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Involvement of Family and Community Medicine Professionals in Community Projects

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- OBJECTIVES: Medical schools are being challenged to continue their excellence in education, research, and patient care while responding to the health needs of the public. The objective of our study was to determine the nature and type of community involvement of professionals in departments of family and community medicine.
- STUDY DESIGN: We mailed a 24-item structured survey to a random national sample of family medicine professionals.
- POPULATION: Survey recipients included 770 full-time physician and nonphysician active members of the Society of Teachers of Family Medicine.
- OUTCOMES MEASURED: Our survey assessed community activities, challenges and incentives to those activities, and desired resources for working in the community.
- RESULTS: A total of 446 usable surveys were returned (58% response rate). Ninety-five percent of respondents had participated in a community activity within the previous year. More male respondents precepted medical students or residents and educated faculty on topics regarding community education; more older respondents participated by sitting on community health boards or councils. Insufficient release time and lack of funding were the 2 most frequently cited barriers to community-based activities.
- CONCLUSIONS: Most faculty are involved in community-related teaching and service. Reasons for low levels of research and subgroup differences, especially among women and young faculty, merit further research.

key words **Community health; family medicine professionals; academic medical schools; social contract; medical education. (J Fam Pract 2002; 51:369)**

For more than 50 years academic medicine has held a privileged position in American society. Medical schools receive significant state and federal support from a variety of sources, including the National Institutes of Health, Public Health Services programs specifically developed to support medical education, the National Science Foundation, Medicare, and Medicaid.[1-4] In return, academic medical centers have provided training to medical students and residents and have

made significant contributions to medical research and clinical care.[1,3] Recently, however, concern has been voiced about whether academic health centers have fulfilled important components of their tacit social contract with the American public, caused in part by changes in medical education financing, trends toward a competition model of health care delivery, and the erosion of trust between health care providers and patients.[1,3,5-8]

Foreman[9] suggested changes to medical school education that would help academic health centers fulfill their reciprocal social obligation to improve the public's health. His recommendations included integrating behavioral and population-based sciences, providing students with learning experiences in community settings where they have the opportunity to work with committed mentors, and developing a critical mass of community-based faculty who are dedicated to addressing the various needs of underserved communities and providing them with the necessary support to continue their community-based efforts. Some academic health centers, including the University of New Mexico School of Medicine, The Johns Hopkins University School of Medicine, the University of Washington School of Medicine, and the Medical College of Pennsylvania/Hahnemann School of Medicine in Philadelphia have begun to implement some of Foreman's suggestions to strengthen social responsiveness.[3,10-12]

Within academic medical centers, departments of family medicine have pioneered placing medical students in community-based settings. Of the 124 medical schools that participated in the annual Liaison Committee on Medical Education survey in 1996, 69% of family practice clerkships had a community-based placement, compared with 40% for internal medicine and 25% for pediatric clerkships.[13]

Family practice residency programs have also striven to respond to the needs of their surrounding communities. In 1999 the Strategic Planning Working Group of the Academic Family Medicine Organization and the Association of Family Practice Residency Directors developed the following list of competencies for family practice residents to acquire during training: (1) family practice residents should understand Community-Oriented Primary Care (COPC) and the practice of population-based medicine; (2) family practice residencies should model COPC or population-based interventions within their practices; and (3) family practice graduates should be capable of recognizing community health needs, developing interventions, and assessing the outcomes.[14] Several family practice residency programs, such as the one at Montefiore Medical Center in New York City have worked to address their communities' concerns by implementing COPC.[15]

Less information is available on the involvement in community activities of individual family medicine professionals, which include faculty medical doctors (MDs), nonfaculty MDs, doctors of philosophy (PhDs), and master's degree-prepared department members. The objective of our study was to determine the nature and type of community involvement of professionals in departments of family medicine. We also assessed community activities, challenges and incentives to those activities, and desired resources for working in the community. Insights into these topics increase our understanding of how personnel in academic health centers are attempting to meet the challenge of responding to the health care needs of their surrounding communities while they maintain a commitment to the traditional missions of education, research, and clinical service.

METHODS

A pilot survey was sent to 25 members of the Society of Teachers of Family Medicine (STFM). Minor revisions were made according to respondents' feedback, resulting in a 24-item, structured survey that we mailed to a national random sample of physician and nonphysician active members of STFM (N = 770). The first section of the questionnaire asked respondents a series of demographic and descriptive questions, including participants' age, sex, ethnicity, professional effort (full or part time), length of time in their current department, and the year they completed residency or a doctoral degree. Additional information was collected on a variety of topics, including type of community-based involvement, reasons for that involvement, challenges to community-based involvement, and support or resources desired from their departments. A list of community-based activities was provided on the questionnaire, as was one write-in option **Table 1**. Although all activities were community-oriented, not all activities were conducted in the community.

Surveys were distributed in 2 mailings over a 6-month period with the second mailing going only to nonrespondents. Descriptive statistics consisting of percentages for categorical variables and medians for continuous, non-normally distributed variables were calculated. Univariate analyses were accomplished with the chi-square test or, in the case of

non-normally distributed variables (age, years in the department, percentage of professional time spent on community-based activities), with the nonparametric Wilcoxon rank sum test.

Multiple logistic regression was used to examine the relationship between binary outcome variables and multiple explanatory variables. The logistic regression outcomes we considered were the individual types of community involvement, barriers to community involvement, and support desired. The candidate explanatory variables were chosen a priori: age, sex, degree (4 categories: master's degree [reference group], MD degree, PhD degree, and both MD and PhD degrees), and years in department. Following the structure of the survey, analyses of barriers and desired support were restricted to those who had some type of community-based involvement in the previous year. A backward selection stepwise technique was used to build the models. Explanatory variable effects are shown as odds ratios (ORs) with 95% confidence intervals (CIs). For all analyses we used the Stata 6.0 statistical software package.[16]

RESULTS

A total of 446 usable surveys were returned (58% response rate). Of these, 3 were blank and therefore unusable. Demographic characteristics indicated that respondents were representative of active STFM membership and national family medicine department faculty as reported by the Association of American Medical Colleges[17]**Table 2**.

Ninety-five percent of respondents had participated in a community-based project within the previous 12 months. Projects represented a continuum of involvement with community members. Nevertheless, much of the community-based activity was traditional in nature and included precepting medical students and residents in the community, providing clinical services at community-based sites, and conducting educational presentations in the community **Table 1**. When we considered only activities actually taking place within the community and excluded education about the community that took place elsewhere (the second, third, and fourth items under the heading "Any Education" in **Table 1**), 92% of respondents had been involved in a community-based project in the previous 12 months.

Faculty participated in community projects for several reasons, the most prevalent being personal interest or satisfaction (77%). Respondents identified insufficient time as the biggest barrier to involvement in community-based activities and noted sufficient release time as the most important form of support or resources they desired from their departments **Table 3**. Respondents' academic institutions were most likely to serve urban communities (60%), followed by suburban (33%), small town (20%), and rural (16%) communities.

The association between types of community involvement and respondents' sex, age, and professional degree was examined with logistic regression analysis. Even when controlling for degree, more men than women reported educating faculty on topics regarding community-based education and how to precept medical students or residents in community sites (OR = 2.01; 95% CI, 1.20 - 3.37; P = .008) and providing clinical care at community-based sites (OR = 1.73; 95% CI, 1.14 - 2.61; P = .009). The longer a respondent had been a member of a department, the more likely he or she was to report having served as a board, committee, or council member of a community health organization, even after controlling for age (for each 5-year interval spent in their department: OR = 1.23; 95% CI, 1.03 - 1.47; P = .023). Not surprisingly, MDs were 5.27 times more likely to report that they had precepted medical students or residents at community-based sites (95% CI, 1.29 - 21.46; P = .02) and provided medical care at community-based sites (OR = 5.35; 95% CI, 1.08 - 26.47; P = .04) than non-MD respondents. MD and PhD respondents, however, were less likely than those without such degrees to work with community members to develop and implement a research project to meet a community-identified health concern (PhDs: OR = 0.17; 95% CI, 0.04-0.84; P = .03; MDs: OR = 0.28; 95% CI, 0.07-1.09; P = .07).

We also analyzed the type of community served to determine its effect on participation in community activities. Institutions serving rural communities were more likely to have designed a community health curriculum (51% vs 36%; P = .023 by Fisher's exact test) and to have evaluated a community-based project or program (32% vs 18%; P = .010 by Fisher's exact test). Those serving a small town were also more likely to have evaluated a community-based project or program (30% versus 18%; P = .026 by Fisher's exact test). Those serving urban communities were more likely to have taught students to work in a community site (58% vs 48%; P = .052 by Fisher's exact test), to have designed a community health curriculum (43% vs 31%; P = .010 by Fisher's exact test), and to have educated faculty on community-

based education (27% vs 17%; P = .021 by Fisher's exact test). Neither community served nor community activity, however, is mutually exclusive.

Some of the barriers to community-based activities and desired support for such work were also associated with respondents' sex, age, and number of years in the current department. Women were 2.41 times more likely than men to report a lack of technical assistance as a barrier to community-based projects (95% CI, 1.41-4.13; P = .001). However, women were only 1.56 times (95% CI, 0.99-2.46; P = .054) more likely than men to desire technical support from their department. Men were 1.57 times (95% CI, 0.99-2.48; P = .054) more likely than women to desire help in forming relationships with the community. Increased age was associated with a decreased desire for sufficient release or protected time for community-based work. For each decade increase in age, there was a 28% reduction in the perceived need for sufficient release or protected time (OR = 0.72; 95% CI, 0.55-0.95; P = .02). Similarly, respondents who had been in their departments longer were less likely to report a need for faculty development regarding community-based activities (OR = 0.95 for each year [a 5% reduction for each additional year]; 95% CI, 0.91-0.99; P = .009).

DISCUSSION

Advocates of community health have challenged academic institutions to more and better involvement in teaching and researching community health and providing service in the community. However, there are almost no data describing the status quo. Our study of 446 health providers who demographically mirror current STFM members and family medicine department faculty establishes a baseline of current activities. The findings support some of our beliefs, call others into question, and raise a number of specific areas for further study.

First, our results indicate that significant numbers of family medicine personnel are participating in a variety of community-based activities. Ninety-five percent of those responding reported having participated in a community education, service, or research project in the past year; 92% performed those activities in the community itself. The activities included precepting medical students and residents, providing clinical services at community-based sites, and making educational presentations in the community. Although this finding does not obviate the need for more and better services, it does suggest that faculty are fulfilling their responsibilities in this area. Less than half of our respondents participated in research, however, a finding that merits further investigation.

Second, this group of physicians and other family and community medicine personnel reported personal interest and satisfaction as the primary motivation (77%)for participating in community projects. This finding supports attempts to motivate community involvement as a personally rewarding experience. Other motivating factors were health of the community and importance to medical student and resident education.

Predictably, the most commonly perceived barrier to community service project participation was a lack of time. More release time was the most desired form of department support for surmounting that barrier. However, we found no data about release time and service. Bland and Schmitz[18] have suggested that dedicating 40% of effort to research is necessary for adequate research productivity. If community service is a mission of a medical school, it seems that protecting time for community service projects would also be necessary. Further research is needed to ascertain whether schools offer faculty protected time for community service and, if so, how much is necessary or optimal.

Participation patterns, perceived barriers, and desired resources varied by age, sex, educational background, and academic rank. These factors are often interrelated and individual effects are difficult to segregate. Greater experience and time with an organization may be associated with higher status (rank), which in turn may lead to greater access to monetary and other resources, more protected time, and greater ability to allocate one's own time. There are still more male family physicians than female, and more men have higher faculty rank. These factors may affect our findings that men were significantly more often involved in teaching other faculty about community-based education and providing care at a community or school clinic.

Among respondents who desired technical assistance, women were nearly twice as likely as men to report lack of technical assistance as a barrier (61% versus 34%) but desired technical assistance only slightly more often than men. Men reported desiring help in forming relationships with community members more often than women did; the difference

approached, but did not achieve, significance. The findings are intriguing, but speculation about their implications would be based on stereotypes. Certainly further investigation is desirable.

Controlling for age, the longer the respondents had been members of their departments, the more often they participated on community health boards, committees, and organizations. Respondents who have been in their departments longer may be better established in their careers and in the community, resulting in more frequent invitations to these activities. Other explanations could include changes accompanying life stages, such as concern for assisting younger generations.

Length of employment in a particular department correlated with less reported need for faculty development around community-based activities. Since we did not attempt to ascertain respondents' levels of expertise, we cannot interpret this finding. However, it cannot be assumed that long experience and lack of reported need necessarily reflect a high skill level.

Older respondents were less likely to desire release or supported time for their community activities. The perceived need for more time diminished by 28% with each decade of life. It may be that they have already garnered sufficient support and protected time in their institutions.

That MDs were significantly more likely than non-MDs to have precepted students and residents at community sites reflects the requirements of medical education accrediting bodies. The reason for the prevalence of research by respondents with master's degrees and not those with terminal degrees is not known, although we surmise that at least some may have been hired specifically to conduct research. More study of the role of this small subset of respondents is warranted.

We did not examine differences in practice environments and their effect on community-based activities. University-, military-, and community-based practices have different goals, incentives, and disincentives, as do managed care and fee-for-service organizations. Furthermore, the traditional patterns of these organizations may be changing in response to interest in performance measures.[19] This is another important area for investigation.

Limitations

This is a descriptive, not a definitive, study. The 58% response rate to the survey may limit the generalizability of our findings. Individuals who are involved or interested in community projects may have been more likely to return the survey, resulting in an overestimation of involvement in community-based activities. Although we do not have demographic or community involvement information about nonrespondents, our sample is demographically similar to active STFM membership and national family medicine department faculty. We provided examples of community-based activities; however, individual interpretations of what constitutes such an activity may differ. Using exploratory analyses increased the likelihood that a significant result would occur by chance. Thus, marginally significant results require further study, and those with P values between .01 and .05 should be considered hypothesis generating.

CONCLUSIONS

This descriptive study helps establish a baseline for better understanding academic physicians' current participation in community-based activities. Although the scope of this study is narrow, it suggests that most academic faculty are providing community service and education and are deriving satisfaction from doing so.

Our results also raise a number of questions for further study. Is there enough appropriate research being done within communities to address its health needs? Should women and younger faculty receive additional support in establishing community-based activities, and if so, what kind? If women perceive technical barriers more often, why do they not report a desire for technical assistance more often? Is the difference between men and women in ease of forming community partnerships meaningful? The answers to these questions will provide a richer understanding of the ability of an academic health center to respond to the health care needs of their surrounding communities.

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