Community-Oriented Primary Care

Implementation of a National Rural Demonstration

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A major objective of community-oriented primary care (COPC) is to focus the clinical practice on the health care problems of the community that the practice serves. The COPC process defines the community of interest, identifies and prioritizes community health problems, and implements and evaluates interventions. Under sponsorship from the W. K. Kellogg Foundation, the COPC National Rural Demonstration Program was established to explore the feasibility of implementing COPC in 13 rural practices. An evaluation of the program found that local communities played critical roles in defining and implementing COPC interventions. These interventions were most often focused on health promotion/illness prevention activities. At most sites, clinical practices were limited in their ability to incorporate COPC activities by staff and physician turnover and the extensive patient demands on the time of rural primary care physicians. While the COPC process proceeded at different rates across the sites, after 2½ years of grant funding, most sites continued to devote the majority of their resources to designing and implementing interventions. Thus, it appears that coordination by dedicated non-physician staff and more than 2 years of effort are required to implement COPC concepts in rural practices in underserved areas.

Community-oriented primary care (COPC) occurs when a primary care practice looks beyond the needs of individual patients to the health care problems of the larger community.

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methods

The analysis reported herein is descriptive and qualitative in nature. While formal hypothesis testing and statistical testing of significance were not employed, care was taken in the development of the evaluation design to ensure the reliability and interpretability of the information collected. The primary data source consisted of two rounds of in-depth, on-site interviews conducted at the beginning of the first year of the program and at the end of the third year. To impose the necessary degree of uniformity on the qualitative data collection procedures and thus ensure a corresponding degree of data comparability, a standardized, structured interview protocol was used at all sites. In addition, interviews were conducted by the same investigator at each site to assure continuity with respect to interview procedures and the processing of information. The interviews included questions about program activities, community involvement, organizational characteristics, resource needs, and overall conclusions. Interviews were conducted with the local project director or administrator, one or two physicians, two or three staff team members, two or three community leaders (including board or advisory group members), and, when appropriate, representatives from one or more collaborating agencies. The interviews, which ranged from 30 minutes to 2 hours in length, were recorded and transcribed, with interview transcripts mailed to interviewees for corrections and clarifications. The interview data were arranged topically for each site and examined for consistent patterns of responses within sites (across respondents) and across sites. Comparing response patterns across sites was critical in understanding differences in site experiences and especially in identifying generalizable findings.

In addition to site visits, regular contact with each site was maintained by the NRHA administrative office through telephone conversations, annual progress and financial reports, and conference calls. Networking meetings, attended by two to six representatives from each site, were held in both the first and third years of the project. These meetings provided NRHA staff, advisory committee members, and evaluators the opportunity to monitor the progress of the sites and gave site representatives a chance to meet with other project staff and discuss common experiences. Information from these different sources was synthesized with the interview data by three evaluators, resulting in the conclusions reported in this article.

results

overview of sites

The participating sites were located in 13 different states, representing every region of the country (Table). While all sites were rural, three were located within 80 km of metropolitan areas; others were geographically isolated or located in sparsely populated regions. There are two striking characteristics of the sites. First, 10 of the 13 sites served relatively poor populations, even for rural areas. Second, there was considerable variety across the sites in the nature of the COPC-sponsoring organizations. Sponsors ranged from a private practice to a hospital to a university practice residency site to a tribal health department. There were no one- or two-person private practices selected for the program.

To participate, an applicant needed to assemble the resources and expertise necessary to develop a credible proposal. Not surprisingly, the rural organizations selected for the program usually had some experience securing private grant funding or public program support, possibly reflecting a need to subsidize services for their relatively low-income populations. Without access to external resources and expertise (e.g., a state office of rural health staff person or collaborating university faculty member), it would have been very difficult for a small private practice to construct a successful proposal.

issues raised by the program

The existing literature identifies several issues that have arisen in past attempts to implement COPC. The data collected through the program evaluation provide new perspectives on four of these issues: the role of the community in COPC, the role of the physician practice, the process of selecting and implementing specific COPC programs, and the cost of COPC.

The role of the community in COPC

In the COPC literature, community groups are often portrayed in an
advisory role to a physician practice. However, in the program, the community frequently played a somewhat different and more central role. At several sites, the COPC project evolved into a rural development/community-organizing program, with the clinical practice playing the advisory role to the community group.

In interviews conducted at the sites, most respondents expressed the view that COPC represented an opportunity to initiate community-based interventions. Almost all sites engaged in substantial efforts designed to empower communities to identify and address their health care problems. For example, COPC sponsors conducted key informant interviews at nine sites, established community advisory boards at 10 sites, held nominal/focus group meetings at eight sites, and convened town meetings at five sites.

It was generally anticipated by COPC staff that large numbers of community residents would become involved in COPC activities in a relatively short period of time. After moving past the initial period of skepticism and suspicion that might be expected with any new activity, most sites were able to identify a core group of interested community residents who were willing to be involved with the project. In these sites, community perceptions were relied on as heavily as secondary data in identifying community health problems. For instance, at one site, interviews with key community members were conducted to supplement statistical data. Combining findings from these two sources led one COPC planning team to target injuries from falls by elderly patients as a major community health problem.

After the initial organizing period had passed, sustaining community involvement became an important issue at many of the COPC sites. It was generally believed by COPC sponsors that COPC activities could have a long-lasting effect only if broad-based com-
munity resources were involved rather than if reliance was placed on just one person or a small group of people in the sponsoring organization. Sites in the program used several strategies to sustain community involvement. Some sites believed community ownership of the COPC process should be encouraged through community fund-raising efforts and others stressed community representation and involvement in all aspects of COPC, including the use of volunteers to carry out some COPC activities.

Midway through the program, half of the sites identified community leadership, motivation, and organization as an important area in which they needed technical assistance. These sites simply did not have people with the technical skills and experience required to sustain community involvement. The dissemination of information about the COPC project to the local community required a continuing effort. When asked how informed the community was about COPC project activities, respondents generally provided ratings from five to six on a 10-point scale, where 1 meant not informed at all and 10 meant very informed. Project directors in sparsely populated, more remote sites were particularly likely to report difficulties in disseminating information about COPC.

The Role of the Practice

One measure of the successful implementation of COPC is whether sponsoring organizations take responsibility for the health of the community and not just the patients seen by the practice. Under the COPC model, it is expected that practices will conduct needs assessments that identify community health problems, develop and implement interventions that address these problems, and monitor the impact of the interventions. Nutting has identified several obstacles to the integration of COPC into primary care practices, including difficulty in defining the target population, difficulty in accessing individuals in the target population, inadequate practice resources, inadequate data on the target population, inadequate skills and expertise in COPC, and limited reimbursement for COPC activities. Several of these obstacles were clearly present at program sites.

In five sites, it did not appear that the COPC process had a significant impact on physician practice. This finding could reflect the limited time period for the program, as some sites focused their energies initially on community organizing and assessment and had not begun to implement a COPC intervention at the end of the program. In five other sites, there were no obvious changes in provider practices, but those interviewed stated that the COPC activities drew provider attention to the health problems and needs of a specific population (eg, functional and mental health status of the elderly, diabetes in adolescents). This change in awareness may lead to longer-term changes in practice if a COPC focus can be sustained. In the three sites where COPC clearly was integrated into the daily activities of the practice, much of this emphasis was developed prior to the program. For instance, one sponsoring organization had been involved since its inception in efforts to improve community health through the use of a community-based strategy. There was a focus on community-based activities in the mission and vision statement of the organization, and 20% of the time of all providers was allocated to working on community-based projects, holding monthly COPC meetings, and maintaining a data collection and surveillance system. The practice participated in multiple interventions, attempted to recruit individuals who were committed to COPC, and provided a stable funding base for COPC activities.

Clinicians across all sites said they were committed to current COPC activities (a mean score of 7 on a one- to 10-point scale, with 10 indicating a high level of commitment). In interviews conducted at the end of the program, physicians and other respondents reiterated the commitment of their practices to sustaining the COPC process in the long run (a mean score of 8.4 on the same one- to 10-point scale).

Efforts to implement COPC were hindered by a turnover of physicians, administrators, and/or project coordinators at eight of the 13 sites during the program. Also, it was difficult to identify staff in a rural primary care practice who were willing and technically able to do what may be viewed as the additional work associated with COPC activities. Sites found that a commitment of nonphysician staff time (eg, a coordinator position) was very important for implementing COPC activities, many of which required community organizing as much as the delivery of traditional primary care.

In summary, the evaluation findings support previous reports in the literature of substantial impediments to the integration of COPC into primary care physician practices. These obstacles suggest that more attention needs to be paid to which types of organizations are likely to implement COPC most successfully, and why. Clinical practices can play a variety of roles within the COPC framework, ranging from aggressive sponsor to advisor. However, for practices to play a substantial role in the COPC process, they may need to rethink their mission in very fundamental ways. As one respondent observed:

The term COPC itself and some of its structure tends to turn people off. The whole process often seems like a mystical black box that is hard to understand... We need to define primary care much more broadly than the clinical view of primary care. Then we will be...
able to define a meaningful role in community-based interventions for the primary care practice.

The Choice and Implementation of Interventions
The intent of COPC is to improve the health of the community through the implementation of a program or intervention designed to address a critical health problem. Ideally, as Muller\(^{110(p245-49)}\) points out, these defined programs will be

... based on the epidemiologic analysis, aimed so they deal with the health problems of the community within the framework of primary care. These programs may involve disease prevention and health promotion as well as curative and rehabilitative care.

The projects adopted by the program sites contained a mixture of both elements, as can be seen in the Table, but consisted primarily of health promotion/disease prevention projects. The support offered by grants, along with the diverse nature of the sponsoring organizations, influenced the nature of the interventions chosen by the sites. As Frame\(^{12}\) has noted, physicians in primary care practices are generally restricted to activities that generate direct revenues necessary to sustain the practice. The health promotion/disease prevention activities chosen by the majority of the sites would not be financially self-sustaining under most circumstances. However, they were feasible with grant funding and, in some cases, subsidies from their sponsors and funds raised through community-organizing efforts.

The interventions that evolved at each site were also influenced by the level of community involvement at the problem identification and prioritization stage. One consequence of broad community involvement in the intervention selection process was a tendency for community residents to conceptualize interventions as community-wide programs to be implemented through community action efforts. Health promotion/disease prevention activities were a natural outcome of this conceptualization of COPC. While communities expected that clinical practices would support these activities, they did not necessarily expect them to be the driving force behind the interventions. The fact that community groups provided strong leadership in selecting and implementing interventions at many sites was seen by most COPC-sponsoring organizations as a very positive development. It helped to generate support for the interventions, including much-needed volunteer time for implementation, and indirectly raised the profile of the sponsoring organization in the community. In fact, in some instances, the COPC intervention was seen as an important source of social marketing for the sponsor. For example, a rural hospital supported a community program to lower cardiovascular risk factors through a variety of different activities. These activities brought community residents to the hospital on a regular basis, facilitated contacts between hospital staff and local citizens, and broadened the perception of the hospital's mission in the community.

The extent of community involvement in definition and implementation of interventions raises some interesting questions for the conceptualization of COPC. For instance, can COPC become a continuing process under these circumstances? How, and under whose auspices, will it become institutionalized so that it will move past the first intervention and generate ongoing efforts to identify and address local health problems? Past reviews of COPC efforts have raised similar questions. For example, Nutting et al\(^{4}\) observed that the commitment to COPC on the part of the practitioner, rather than the community, is frequently critical to maintaining attention to the regular activities of COPC. While this view is valid under some circumstances, the program experience suggests that community leadership is often more stable than leadership provided by rural clinicians. In fact, as noted above, a major obstacle to implementation of interventions at many sites was the turnover of providers. In most of these sites, the physician or other provider who was the most knowledgeable and committed to COPC left during the program, creating a leadership vacuum. Often, at these sites, the presence of a committed community group was critical in keeping an intervention alive while new providers were recruited and, hopefully, drawn into the COPC process. Thus, the turnover of practitioners in rural areas, especially in very poor communities, may be as great a challenge to identifying and implementing interventions through a COPC process as the thinness of the community leadership base in many rural communities and the demands of patients on rural physician time.

Cost of COPC
In describing a research and development agenda for COPC, Nutting\(^{7}\) called for more detailed information on the costs of COPC. To gather this information, all COPC sites were required to submit detailed reports of their expenditures to the NRHA at 6, 18, 30, and 36 months (the end of the demonstration). Each category of expenditure was disaggregated by source of funds (grant vs site). The sites also were asked to estimate the percentage of expenditures in each category that were directed at different COPC activities. Each report was accompanied by a narrative that explained any unusual expenditure items or deviations of expenditures from budgeted amounts. The reports...
were reviewed by NRHA staff, who made follow-up telephone calls to the sites to clarify ambiguous entries or fill in missing data. Cost data from the 6-, 18-, and 30-month submissions were aggregated across sites for discussion in this section. Cost data for the last 6 months of the program were omitted from the analysis because these expenditures might reflect unusual patterns at some sites.

The sites spent an average of approximately $150,000 on COPC activities during the first 30 months of the program, with 32% financed through grant funds. The majority of the expenditures (about $94,000 on average) were for salaries and fringe benefits for personnel, with the remainder spent on office maintenance, travel, supplies, and other miscellaneous expenses. In the personnel category, approximately two thirds of all expenditures were from matching funds—primarily the donated time of physicians and practice staff.

The pattern and timing of expenditures across COPC activities appears quite reasonable, given the staging of the program. Twenty-one percent of the funds at an average site were spent in defining and characterizing the community. Half of the expenditures during the first 6 months of the demonstration were directed at this activity, dropping to 19% during the succeeding 12 months and only 5% thereafter. Approximately one third of expenditures in the first 18 months of the demonstration were directed at identifying health problems. These included expenditures for community surveys, focus groups, and the collection and analysis of data from published sources. At the end of this time, this activity was essentially complete, with expenditures dropping to 4% of the total between months 18 and 30. During the 2 years from September 1989 through August 1991, the largest proportion of funds was spent on the design and implementation of interventions. For the budget year beginning in September 1990, 72% of all expenditures went for this activity, while 19% were directed at monitoring the impact of the interventions. The relatively small proportion of expenditures for this latter purpose is consistent with the overall evolution of the program. The pattern and timing of expenditures reinforces the conclusion that after 30 months, most sites were still in the early stages of implementing their interventions.

While the program generated the most detailed information to date concerning expenditures on COPC, there are several reasons to interpret these data cautiously. First, and most importantly, they reflect the implementation of COPC in a structured demonstration program rather than a real-world setting. Certainly there were expenditures by the sites that would not have occurred were it not for the program and the reporting demands it placed on participants. Also, it is probable that the availability of grant funding influenced the scale at which COPC was implemented at the participating sites. For both reasons, reported program expenditures are likely to exceed the expenditures that would occur if COPC were implemented without grant funding. A second caution pertains to the accuracy of the reported expenditures and, especially, their allocation across COPC activities. Considerable effort was expended by the NRHA staff and the sites to produce an accurate accounting of expenditures by category under the program. The allocation of the expenditures across COPC activities is less accurate, based on the judgments of COPC staff at each site. However, the expenditures for COPC activities con-

form well with observations concerning the progress of the sites in implementing COPC over time. Finally, it should be emphasized that the reported expenditures do not fully reflect the value of the time and resources donated by community residents to COPC activities. With respect to this omission, the reported figures underestimate the costs of COPC.

CONCLUSIONS

The COPC National Rural Demonstration Program supported the implementation of COPC in 13 sponsoring organizations. Although there was considerable diversity in the sites picked for the program, they clearly were not representative in any statistical sense of rural communities or practices. All sponsoring organizations reported previous experience in carrying out at least some of the activities associated with COPC and were highly motivated to participate in the program, having survived an extended site selection process. However, it would not be accurate to characterize the program as a best-case test of COPC. The population in the majority of sites was quite poor, and there was substantial provider turnover, perhaps reflecting the fragility of health care provision systems in poor, underserved rural areas.

The experience of the program underscored, perhaps more strongly than in past studies of COPC, the obstacles to incorporating COPC in these practices. The conflicting demands on the time of rural providers can overwhelm their good intentions to pursue COPC, even when grant funds are available to subsidize COPC activities, as is evident in the following comments of physicians and their staffs gathered in the interviews at the sites: “We need to work around people's schedules, because COPC is not a primary part of their job”; “Acute care always wins out over COPC”; “Most of the COPC staff are in-

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kind contributions by the practice; and "I take time out of my practice to do COPC." Furthermore, the turnover of rural physicians and other personnel at many COPC sites created a major obstacle to the institutionalization of COPC into clinical practices. Practice sites that were able to hire and retain a (nonphysician) COPC coordinator were the most likely to sustain clinician involvement. Without grant support, however, it would be difficult for sponsoring organizations to fund such a position.

Another important finding relates to the time and resources required to carry out the different elements in the COPC process. The expenditure data suggest that, even where sponsoring organizations are relatively experienced, the process of defining and characterizing the community along with educating the community and mustering its support can take from 1 to 2 years. After 2½ years of effort, most sites were still devoting the majority of their resources to designing and implementing interventions. In fact, project staff at individual sites quite often became consumed with the details of implementing specific intervention activities. They faced the dilemma of how much time and energy to devote to integrating the philosophy of COPC into the practice vs carrying out the intervention and thereby having an immediate impact on the health of the community and a demonstrated success for COPC activities. It was common for staff to reach the point where they viewed COPC primarily in terms of a specific intervention aimed at addressing a specific health care issue. Even then, the program's time frame was not long enough to complete the initial COPC process and evaluate the impact of the intervention. The limited duration of the program must also be considered in interpreting the results reported in this article. The issues identified may prove to be less relevant over time at sites that continue COPC activities.

In summary, the COPC National Rural Demonstration Program was an ambitious attempt to support the introduction of COPC in rural practices. In some ways, the experience of this program reinforced previously expressed concerns that the demands of COPC on physician time would make it difficult to implement in rural practices. However, the experience of the demonstration also suggests that communities, with the support of local practices, can accomplish many COPC objectives, although this goal requires modification of COPC as it is generally conceptualized.

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REFERENCES