated into their current communities. Participation and assimilation were also greater when physicians lived closer to where they worked and when they lived in more affluent counties. Community participation and assimilation were lower for those physicians in poorer counties, those with more minority patients, those caring for more HMO or capitated patients, and those raised in rural areas.

DISCUSSION

Data from this study support the notion that there are four general ways the community fits into the work of primary care physicians. Physicians can collaborate with their communities to identify and intervene in their health problems, understand and respond to the health issues facing the principal social and cultural groups in their communities, make appropriate use of the health resources available locally, and assimilate into their communities and participate in their organizations. Because the community competency items used in this study were designed to cover only the four hypothesized realms, it is possible that there are other community realms of practice that

TABLE 3

Physicians' Responses to Questions About Their Involvement in the Community Aspects of Medicine, by Four Dimensions of Community Involvement

Dimension	Value
Participation in Health Activities in the Community: Have you participated in the following activity in the past 2 years?	Proportion Responding Yes
Spoken to a community group (eg, students, Rotarians) about a health issue	.61
Volunteered expertise to a community organization	.43
Written or appeared in a health-related story in the local media	.39
Worked with a community group to address a local health problem	.33
Provided nonpaid expert testimony (eg, for a town council)	.09
Average scale score (scale alpha)	0.37 (0.70)
Attention to Sociocultural Issues in Patient Care: Proportion of patients with whom physician discusses:	Mean
The impact of their illness on their lives	.26
Their social supports	.26
How they spend their free time	.23
Their beliefs about their illnesses	.22
If they can afford medical treatments	.20
Their use of unconventional medical treatments	.10
If transportation to the office is a problem	.06
Average scale score (scale alpha)	0.19 (0.81)
Familiarity with Community Health Resources: Familiarity with specific professionals and programs in the community:	Mean*
Physical therapist	4.18
Social worker	3.97
Nutritionist	3.92
Hospice program	3.58
Drug treatment center	3.16
Clergy	2.86
Women's shelter	2.79
Chiropractor	2.52
Average scale score (scale alpha)	3.37 (0.84)
Community Participation and Assimilation: Level of agreement with the following statements:	Mean†
I have valued friends in my community.	2.69
I feel accepted by my community as "one of them."	2.43
I feel appreciated by my community.	2.39
I become involved in community issues that are important to me.	2.36
I am active in my community.	2.16
I am active in community organizations (eg, Kiwanis, softball league).	1.85
I have received formal recognition for my work in the community.	1.56
Average scale score (scale alpha)	2.21 (0.82)

*Numbers for this type of activity were from responses based on Likert-type scale, where 1=not at all familiar; 3=somewhat familiar; 5=very familiar.

† Numbers for this type of activity were from responses based on Likert-type scale, where 1=disagree; 2=neutral/uncertain; 3=agree.

TABLE 4

Correlates of Physicians' Activity in Each of the Four Community Dimensions of Medical Practice: Results (beta coefficients) of Four Multivariable Ordinary Least Squares Regression Models

	Outcome Variables			
	Participation in Health Activities in the Community	Attention to Sociocultural Aspects of Care	Familiarity with Community Health Resources	Community Participation and Assimilation
Male (vs female)	−.064[a]	−.006	-.012	−.045
White, non-Hispanic (vs minority)	.014	.036	.034	−.111
Age, years	.010	−.002	.006	.004
Child less than 19 years at home	.001	.002	.123	.088
Raised in rural area (vs urban)	−.004	−.035	.007	−.147*
General internist (vs other)	−.005	.043	.013	−.049
Pediatrician (vs other)	.111*	−.026	−.562***	.135
Initial interest in being part of a community [b]	.063***	.007	.055	.153***
Initial interest in cultural aspects of health [b]	.015	.045***	.132*	−.011
No. of years physician has worked in practice	.003	.000	.068*	.019
No. of outpatients physician sees each day	.001	−.005***	-.002	.004
No. of physicians in practice	−.001	−.001	-.005	−.002
Patients with HMO/capitation coverage, %	−.002	−.000	-.004	−.003**
Minority patients, %	−.002*	−.000	-.001	−.004**
Miles (log) from office to town of upbringing	−.009	.007	.030	.008
Distance from home to office	.000	.001	.002	−.008*
County population (log)	−.022	−.005	.043	.012
County population white, non-Hispanic, %	−.002	−.000	.016**	−.001
County population non–English-speaking, %	.220	−.277	.026	.888
County average per capita income ($1000)	−.008	.000	.021	−.017*
Model F value	3.64***	5.37***	4.87***	4.47***
Model adjusted R^2	.19	.28	.29	.24

* $P \leq .05$; ** $P \leq .01$; *** $P \leq .001$

[a] Positive signs on beta coefficients sign show positive associations. Negative signs show negative associations.

[b] Scale values: 1= not interested; 3= moderately interested; 5= very interested

did not emerge through factor analysis. If a fifth dimension is recognized in the future, it would not undermine the basic premise of the proposed framework: that physicians' involvement in their communities falls into a number of distinguishable realms. It is also likely that the four specific dimensions proposed here would remain valid should a fifth or sixth later emerge.

Activities within these four community dimensions of medical practice have been previously recognized as community aspects of practice. However, without a conceptual framework and categories within which to be understood and recognized, these activities often have been viewed as a single, amorphous group. Not infrequently, each of the community dimensions has been mistakenly referred to as "COPC". For example, it is not uncommon for a clinic that hires interpreters and provides cultural sensitivity training for its staff to claim that this is "community-oriented primary care," even though the cardinal features of COPC are absent (ie, no formal needs assessment in the community, no intervention outside the practice, and no evaluation of the program's impact).[4,13] We suspect that the COPC title has been misapplied because it has a general, all-encompassing sound to it, many physicians are not aware that COPC denotes a specific group of activities, and no labels have been available for the other community aspects of practice. By distinguishing the four community dimensions of medical practice, physicians and practices can recognize which of the community dimensions they are addressing and which are being neglected.

Based on these self-reported data, we conclude that there are community activities that primary

care physicians regularly undertake (eg, speaking to community groups about health issues, inquiring about patients' social supports) and in which they achieve success (eg, feeling accepted and appreciated by their communities), and other community activities where their involvement is low (eg, inquiring about patients' use of unconventional medical treatments and working with community groups to address local health problems). Relying solely on data from this study, we cannot know how often physician involvement in specific community-related activities falls short of what is optimal for people's health or short of what is possible given the competing demands on physicians' time. Nevertheless, it is reasonable to suspect that physician involvement is too low in a number of areas, such as working with community groups to address a local health problem (only 33% had done so) and being involved in community organizations (most felt they were not).

It is likely that in the near future physicians and practices will be called on to more actively incorporate their communities into their work. The impending mandate for practice-specific health outcome assessments and patient satisfaction surveys will push providers to be more attentive to all their patients' needs, including those that are culturally determined. Physicians and practices that are at risk for the health care costs of defined patient populations and are responsible for their health outcomes will find the COPC approach and the informed use of community health resources increasingly important.

Given these forces, it is important to note that physicians with more patients covered through HMO and capitated insurance plans report lower involvement in each of the four community dimensions, reaching statistical significance in lower community participation and assimilation. If practices and insurers at financial risk for preventable illnesses are undertaking community-based initiatives to reduce their costs, physicians evidently are not joining these efforts. Perhaps physicians who are less interested in the community aspects of medicine are more likely to take on patients with HMO and capitated coverage, or perhaps these forms of coverage have grown more rapidly in settings where the community aspects of medicine generally receive less attention. It is also possible that these forms of coverage create a distance between physicians, their patients, and their communities, frustrating physicians' desires to pursue the community aspects of medicine.

The most unexpected and disturbing finding was that demographic indicators of patient and community socioeconomic need (per capita income, minority composition, percent non–English-speaking persons) did not predict greater physician involvement in any of four community dimensions. To the contrary, physicians who provided care to more minority patients were less involved in health-related activities in their communities and were less assimilated into their communities; physicians in counties with more minorities were less familiar with their local health resources; and physicians in poorer counties were less assimilated.

We and others had assumed that population need motivates physicians to be more involved in their communities. Indeed, community-based health interventions are frequently described in economically disadvantaged communities.[17,19] If physicians are motivated by community need, then there must be other factors that impede efforts of those working with needy populations, such as greater cultural distance between them and their communities, more competing demands for their time, fewer community resources on which to rely, or greater professional burnout. These data suggest that efforts to bolster physician community involvement may be less successful in communities of need unless we identify and address the additional factors impeding community involvement in needy settings.

We believe that the four identified community dimensions of medical practice are relevant for all physicians, but particularly those in primary care.[1] Primary care physicians must understand the patient's social situation and muster needed community resources to manage lifelong medical problems and change unhealthy life styles. The neighborhood location of primary care physicians and the long-term therapeutic relationships they build with patients make their connections with the community particularly relevant.

The community is also relevant to specialist physicians. All physicians, and all health professionals, must know how to work with patients of varied backgrounds, recognize financial constraints when discussing therapeutic options, and

understand how diseases vary across communities. There are, however, typically fewer opportunities for specialists to understand the community context of their patients, because they more often see patients for specific biomedical needs on a time-limited basis and on referral from several distant communities.

A few of our study's limitations need mentioning. This study is exploratory and its findings will be strengthened through further research. It is possible that there are other community dimensions that were not represented in the questionnaire's self-efficacy items. Further, the data used in these analyses related to physicians' perceptions of their own community competencies and involvement, which may be inaccurate. In addition, a number of variables that were not examined may affect physicians' involvement in their communities, such as their religiosity, their training, and their spouses' involvement in the community.

CONCLUSIONS

This study proposes and begins to validate a framework to understand what role the community plays in the work of physicians. This framework may help physicians and practices understand the ways they can meet the growing demand to approach their work with a community perspective. This framework may also prove useful to educators who want to provide students and residents with a full range of community skills.

Findings from this study suggest that primary care physicians regularly and successfully incorporate some types of community activities into their work, but are less involved in other types of community-related activities. Future studies will need to clarify the optimal amount of involvement in each type of community activity.

Those who advocate for community interventions to address the health needs of economically poor and minority communities should be challenged by the finding that physicians who work with poor and minority populations are less involved in their communities. Community outreach activities undertaken by the practice organizations that provide care for needy populations, such as community and migrant health centers, may offset physician inaction.

It will be important to monitor physician involvement in the community as our health care system continues its current rapid evolution in payer composition and in its expectations of physician clinical productivity. Future work should examine what insurers can do to promote community involvement among their participating physicians, and assess whether some insurers are ethically obliged to address community health at the organizational level to compensate for their physicians' lower involvement.

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