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Community Oriented Primary Care: New Directions for Health Services Delivery

Division of Health Care Services

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Community Oriented Primary Care

New Directions for Health Services Delivery
Conference Proceedings

Edited by Eileen Connor and Fitzhugh Mullan

Division of Health Care Services
Institute of Medicine

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COMMITTEE ON COMMUNITY ORIENTED PRIMARY CARE

*JOYCE C. LASHOF, Chairman: Dean, School of Public Health, University of California (Berkeley)
H. JACK GEIGER, Professor of Community Medicine, Center for Biomedical Education, City College of New York
CLARK HANSBARGER, State Director of Health, State of West Virginia
MARGARET C. HEAGARTY, Director of Pediatrics, Harlem Hospital Center
SIDNEY L. KARK, Professor and Chairman, Department of Social Medicine, Hadassah-Hebrew University School of Medicine
DONALD MADISON, Associate Professor of Social Medicine, University of North Carolina
HANS MAUKSCH, Behavior Sciences Section, Department of Family and Community Medicine, University of Missouri
*JACK H. MEDALIE, Professor and Chairman, Department of Family Medicine, Case Western Reserve University
S. SCOTT OBENSHAIN, Assistant Dean of Undergraduate Medical Education, School of Medicine, University of New Mexico
*LISBETH B. SCHORR, Adjunct Professor, School of Public Health, University of North Carolina
*IRIS R. SHANNON, Associate Professor, Community Health Nursing, Rush-Presbyterian-St. Luke's Medical School
*AARON SHIRLEY, Project Director, Jackson-Hinds Comprehensive Health Center
FREDRICK J. WENZEL, Executive Director, Marshfield Clinic

Conference Convener

FITZHUGH MULLAN, M.D., Scholar-in-Residence

Conference Staff

EILEEN CONNOR
AZORA L. IRBY
RAYMOND JARRIS

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* Member of the Institute of Medicine

PREFACE

The Conference on Community Oriented Primary Care, held in March of 1982 under the auspices of the Institute of Medicine, represented an important historical point in the development of primary care in the United States. Set as it was against a backdrop of 20 years of vigorous efforts to provide more equitable health services to the entire population of the United States, it was nonetheless firmly rooted in the realities of the 1980s.

The antecedents of the conference were several. Large-scale federal commitment to the provision of medical care was one. That began in the 1960s with the OEO Neighborhood Health Centers, the Children and Youth and Maternal and Infant Care Programs, and the Migrant Health Program. It continued in the 1970s with the authorization and growth of the National Health Service Corps and its scholarship program. A second factor was the reemergence of general practice medicine in the form of family practice as called for in the Millis and Willard Reports, both published in 1966.* The family medicine movement grew apace from the sentiments that these documents articulated. By the late 1970s some 13 percent of American medical graduates were pursuing careers in family medicine—many practicing in rural and traditionally underserved areas.

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* Citizens' Commission on Graduate Medical Education, Report, The Graduate Education of Physicians, John S. Millis, Chairman (Chicago: American Medical Association, 1966); Ad Hoc Committee on Education for Family Practice of the Council on Medical Education of the American Medical Association Report, Meeting the Challenge of Family Practice, William R. Willard, Chairman (Chicago: American Medical Association, 1960).

Finally, during the 1970s, the concept of primary care gained prominence and acceptance as an anchor against the subspecialty drift of the major medical disciplines. Not only was family practice included in the concept of primary care, but general internal medicine and general pediatrics and some elements of psychiatry and obstetrics and gynecology were included as well. The Institute of Medicine (IOM) helped to solidify the concept with its 1978 publication, *A Manpower Policy for Primary Health Care,* which clearly defined the field and made specific policy recommendations pertinent to it.

All these developments had taken place in an environment of greater community participation. From the civil rights movement of earlier years to the consumerism of the 1970s, the role of the community and the patient had become more prominent in the delivery of health services. Departments of community and social medicine had grown up in medical schools, and increasing numbers of medical students and young health professionals sought career opportunities in community-responsive practice settings.

The conference occurred at a time when the difficult economic, social, and political circumstances of the 1980s were being experienced for the first time in all sectors. The nation's economy was hard-pressed. Serious cutbacks in governmental support for health care were a reality. The energetic efforts of medical schools in previous years had succeeded in producing a vastly expanded pool of physician graduates whose availability was unquestionable but whose ultimate place and type of practice was uncertain.

The historical trends in health service delivery, set against the political and economic realities of 1982, provided the backdrop for the meeting.

The National Academy of Sciences supplied a small program initiation fund that enabled the Institute of Medicine to assemble a planning committee to examine issues emerging out of these events. This group met for 2 days in June 1981 and then continued to deliberate by phone, letter, and subcommittee meeting for the balance of the year. The planning committee played an important role in formulating the questions for the conference and supplying a format for the answers. They selected the term “community oriented primary care” (COPC) over a number of other possibilities because they felt it represented an amalgam of the main themes of their deliberations. The term itself had been coined by Dr. Sidney Kark of Hadassah-Hebrew University in Jerusalem to describe his well-established program of training and research in the area of population medicine and primary care. Dr. Kark, who was visiting in the United States, served as a member of the planning committee and played an important part in framing the concept.

The committee further agreed on two important points that shaped the substance of the conference. The first was that, while COPC had major implications for health services delivery, its implementation would be impossible without education and training programs that would prepare physicians and other health providers for the demands of community practice. Therefore, any deliberations on the subject should recognize the issues of education as well as service. Second, there was a strong sense that the COPC discussion should not be limited to the United States because much could be gained from and exchanged with other nations who had undertaken similar approaches to the delivery of health services. Many committee members felt that the rapid developments of the previous years in the United States had taken place without the benefit of the experience of similar efforts around the world. Therefore, it was decided that the conference should attempt to incorporate representatives of community oriented programs in progress in other countries. The committee stated four goals for the conference:

- to refine the concepts and techniques of COPC and to trace its development in the United States in comparison with that of other nations;
- to examine the theories and practices that have been applied in COPC;
- to consider the means of incorporating the theory and practice of COPC into the education and training of health care providers; and
- to publish and disseminate the results of this conference in order to facilitate further developments in COPC.

In summary, the conference was intended as a forum in which the practice of community medicine in the United States could be reassessed, codified, and, as appropriate, redirected. This volume represents the record of that undertaking. It is our hope that it will be of assistance to health care practitioners, planners, and teachers in the decade to come.

And, finally, a word of thanks. Conference participants were drawn from many walks of professional and community life in an effort to provide broad and varied contributions to the deliberations. Although many participants raised their own funds to enable them to attend the conference, crucial financial assistance for others, as well as for the undertaking as a whole, was provided by the U.S. Public Health Service, the Commonwealth Fund, and the Henry J. Kaiser Family Foundation. The COPC committee wishes to thank them for their trust and their support.

FITZHUGH MULLAN

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Overview and Summary

Eileen Connor

In March 1982 the Institute of Medicine sponsored an invitational Conference on Community Oriented Primary Care (COPC). Over the course of 3 days, 120 conference participants from six countries took part in plenary sessions and small group workshops. During the plenary sessions papers were presented and responded to by discussants. Both the major papers and the discussant papers dealt primarily with the theoretical issues of COPC. The workshops provided an opportunity for the participants to listen to case reports by people currently engaged in COPC, to discuss the problems of applying theory to practice, and to suggest creative ways these problems could be solved. Time constraints made plenary discussion impossible but ample opportunity for discussion was provided in the workshops. The success of the conference is evidenced by the richness of these proceedings.

The contents of this volume reflect the organization and main themes of the March conference. Part I, “Theoretical Issues,” covers the meaning and scope of COPC in an historical context, an international perspective on COPC, the problems and opportunities presented by COPC in the current economic and political climate, the role of health workers in COPC, and the education and training of providers of COPC. Part II presents summaries of 16 case reports illustrating the application of COPC principles to medical education and health services delivery in a variety of settings—urban, rural, public, and private. The discussion, conclusions, and suggestions that emerged from the small group workshops are summarized in Part III.

COPC is defined at the outset by Sidney Kark and Joseph Abramson.

Their work expands the definition of primary care formulated by the Institute of Medicine in 1977, which listed five attributes essential to primary care: accessibility, comprehensiveness, coordination, continuity, and accountability. To these attributes COPC adds a community focus and the application of epidemiologic methods to the clinical care of individual patients. COPC is both a general approach to the delivery of services and a specific methodology for defining and intervening in specific health care problems.

COPC is not a revolutionary concept. Elements or specific features of the Kark/Abramson model have been present in a variety of programs and practices in the United States and abroad over the past 50 years. Generally lacking, however, has been a synthesis of the elements of community orientation, demographic and epidemiologic investigation, personal medical services, environmental intervention, community organization, and health education in a single practice or by a small number of practices and health agencies working as a single system. Several notable exceptions, wherein a synthesis has been approximated, include the Many Farms Project with the Navajo Indians, the CHAD project at Kiryat Hovel in western Jerusalem, Glyncorrwg Health Center in Wales, the East Boston (MA) Neighborhood Health Center, the Beersheva experience in Israel, and the Su Clinica Familiar in Harlingen, Texas. (Glyncorrwg, Beersheva, and Su Clinica Familiar are described in the case reports in Part II.)

Where COPC has existed in its “pure” form and/or where significant elements of it seem to have been present and tested, there appears to be an improvement in the health of the populations served. There is some evidence of reduction in infant mortality rates, in prevalence of conditions (hypertension, cigarette smoking, and overweight) shown to be highly correlated with severe, debilitating diseases, and in costs of hospitalization resulting from preventable diseases.

With COPC, as with any effort to grapple with the complexities of primary care delivery, there are both opportunities and constraints that present themselves. In the current economic climate, the targeted and effective use of resources encouraged by COPC is a particularly appealing feature. Moreover, the worldwide commitment to a broad definition of primary care expressed formally at a 1978 World Health Organization conference on primary care in Alma-Ata, U.S.S.R., serves to reinforce and underscore the relevance of COPC.

The increase in the number and distribution of physicians and health professionals that has occurred in the last decade and that appears to be continuing has the potential for creating an atmosphere conducive to COPC. As the supply of physicians and health professionals increases there may be a greater emphasis on establishing a stable client population. Market conditions may serve to encourage providers to turn to COPC. Moreover, increased supply may also result in smaller patient loads allowing time for the provision of services essential to COPC, such as health education, counseling, and community involvement.

Furthermore, an ever increasing number of health problems are community-related. Health problems rooted in environmental hazards, job-related stress, and/or life-styles occur in individuals but are community-based and require a community orientation for resolution. In addition, the changing demographic profile of the U.S. population suggests that the significant health problems of the next few decades will put a premium on chronic care of an elderly population and will require an approach that considers and takes account of the community being served. COPC affords that approach.

Several other factors also represent opportunities for COPC. The advances in microcomputers, which make handling of data both relatively simple and inexpensive, facilitate the aggregation of demographic and epidemiologic data that is a basic feature in COPC. Additionally, the current tightening of federal funding, which will force state and local agencies once again to assume responsibility for such functions as health care, may provide the necessary climate for COPC to flourish.

Factors that tend to inhibit the development of COPC are not negligible and should be thoroughly considered. These factors were noted by many conference participants. One factor explicitly mentioned by several participants and that can be inferred from a number of the presentations is the historical association of COPC with underserved populations. In the recent past, programs in this country that have most closely resembled the COPC model have been those programs designed to meet the needs of the underserved—inner-city minorities, rural populations, and migrant workers, to name a few. As a result of this association, COPC tends to be thought of as a way to organize services for the disadvantaged rather than as a general approach to primary care delivery for a broad base of the population. The presumed limited applicability of COPC can serve to constrain and limit its wider adoption. The variety of perspectives represented and expressed at the conference helped to dispel this notion.

Perhaps the greatest impediment to COPC in the United States today is the current reimbursement system which encourages a one-on-one, fee-for-services orientation and a proliferation of discontinuous, high-technology procedures to treat diseases of individual patients without addressing the concerns of disease prevention and health promotion. Under our current medical care system, a style of medical practice, such as COPC, that em phasizes education, social and emotional support of the ill, and identification of those at risk as essential modalities, tends to be superseded by practices and programs that value technological modalities of care.

Practices and programs emphasized in COPC are generally not dependent on high technology and therefore do not have the immediate visibility and drama that many medical specialities enjoy today. The preventive, low-technology, common sense approach that characterizes COPC (as well as family and community medicine) has not fared well in competition for prestige and power in academic medical centers. The status factor, therefore, is a real problem in the training and maintenance of practitioners for COPC.

Two other factors, perhaps even more fundamental, also serve to inhibit the growth and expansion of COPC: the general unpopularity of the preventive elements of COPC and the cultural belief that responsibility for health should be left in the hands of individuals and that any who would meddle with this responsibility, even when it occurs in the name of health promotion, should be viewed with suspicion. Educating people about the health hazards of certain kinds of behavior is relatively simple and straight-forward; getting these same people to alter their life-style or change their behavior is extremely difficult, and likely to be viewed as self-righteous and intrusive. The importance of these obstacles to the advancement of COPC should not be overlooked.

Given that COPC represents a synthesis of a number of disciplines and approaches, the practice of COPC involves the commingling of people with a variety of backgrounds and expertise. Traditional providers of health care—physicians, nurses, and social workers—must link up and work closely with epidemiologists, social scientists, and administrators. All of these must look to the community for guidance and advice when diagnosing the community problems, designing and implementing treatment modalities, and evaluating its worth. The community itself must, in some fashion, assume a leadership role in the multidisciplinary health team.

The feasibility and effectiveness of such a team and consequently of COPC depends on the cooperative abilities of all the participants. This kind of multidisciplinary team approach, with direction coming from a variety of sources rather than from the physician alone, requires a basic reorientation of everyone involved—including the patient or consumer of health services. Roles must be clearly defined and educational programs created at all levels in order to produce a cadre of people capable of providing COPC. Strategies for moving in this direction include:

- developing COPC role models both in faculties and in practices;
- expanding practice opportunities for students (medical, nursing, public health, social work, etc.) and residents;

- modifying traditional curricula to include elements of COPC such as epidemiology, biostatistics, and management sciences; and
- understanding and influencing societal value orientations toward health.

The work has begun. Programs such as the Primary Care Curriculum at the University of New Mexico, the Family Practice Program at Case Western Reserve University, and the Upper Peninsula Program at Michigan State University (all three are described in Part II) represent valuable attempts to implement these strategies.

The papers and workshop summaries that constitute this volume give testimony to the success of the conference. They represent the most current thinking on COPC and they reflect the various ideological divisions that tend to characterize any attempt to blend or synthesize ideas, disciplines, and programs. The collective efforts of all the participants have provided the basis for a new definition of primary care practice that has important implications for the future of health service delivery in the United States. Not satisfied with the state of the art, however, the conference participants made two major suggestions for future COPC activity.

First, it was suggested that a COPC data base be developed by compiling the major research data and case reports from community-based, primary care practice experiences around the world. This data base should be published along with a research agenda that speaks to future needs in the field. Second, the participants suggested that a network of primary care practices affiliated with academic medical centers doing research and training in COPC should be established. This network would function as the basis for collaborative studies and cooperative training programs to further develop COPC principles and produce COPC practitioners.

This volume is intended to provide a firm base upon which to build these suggested activities. Every effort will be taken to see that they are accomplished.

Community Oriented Primary Care: Lessons LEarned in Three Decades

Kurt W. Deuschle

It is my goal in this paper to review firsthand experience with four quite diverse community oriented primary care practices in an effort to examine some of the common problems and summarize the lessons learned. However diverse, all were academically nurtured but not directly “owned and operated” by the academic establishment. Three of these practices were domestically initiated: the first on the Navajo Indian Reservation; the second in Martin County in Kentucky's Appalachian area; the third in the inner-city East Harlem section of New York City; and the fourth, now in the early development stage, in the Dominican Republic is international. These efforts span 27 years of work in these four different areas and, together, they illustrate many of the principles of community oriented primary care (COPC).

Before describing the four COPC models, terminology essential to the understanding of the topic needs to be defined. I use the simple definition for COPC as stated in the report “Community Responsive Practice—New Directions for Primary Care,” approved by NAS for Program Initiation Funding dated May 8, 1981.[1] As presented in this document, COPC denotes a practice that is oriented to serve the particular needs of defined population. It was pointed out in this report that COPC usually refers to practices responsive to the needs of the underserved and isolated communities but that the “notion of community responsiveness of a medical practice is by no means limited to these areas.” It was also emphasized that the medical practice that we are discussing is largely, if not exclusively, addressed to primary care.

The term "defined population" requires further comment. In the NAS planning document, Madison and Shenkin are quoted regarding their definition of a community-responsive practice.[2] To paraphrase, their definition of community can include geographic, social, and occupational parameters, or merely members of a physician's practice. This latter so-called "community" is a self-selected group of people who have elected to use a particular medical practice. Such a group, in my view, represents a "constituency" rather than a defined population. To the extent that the constituency represents the total community, they may operationally be considered a subgroup of the community at large. Most private practices in this country are addressing a "constituency" rather than a community in the more epidemiologic sense.

Clarification is also neded for the label "community responsive." Again, I refer to the Madison-Shenkin discussion[2] of community-responsive practices in which some specific attributes of "community responsiveness" are presented. Such a practice "assumes a larger than ordinary share of responsibility for safeguarding the health of the community, and … follows through on this responsibility by taking action beyond the traditional mode of treating the complaints and problems of patients as they approach the practice one by one." Over the years I have defined that characteristic of primary care as the "practice of community medicine"—that is to say—identifying and solving health problems in groups of people (or communities). These activities can include aspects of public health and preventive medicine, as can be appropriately integrated into the primary care practice.

Having established the basic vocabulary and definition of COPC, I will now present the four model practices that I have participated in over the past 27 years.

CASE # 1: 1955–1960

Navajo Indian Tribe/USPHS-IHS/Cornell University Medical Center

In 1955, the U.S. Congress transferred responsibility for Indian health from the Bureau of Indian Affairs, Department of the Interior, to the U.S. Public Health Service (USPHS), Department of Health, Education, and Welfare. This COPC practice emerged from the desire of the USPHS Indian Health Service (IHS) and the Navajo tribal government to obtain help from a university academic medical center to improve the Navajo health care system and make it more responsive to the needs of the Navajo nation. Expectations ran high for quantum jumps in health care improvements.

Earlier in the 1950s, Dr. Walsh McDermott and his colleagues at Cornell Medical Center in New York had introduced a highly successful tuberculosis chemotherapy program on the Navajo Indian Reservation.[3] Because of this experience, McDermott and his associates at Cornell University New York Hospital were the logical academic team to assist the federal government and the Navajo tribe in establishing a primary care health model responsive to the needs of his underserved Indian population. The Cornell group accepted this challenging opportunity to collaborate with the USPHS and the tribe.[4–7]

Time does not permit a full description of the exciting 5 years of this project. It was primarily a demonstration and research model, but there are critical lessons learned from that experience that are applicable to the COPC movement today. The sociocultural, economic, geographic, and medical problems seen on the Navajo reservation in 1955 were similar to the health conditions in many of the underdeveloped countries around the world. Additionally, the Cornell team responded to a “felt need,” that is, the Navajo tribe and the USPHS both were enthusiastic about inviting a pilot field health care demonstration. To provide technical assistance, it is essential to have community participation and active involvement, thus ensuring a close communication between the health providers and the community served.

In 1955, the Navajo tribal population was estimated at 70,000 people, living in rural isolation in an area of 25,000 square miles, including parts of Arizona, New Mexico, and Utah. The Cornell team in consultation with the tribe and with the approval of the USPHS-IHS officials, chose a clinic site in the tribal political district known as the Many Farms-Rough Rock chapter. This community of approximately 2,000 population was considered “representative” of the Navajo tribe as a whole and therefore the type of defined population that might serve as an indicator for health problems and services across the entire reservation. However, it should be noted that the Tribal Health Committee was the primary decision maker with respect to the selection of a project site. The Cornell group then presented the purpose of the project to a community meeting at the Many Farms-Rough Rock Chapter House to give the community the prerogative of accepting or rejecting the health care demonstration project proposal. This was just the beginning of a series of reports and open discussions with the local community with more formal annual reports given to the tribal council.

The sine qua non of a COPC practice is the intimate relationship of the health service team with the population served. For example, a communications barrier existed, as the Navajos maintained their traditional culture and spoke a difficult, complex language that is rarely mastered by non-Navajos. This barrier was tackled from two sides. The Navajo community health workers were given extensive education and training in medical interpretation, through the team efforts of a Navajo nurse and linguistic experts, with frequent monitoring of ongoing medical interpretation problems. The non-Navajo health professionals improved their communications by learning Navajo culture, customs, and beliefs. For example, the clinic was not opened until the local medicine men “blessed” the building in a special ceremony. Cultural gaps can be mitigated. In-depth knowledge of the cultural and language differences can help the health professionals strengthen the overall health care service program. Certainly, the cornerstone for optimum health care in any practice situation is effective and sensitive communication. The Navajo case illustrates this most dramatically.

Another aspect of the Cornell Navajo model involved the careful documentation of health and disease problems of the community. In addition to annual census and demographic studies, epidemiologic surveys, analyses of patient care utilization, and nutrition studies, a variety of other relevant studies were carried out periodically.[8] It was soon documented that the primary care problems seen in the clinic were, for the most part, preventable and that overall improvement in the health picture would require major work in health education and health promotion as well as improvement in socioeconomic levels.

The extensive academic field research conducted in the Navajo example was considered vital to the tribal/USPHS health planners. It would be a great asset to every COPC practice to have basic demographic and health information on its defined population. It must, however, be of a quality that could form the basis of evaluating the impact of their services on health levels of the community.

In the Navajo project, great reliance was placed on the community health worker. These were bilingual Navajo men and women, trained to the level of a field nurse assistant—a kind of public health, licensed practical nurse. These individuals usually had less than a full high school education and they represented a readily available pool of tribal manpower. Despite the documented success of the community health worker in this project and its extraordinary capacity to narrow the cross-cultural gap, the USPHS did not immediately follow through with this innovative health manpower model. Critical lessons are learned here too. The most apparent reason for this lack of government interest was the threat it posed to the nursing hierarchy in the USPHS-IHS program at that time. As an aside, the USPHS-IHS to this day has not established a medical interpreter school, course, or program. On the other hand, a medicine man school was established in the Rough Rock community. This is funded by an NIH grant for the next 5 years. The new hospital at Chinle, Arizona, has a hogan temple built as a “leanto” for providing traditional Navajo ceremonies.

CASE # 2: 1962–1968

Martin County, Appalachia

Martin County, a rural Appalachian community in Kentucky, was considered in the early 1960s to be one of the poorest and most medically underserved communities in Kentucky. Tuberculosis was considered by the community leaders as the major health problem. The Kentucky State Health Department and Kentucky Tuberculosis Association, in collaboration with local leadership, requested a university-sponsored pilot demonstration in tuberculosis eradication on a countywide basis. The University of Kentucky Medical Center (UKMC) agreed to provide the technical assistance for this collaborative project.[9]

Fortuitously, the TB project had included a complete census and socioeconomic survey of the entire community as part of the house-to-house tuberculin testing program. The USPHS temporarily assigned four physicians to Martin County to help us conduct clinical examinations on a 25 percent sample of households, thus establishing a baseline for the health and disease problems of this defined target population. On completion of this tuberculosis project, the community sought help from the UKMC in establishing a modern primary care practice program.[10] They obtained a federal grant to construct a clinic building.

A University of Kentucky Medical School graduate, born and raised in the county adjacent to Martin County, had worked with the TB eradication team during his junior and senior years of medical school. He was eager to return to Martin County as a family physician. His residency training in primary care and fellowship in community medicine made him an ideal candidate for directing the Martin County community primary care practice. He rapidly put together a health team recruited from the local community and put into place community health workers and a medical technician. He was also fortunate in finding a nurse practitioner. He was later appointed health officer in addition to his fee-for-service clinical practice. Moreover, he had frequent visits from UKMC faculty, who consulted with him on difficult health problems. During the first few years of the life of this Martin County practice, the future of this program seemed bright. One would have anticipated that such a comprehensive and responsive practice of this kind might become deeply rooted and "institutionalized."

Unfortunately this has not been the outcome. Martin County has been the center of a coal boom. Several physicians have moved into the county. Patients who formerly were satisfied with the nurse practitioner care in the community practice transferred to the practices in which the physician was the primary caretaker. Federal funds to support community health workers dried up. The state has now reorganized the public health departments into 15 regions, and the local county health departments are being dismantled. The family physician conducts his practice in the community clinic with the help of one clerk. It would be unfair of me to try to ascertain all the factors that have reduced the COPC practice—apparently successful and effective—to a traditional "bare-bones" solo practice. Undoubtedly the past 15 years have produced enormous changes in socioeconomic life in Martin County and a dramatic reduction of financial support for social health services.

This case does, however, serve to demonstrate that a major change in the local community and the shift in national health policy can produce major distortions in COPC. The Martin County case started with many positive features also found in the Navajo project; yet, in the face of altered community conditions the idyllic COPC could not be sustained. Was it the lack of ongoing community involvement and participation in Martin County? Was it the broader socioeconomic and political conditions? Or was the exodus of the original community medicine faculty from the UKMC the problem? I can only speculate as to what factor or factors produced the fatal flaw in this COPC practice.

CASE # 3: 1970-PRESENT

The Boriken Neighborhood Health Center, East Harlem, New York

Mount Sinai School of Medicine became operational in 1968. The founders of the school were committed from the very beginning to provide technical assistance to the surrounding East Harlem community. East Harlem, often referred to as Spanish Harlem, had a medically underserved population of 150,000: 45 percent Puerto Rican, 35 percent black, and 20 percent white and other (most Latin American and Italian). East Harlem shares all the adverse health indices, crime rates, substandard housing, unemployment, and other unfavorable characteristics of the inner city.

Again, as in the previous cases, the principle of “doing *with*” rather than “doing *for*” was invoked. Technical assistance and model building became the academic service to the community. An initial community survey of 2 percent random selection of households indicated that, among other health issues, infant and child health was a top priority. [10]

The East Harlem Tenants Council (EHTC), a local Puerto Rican organization committed to housing since the late sixties, broadened their interests in the seventies to include the delivery of health services. Thus, in June 1974 the EHTC—now known as the East Harlem Council for Human Services—requested technical assistance from Mount Sinai in the development of a primary care program that would serve families in their area of influence. The Boriken Neighborhood Health Center (BNHC), a full-scale neighborhood health center, was planned and opened by the community organization in 1975 with technical assistance from the medical school and financed by the USPHS (314e monies).[11] Since 1978 a satellite unit of this center was opened with support from New York State.

The catchment area of these two programs is all of East Harlem with the northern sector of this district as principal target area. The organization and staffing pattern of both centers are typical of community owned and operated neighborhood health centers. A lay governing board of directors assumes policy responsibility for the BNHC, and a project director conducts day-to-day management, reporting to the board. A medical director reporting directly to the project director is responsible for the coordination of professional services. The staffing emphasis is placed on nurse practitioners and community health workers. A full complement of physicians, dentists, nurse practitioners, dental hygienists, psychiatric social workers, health educators, nutritionist, nurse midwives, and appropriate M.D.-specialist/consultants round out the professional health care team. Community health workers bridge the gap between the health professionals and the patients and their families. They also serve a marketing function by helping the community residents learn how to use the health center.

At present there are 16,000 registered patients (13 percent of East Harlem's population) that generate approximately 40,000 annual visits. The clinic has hospital linkages to the three hospitals situated in East Harlem: North General, Metropolitan, and Mount Sinai. Although the persons seeking care at the BNHC and satellite are self-selected, the demographic and socioeconomic characteristics of the registered population resemble the community in the entire catchment area.[12] Most of the registered persons are Medicaid-Medicare-eligible and medically indigent—the so-called “near poor.” The health and disease problems are essentially those identified by existing health agencies and corroborated by our own surveys and segmental health care studies.

Overall, the community governed and managed health center has fulfilled expectations of an urban, inner-city COPC practice. Given continued good leadership from the community organization and strong financial support from federal, state, and city sources, the future would seem to be reasonably secure.

CASE # 4: 1980-PRESENT

La Romana, Dominican Republic.

In the spring of 1980, an official of the Gulf Western Corporation, a multinational conglomerate, asked the dean of Mount Sinai Medical School for technical assistance in planning the improvement of an urban and rural health program that already existed for their employees and dependents living in the eastern region of the Dominican Republic. The need to improve the health services for approximately 100,000 persons, particularly in the three rural provinces surrounding the company town of La Romana, was considered to be a high social goal for the corporation. A 5-year contract was drawn up between the Department of Community Medicine, Mount Sinai Medical School, and Gulf Western Americas Corporation, and technical assistance was initiated on October 1, 1980.

The Dominican Republic occupies the eastern two-thirds of the Island of Santo Domingo (Hispaniola), which it shares with Haiti. The 1980 total population was estimated at approximately 6,000,000. A Spanish-speaking nation, the Dominican Republic is essentially an agricultural economy with great dependence on sugar as its principal export product. Low levels of literacy and lagging socioeconomic development contribute to the poor health conditions.[13]

The health and disease patterns of the Dominican Republic are the very prototype of a developing country: high fertility and birth rates, high infant mortality, deaths and morbidity attributable to infectious diseases, and nutritional deficiencies. There are many criticisms of the quality of care in the hospitals and rural health clinics. The poor quality and uneven distribution of health manpower has been another factor in contributing to the low levels of health care in the countryside.

The Gulf Western business operation in La Romana is typical of multinational enterprises in other countries where the corporation assumes responsibility for health care services to the employees. Therefore, the involvement of academia in providing technical assistance in this Caribbean setting provides yet another challenge in constructing a COPC delivery system. Certainly our past experience in rural and urban health settings in the United States offered the Mount Sinai academic group a basis for developing this private enterprise COPC model.

Although we are only into the second year of this Caribbean project, a series of steps have been taken that parallel the approach used in the previous domestic ventures. Identification of local Dominicans who provide planning and reorganization leadership was deemed as top priority. An industrial engineer and a physician were identified as such. The current system in La Romana was analyzed by them with the technical assistance from our Mount Sinai bilingual faculty team. During the first year the physician was given epidemiologic and management science education with training on site as well as at Mount Sinai. Formal tutoring utilizing the Domincan Republic's own health planning activity as a practicum was most effective in upgrading his knowledge and planning skills. This physician is highly respected and seen as a moving force in the improvement of the rural health system. His views on health focus on prevention, health promotion, and comprehensive primary care. In addition, a general practitioner from the area has been trained on the basic principles of clinical epidemiology. Already several surveys have been conducted that document the health problem in the community.

This second year (1981–1982) has focused on the development of the first of seven rural health centers that will serve a population of approximately 20,000. This center will also serve as a site for demonstration and training of personnel for the other six. While the building of this health center is being completed, the identification and training of the health manpower to staff the center was supervised by the Dominican physician. When the clinic opens the locally trained staff will be in place, including a young general practitioner who grew up in that community. The data collection reporting and referral systems have been carefully planned and are ready to function.

In addition to technical assistance in planning, small teams of Mount Sinai bilingual clinical faculty have made intermittent visits to La Romana and have conducted consultations, lectures, seminars, and workshops on the common disease problems selected by the local practitioners. The education and training effort has included administrators, nurses, and community workers.

During this early phase of the program another component is technical assistance for revamping the hospital at La Romana as a general hospital for secondary care. The medical director of the hospital, at his request, is presently receiving on-site intensive tutorial instruction, particularly in health planning and health care organization. The evolution of the plan thus comes out of local staff effort with the technical assistance of the Mount Sinai health planners.

It is too early to say that the La Romana health system now being put into place will be the appropriate model for COPC practice. However, if the language and cultural compatibility can be assured—and it seems to be—and, if epidemiology and management sciences are appropriately applied—and that seems to be coming along—then, one begins to have some optimism for the future of this project. Fiscal commitments, of course, will depend on the commitment of the corporation. If it remains a high priority to engage in social projects in their own enlightened self-interest, then indeed the future support seems solid. International politics, the economics of sugar production, and the usual community factors in the area will undoubtely influence the outcome of this health care delivery system experiment.

The four COPC practices reviewed above have many common features. The planning, development, and operational problems were quite similar.

Certainly we have learned that the guiding principles in establishing a COPC practice include:

- community participation,
- bridging the language and cultural differences,
- ascertainment of the health and disease problems in defined population, and
- development of a cadre of local community health workers to assist the professional staff in outreach activities.

There are obviously many significant barriers to the development of COPC practices. Perhaps at this point in our history the economic constraints seem most threatening. Steady erosion of the financial subsidies from both the public and private sectors has reduced the support and vitality of these practices. Perhaps at this point in our history the economic constraints seem most threatening. Steady erosion of the financial subsidies from both the public and private sectors has reduced the support and vitality of these practices. In addition to the question of future public or private sector support of the COPC practices, there are also intrinsic serious managerial problems in the operation of these practices. Most physicians have had little or no education or training in the management sciences that affect the practice of medicine. In the education of our medical graduates, the biomedical aspects of medicine dominate the medical centers while management training is simply neglected. The physician in the COPC practice often faces for the first time the preparation of a detailed budget and a variety of federal and state administrative reports.

Another problem facing COPC providers involves balancing the professional health provider mix and staff support appropriate for acceptable high-quality care in the center. The physician, nurse-practitioner, doctor-assistant provider mix must be carefully evaluated for optimum efficiency and effectiveness. The risk for possible breach of privacy and confidentiality with a large staff of community health workers has been a problem with some practices. The medicalization of many social health problems requires community health workers to deal with issues with their neighbors. If the doctor suspects child abuse, alcoholism, sexual problems, nothing these problems on the patient's chart spreads the risk of a breach in confidentiality to a greater degree than a traditional practice.

The emphasis on epidemiologic components of the practice can bring forth the accusation from the community of “research” and “guinea pig” operations—suspecting the doctors of using the practice for their own selfish professional goals and advancement. Patients may also resent the assignment of medical students and residents to their clinical care. People living in underserved communities are understandably highly sensitized to the possibility of being "used" for medical education and research purposes.

Integrating COPC into the existing health care network for the area is yet another issue that must be resolved by persons establishing a COPC practice. COPC cannot operate in isolation but must be linked to effective secondary and tertiary care. The approach to the other health care institutions must be professionally as well as economically appropriate.

In my view the challenge is to sustain and to nurture these COPC practices once they are established. The political dynamics within the practice and forces in the local community, as well as broader political, economic, and social changes, all impact on the COPC practices and make them highly vulnerable.

It is important to examine the potential of experimenting with the COPC practices in the more affluent sectors of our society. The rising interest in preventive medicine and health promotion among the public might well provide the foundation for an innovative COPC practice. The possible modification of the HMO to a COPC structure would also be an option to consider.

We must review the significant barriers affecting the function of the COPCs now in existence and look ahead and anticipate those likely to be encountered by future programs. I am confident that in doing this we will contribute enormously to our understanding of these practices and identify research issues that may help in advancing this pattern of primary care where it is most urgently needed.

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PART I

THEORETICAL ISSUES

This section contains papers presented in plenary sessions. The discussants were invited, prior to the conference, to respond in a formal way to the paper(s) being delivered. There was no floor discussion in plenary sessions.

Community Oriented Primary Care: Meaning and Scope

Joseph H. Abramson
and Sidney L. Kark

Health protection is increasingly seen as a responsibility of society and health care as a right of individuals. The system of financing and organizing health services varies considerably, not only between different countries, but also for different health conditions, income groups, and aspects of health care in the same locality. Health care is usually provided by a variety of discrete and independently functioning services, some of which are located in the community to which they deliver care, while others are not.

Most of the major advances in the quality and content of health care have been made in public health services and in hospital medicine, rather than in primary care based in neighborhoods of cities, rural villages, or other local communities. The acute, short-stay hospital with its various departments is regarded by many physicians, nurses, other health personnel, and the public, as the center of health care. Yet its major functions are increasingly directed towards tertiary care. Much less attention has been given to developing the potential of health care in the community.

In our view what is needed is a change in the orientation of practice and the practitioner—an acceptance of responsibility for care of all the people, not only those with particular medical needs that require the facilities for tertiary care, emergency treatment, or special services such as obstetrics. There is a need for recognition of the full potential of medicine and health care in its capacity to promote health, prevent disease, alleviate the suffering and disability accompanying chronic illness, cure those whose illnesses are curable, and rehabilitate the many whose injuries and illnesses demand a change in life-style and work. For this we need a more integrated approach to health care than is common at present, bringing together different primary care services with certain aspects of community medicine. It is this that we now refer to as community oriented primary care (COPC).

GENERAL CONSIDERATIONS

Primary Health Care and Community Medicine

Community oriented primary care (COPC) is a strategy whereby elements of primary health care and of community medicine are systematically developed and brought together in a coordinated practice. Focus on this kind of integration was one of the features of the declaration on primary health care of the Alma-Ata conference:

> Primary health care addresses the main health problems in the community, providing promotive, preventive, curative, and rehabilitative services … (it) includes at the very least education concerning prevailing health problems and the methods of preventing and controlling them, promotion of food supplies and proper nutrition, an adequate supply of safe water and basic sanitation, maternal and child health care, including family planning, immunization against the major infectious diseases, prevention and control of locally endemic diseases, appropriate treatment of common diseases and injuries, and provision of essential drugs.[1]

COPC unifies two forms of practice—the clinical care of individuals in the community and aspects of community medicine.[2] In more developed countries the main primary care practitioners are physicians and nurses. For purposes of the present discussion, attention will be focused on the physician. The clinical care provided by primary care physicians may include promotive, preventive, curative, and alleviative functions, but the dominant function is care of the ill or disabled patient who turns to them for treatment. The five attributes that are essential to the practice of good primary care, according to a definition of primary care prepared by the Institute of Medicine of the National Academy of Sciences of the United States,[3] are accessibility, comprehensiveness, coordination, continuity, and accountability. The primary physician is the doctor to whom a patient first turns when ill or when seeking advice on personal health. Another important feature of such primary care in the community is its continuity over long periods of time; this builds a special relationship between practitioners, patients, and their families. Primary care practitioners who come to know several members of the same family in the course of their practice are more able to use this knowledge of the family's state of health, its resources, relationships, and perception of health when members of the family turn to them, from time to time, for care. The doctor's interest often extends to the school and other institutions in the community, as resources in the care of individual patients.

The provision of health care in the community, i.e., the practice of medicine outside the hospital, is sometimes equated with community medicine. We use the term “community medicine” with a different connotation to signify health care focused on population groups rather than on individual patients. So construed, community medicine has its roots in the disciplines of public health and medical administration. In the present context, community medicine may be distinguished from other forms of personal health care in the community in that its interest is centered on the community as a whole and on the groups of which communities are composed.

Practitioners of community medicine need the skills to answer the following cardinal questions, the asking of which characterizes community medicine:

1. What is the state of health of the community?
2. What are the factors responsible for this state of health?
3. What is being done about it by the health service system and by the community itself?
4. What more can be done, what is proposed, and what is the expected outcome?
5. What measures are needed to continue health surveillance of the community and to evaluate the effects of what is being done?

Basic Features of COPC

The cardinal features of COPC are:

1. The provision of primary clinical care for individuals and families in the community, with special attention to the continuity of care. Suitable arrangements need to be made for consultative services, specialist care, and hospitalization.
2. A focus on the community as a whole and on its subgroups when appraising needs, planning and providing services, and evaluating the effects of care.

The “community” in COPC may be any of the following (in order of preference):

- a “true” community, in the sociological sense;

- a defined neighborhood;
- workers in a defined factory or company, students in a defined school, etc;
- people registered as potential users of a physicians' group practice, health maintenance organization, neighborhood health center, or other defined service; and
- users of a defined service, or repeated users of the service.

Although from a puristic viewpoint the application of the term “community” to a group of patients may rightly be criticized, especially when these patients constitute a small selected part of a population, there is little doubt that the principles and practice of COPC can profitably be applied to such groups, although its full development may not be possible. At this stage it would not be constructive to suggest that COPC should be confined to “true” communities and defined neighborhoods. When COPC is applied to a selected part of a population, an effort should be made to determine how the characteristics of this subgroup compare with those of the population at large.

The following can be regarded as the five essential features of COPC:

1. The use of epidemiologic and clinical skills as complementary functions; both the epidemiologic and the clinical activities should be of as high a standard as possible.
2. Definition of the population for which the service is or feels responsible. This defined population is the target population for surveillance and care and the denominator population for the measurement of health status and needs and the evaluation of the service.
3. Defined programs to deal with the health problems of the community or its subgroups, within the framework of primary care. These community health programs may involve health promotion, primary or secondary prevention, curative, alleviative or rehabilitative care, or any combinations of these activities. The programs are based on the epidemiologic findings.
4. Involvement of the community in the promotion of its health. Community involvement may be seen as a prerequisite for the satisfactory and continued functioning of a COPC service.
5. Accessibility that is not limited to geographic accessibility (the COPC practice should ideally be located in the community it serves) but that refers also to the absence of fiscal, social, cultural, communication, or other barriers. The full development of COPC requires a synthesis of all the above elements. Epidemiologic studies alone, or placement of the practice within the

neighborhood it serves, are not enough to justify the use of the term "COPC."

At least five other elements can be regarded as highly desirable features of COPC, although not essential:

1. The integration, or at least the coordination, of curative, rehabilitative, preventive, and promotive health care. Even if different agencies provide these services, COPC practitioners should be concerned with ensuring their coordination and the continuity of care, at least of the individual patient, the family and other small groups, and where possible in the development of health programs focused on the community as a whole.
2. A comprehensive approach to health care, encompassing social and mental as well as physical aspects of health, and extending to behavioral, social, environmental, and other determinants of health.
3. A multidisciplinary health team. While some features of COPC can be introduced into the practice of a motivated solo practitioner with the necessary epidemiologic skills, the complementary functions of a multidisciplinary group will obviously enhance effectiveness.
4. Mobility of the health teams—"outreach" activities, such as going out into the community to become acquainted with the people and their health problems and identifying people at risk and inviting them to attend for surveillance or care.
5. Extension of community health programs beyond the framework of primary care, e.g., by promoting health education programs in schools or community centers, or by participating in broad programs of community development that are not aimed solely at health advancement but that deal with the root causes of health and disease in the community.

The Need for Coordination or Integration of Community Health Services

In more developed countries, health and welfare services are often provided by separate agencies having little, if any, accountability to one another, to a central authority, or to the community itself. Some of the more unsatisfactory aspects of a nonunified health care system are the problems created by the ready access to so many varied health and medical care facilities; the limited relationships and the lack of coordination between agencies; the absence of responsibility by any single agency for the overall health of individuals, families, or community resulting in gaps in care; and the additional costs of duplication or overlapping of services. This multiplicity of services and its consequent problems may be found even in relatively small localities of metropolitan areas, in smaller towns or cities, and in rural districts.

One of the major aims of COPC is to remedy these unsatisfactory features of present-day health care by integrating or coordinating the various primary care activities—promotive, preventive, curative, and rehabilitative. In many communities a main feature of existing personal services is that the initiative for care comes from patient or family only, or depends on referral from one practitioner or agency to another. Staff members of the health services are relatively static. They do not go out into the community to identify and explore health problems. In contrast to this, a COPC practice in which mobility of staff is a feature develops programs for going out to the community to conduct investigations of its health status, health attitudes, and health-relevant practices. On the basis of the findings, action is initiated by the practice with the concurrence and active cooperation of the community.

The extension of interest to the community as a whole and to all its members, with the assumption of responsibility for surveillance at least, if not for comprehensive health care, is a key to the introduction of COPC into existing primary care practices. This is so whether they are conducted by family physicians, by pediatricians or internists, or by other practitioners, in solo practice, or in a group practice, or in a community health center. Generally, such practices provide services in response to patients who turn to them for care or advice. If they conduct home visits it is in response to a call or a follow-up visit for care of a patient. This visit might be conducted by a physician or by a visiting nurse.

This approach to COPC may be contrasted with the traditional practice of public health nurses in their maternal and child health work. The public health nurse was responsible for the care of all the babies in a defined geographic area. Surveillance of the health of these babies and of the parental care received at home was and, in many places, still is a central function of the public health nurse's work. In our own approach to COPC in Jerusalem, we have incorporated this system, and each family nurse working in a family practice (in a prepaid medical insurance framework) has responsibility for the nursing care in health and illness and for surveillance of all members of the households living in a defined area allocated to her.[2] This requires ongoing contact with each family and necessitates home visits when there has been no contact for some time. This surveillance assists the nurse and family physician to help the family to make the best use of the various services available.

Community-Based Primary Health Care

Primary care services that are situated in the communities they serve are in the main concerned with the health care of people who live nearby. This proximity is important; it makes it easier for people to come for personal health care or to attend group discussions or community meetings. For older or disabled people and for mothers with their babies and toddlers, it is especially important that the service should be within easy walking distance or within easy reach by public transport. Proximity facilitates home visits by the health team, for home care of the sick, for family and group health discussions, and as part of preventive and promotive programs. These relationships may promote community involvement in accepting responsibility for important aspects of its own health. The insecurity felt by health professionals in many neighborhoods of large cities may also be reduced by their increasing familiarity with many residents in the neighborhood and their consequent recognition by people in the local streets and buildings.

When a service is located within the community, the area or people for whom a practitioner or health team is responsible may be relatively easy to define. If the population is large or dense, as in many city neighborhoods, the primary care unit might be divided into a number of health teams, each providing service to one section of the neighborhood. In a rural area with scattered small homesteads, a single health team might meet the requirements of a large area by traveling from a central station or by setting up subcenters. A health team that works with a small defined population may readily come to know the primary groups[4] and health-relevant social networks of the community.

If each practitioner or health team has responsibility for a defined population or geographic area, this may counteract one of the major deficiencies of modern health care. Generally no one person or institution accepts the responsibility for the health of a community or population. It is this acceptance of responsibility that distinguishes COPC from much of the primary care that is so common today, characterized by the episodic care of those patients who seek care when sick.

This definition of an area or population for which the practitioner or team is responsible makes it possible to go further and to characterize the community in terms of its demographic and other characteristics—knowledge that is essential for the use of epidemiologic methods in community diagnosis, in health surveillance, and in the evaluation of health programs focused on changing the community's state of health.

These remarks on defined populations in local communites may be applied to other settings also, e.g., to primary care services for workers in factories or other workplaces and for students and faculty at universities, colleges, and various types of schools.

SOME SPECIAL FEATURES OF COPC

Clinical Epidemiology in COPC

When examining a patient, primary care practitioners have often to make an initial decision on the problems the patient has posed. The early interviews and various examinations are focused on establishing a positive relationship between practitioner and patient, making a diagnosis, deciding on treatment and care, and considering the expected outcome. Critical to the diagnosis is a judgment as to whether the patient has a disease or not. If so, what is the nature of the disease, its natural history and hence the patient's prognosis, and the management needed? If not, the patient is often reassured, and the practitioner's task is ended for that particular event.

This division of health into two distinct categories—disease and no disease, illness or wellness—is becoming more difficult to define or even conceptualize. Advances in measurement of various health-relevant characteristics, somatic, psychological, or social, make it increasingly difficult to divide the universe into two discrete groups, the healthy and the sick. This is especially true in present-day medical care where patients with long-term and chronic diseases represent such a large part of practice and where long periods of asymptomatic abnormality are so frequent.

Epidemiology is concerned with population groups. It is commonly defined as the study of the distribution of disease in population groups and the determinants of this distribution. This definition is too restrictive and limiting for the full use of epidemiology in COPC, which is not limited to treatment of disease but which includes promotion of health through changes in behavior, protection from exposure to potentially harmful infections and other substances, the prevention and treatment of disease, and care of the disabled.

We therefore emphasize epidemiology as a health science and define it as “the science concerned with the occurrence, distribution and determinants of states of health and disease in human groups and populations.”[5] This extends epidemiology beyond the study of disease to the study of health and well-being and the investigation of differences in such characteristics as growth and development through infancy and childhood.

Further, we consider health care to be one of the “determinants” of health mentioned in the above definition and hence regard the collection and analysis of information about the use, the provision, and effects of health care as a legitimate concern of epidemiology. In his book on the uses of epidemiology, J. N. Morris writes of an “epidemiology of health services as well as of health,” and stresses the importance of information on “the people's needs and demands; how these are being met; and the success of services in lifting the burden of disability and improving health.”[6] This interpretation of epidemiology, broader than that of many academic epidemiologists, has come increasingly into the forefront, and a handbook recently sponsored by the International Epidemiological Association and the World Health Organization extends it still further. “The epidemiologist is concerned not solely with the monitoring and evaluation of existing services … but with the planning process in its entirety, including the assessment of needs, the formulation of and choice between alternative policies and objectives, with evaluation, with the design of experimental services, and with the implementation and development of definitive ones.”[7]

As a simple example of the use of epidemiology, primary care practitioners who wish to extend their work with children to include community pediatrics will require some of the skills of community medicine, of which epidemiology is a foundation science. They will need not only to make routine measurements of such variables as length or height, weight, head circumference, skinfold thickness, motor, adaptive, language and social development, and intellectual development, but also to analyze the findings at a group level. Practitioners need to investigate and answer questions concerned with the community of children for whom they have responsibility. Among the critical questions are: “Who are the infants and children registered in my practice and which of them have I seen and examined this past year? What is their state of health, growth, and development? What acute illnesses have they had, and what chronic illnesses or disabilities? Are they all under care, and, if not through my practice, by other agencies? Have all the children been immunized against the major childhood infections? What are the major determinants of their state of health? What are their social and environmental conditions, especially in the home and family?” The answers to these questions may lead the practitioner or health team to consider the desirability of inviting visits by certain parents with infants and children registered in the practice, or otherwise eligible for care, or to go further and explore the possibility of inviting children to attend for health care and advice at fixed ages. In this way the practice establishes routines that provide the information required to assess the state of health of individual children, as well as that of the community of children.

If information is to be used in this way, the methods by which it is collected should be as rigorously defined as in any epidemiologic survey.[5] Standardized diagnostic criteria should be decided upon for common or important diseases, and standard operational definitions should be used for other relevant variables. Uniform examination methods must be used, especially if different members of the primary care team are involved, and data that are to be analyzed should be accurately and completely recorded. Record forms and systems should be designed with an eye to the easy retrieval of data.

The information required for epidemiologic purposes may be a by-product of the diagnostic investigation and surveillance of patients, it may be derived from routines specially added to clinical procedures, or it may require special surveys. The characteristic feature of this application of epidemiology is not the source of its data, but its purpose. The primary aim is not to advance medical science by providing new knowledge about the causation or natural history of a state of health or disease or about the value of a treatment or type of health care —although this may be a secondary gain—but to contribute to the health care of the specific group or population for whom the primary care service is responsible. This kind of epidemiology is probably best referred to as "clinical epidemiology," as a natural extension of a term usually confined to small-scale investigations centered around patients, their families, and other small groups of people receiving clinical care.[8]

A notable feature of clinical epidemiology is that in many or even most instances the collection of data fulfills a double function and meets the dual responsibilities of the clinician who is concerned both with the care of specific individuals and with the care of a total community. This is obviously so when the results of clinical tests, performed as part of the management of patients, are used as data for subsequent analysis at a group level. It is also true if the test is performed in the course of routine community surveillance or during a screening or case-finding survey of the practice population. Similarly, information on immunizations may be used both for the quantitative evaluation of an immunization program and to pinpoint specific children who have not yet been fully immunized. A register of patients with a specific disease may be useful not only as a basis for the calculation of prevalence or incidence rates, but also as a tool for ensuring that particular patients get the care they need. A list or register of the total eligible population may be invaluable not only for epidemiological planning and organizational purposes, but also for the identification of specific individuals who may require follow-up or care, such as elderly people with whom there has been no contact for some time.

The information that may be collected includes the following:

1. Demographic information on the community or the population eligible for the service—the size of the population, its demographic characteristics, such as its age, sex, and ethnic distribution, and its mobility. These data have obvious implications for the planning of services and provide the denominators required for the measurement or morbidity and other rates.

Registration of known pregnancies and of births, deaths, and movements in and out may have immediate practical relevance.

2. Information on illnesses and disabilities. Charts showing the occurrence of selected acute illnesses, using the technique developed by W. N. Pickles, a general practitioner in Yorkshire, England, provide a simple means of infectious disease surveillance.[9] Registers of important long-term disorders such as ischemic heart disease and cerebrovascular disease and maps showing the distribution of house-bound patients or of patients with certain acute infections may be useful.
3. Information about health-relevant characteristics, such as the growth and development of children and blood pressures of the adult population.
4. Information about the utilization of services and their differential use by various groups of the community.
5. Information about health-relevant behavior, such as cigarette smoking, family planning practices, and compliance with medical advice.
6. Information about the presence of risk markers or known risk factors as a basis for the identification of vulnerable individuals and groups; “at-risk” registers may be helpful.
7. Prompt reporting of deaths or other stressful events that may warrant the adoption of crisis intervention procedures.
8. Information on the performance of activities by the primary care practitioners, such as screening tests, home visits, etc.
9. Information, often not quantifiable, on the community's interests and concerns, its demand for services, and its satisfaction with its health care.

An analytic as well as a descriptive approach may be used in clinical epidemiology by directing attention at relationships between variables. Information about the differential occurrence of a disease in different groups of the population, for example, may be helpful both in the delineation of vulnerable groups and as a pointer to the etiological processes operative in the community. In a primary care health center where a program for the treatment and control of anemia in pregnancy was initiated,[2] we found a differential distribution of hemoglobin levels and of anemia, according to ethnic group and socioeconomic status. In the same center, a comparison of the characteristics of elderly men who died or remained alive during a 5-year period revealed a simple set of risk markers that might be used to identify men with a high risk of dying.[10] An examination of the coprevalence of diseases, i.e., the tendency of different diseases to affect the same people, revealed an unexpected cluster of mutually associated disorders—migraine, chronic bronchitis, congestive heart failure, gallbladder disease, and chronic arthritis.[11] People with one or more of these common conditions made especially heavy use of the primary care service. The clustering was espe cially strong when people with clear objective evidence of these diseases were removed from consideration; that is, the clustering was essentially between complaint-based disorders. These were frequently associated with emotional symptoms and with family disharmony or other stressful situations. The analysis drew attention to the occurrence of a community health syndrome for which there was no organized program in the primary care service.

When community medicine programs are set up as an integral part of the primary care practice, each program needs to be supported by epidemiologic investigation for (a) community diagnosis related to the problem at which the program is directed, e.g., the particular health condition or group of conditions included in a community syndrome, (b) community health surveillance, and (c) evaluation of the community program.

Information may be required not only about the community as a whole, but also about its various subgroups. This will lead to a need for the organization of continuing epidemiologic surveillance of health and illness of different community groups. For this purpose it is useful to focus on major developmental phases and social groups within the community, such as reproduction and family formation, childhood from infancy and preschool childhood (the under-fives) through school age children and adolescents, adulthood, aging and the aged.

To define health priorities, it is necessary to link clinical and epidemiologic orientations. Thus the care of women through pregnancy and child-birth has to focus on the well-being of individual women, as well as on the progress and outcome of pregnancy in all pregnant women in the community. The two disciplines required for assessing the health state of individual and community, namely clinical practice and epidemiology, are complementary to one another in the development of COPC, the one providing the information needed for individual diagnosis and the other for community diagnosis (Table 1).

Very few practitioners can be expected to be skillful both as epidemiologists and as clinicians. In view of the need for a high standard of epidemiologic practice in COPC, it is probably true to say that in general the involvement of an epidemiologist, at least as a part-time co-worker and consultant, is desirable. All COPC practitioners, however, should have been exposed to epidemiology sufficiently to enable them to appreciate its importance, to play their part in the collection of accurate data, and to make proper use of the epidemiologic findings.

Why has the use of epidemiology in the practice of primary care physicians not been fully explored? This seems to be the case despite the increasing attention given by medical schools to the teaching of epidemiology, despite the need for such knowledge in reading current medical journals, and despite the increasing recognition of the importance of epidemiologic thinking as a basis for "clinical judgement" and clinical decisions concerning diagnosis, prognosis, and treatment.[12] It seems that one of the important reasons is that the epidemiology that is clinically relevant for primary care is not developed by the major teaching centers.

TABLE 1 Summary of the Complementary Functions of Clinical and Epidemiologic Skills in Development of Community Oriented Primary Health Care

CLINICAL (Individual)	EPIDEMIOLOGIC (Population Group)
Examination of a patient	*Survey*
Interview and examination of individuals by history, taking physical and psychological examinations, laboratory, x-ray, and other special techniques.	State of health of community and families, using questionnaires, psychological testing, and special facilities for such investigations.
Diagnosis	*Community diagnosis*
1. Usually of a patient. Differential diagnosis to determine main causes of patient's complaint.	1. Usually problem-oriented. Differential distribution of a particular condition in the community and the causes of this distribution.
2. Appraisal of health status of "well" persons, such as pregnant women, well children; periodic health examinations of adults.	2. Health status of the community as a whole or of defined segments of it, e.g., health of expectant mothers, growth and development of children, birth and death rates.
Treatment	*Treatment*
1. According to diagnosis and depending on resources of patient and medical institutions.	1. According to the community diagnosis and depending on resources of the health service system.
2. Intervention usually follows on the patient seeking care for illness or advice about health.	2. Intervention on basis of survey findings, often before any illness notified or recognized.
Continuing observation	*Continuing surveillance*
Evaluation of patient's progress and sometimes for further diagnostic work-up.	Surveillance of health state of community and ensuring continuing action. Evaluation of intervention programs.

Of special relevance for community diagnosis in primary care are studies of the incidence of common acute illnesses and the prevalence of a number of chronic disorders and disabilities, cigarette smoking, and other health-relevant behaviors, as well as studies of the distribution of continuous variables such as height, weight, and blood pressure. This information may be derived from routine recordings on all persons examined or interviewed or from special surveys of the population eligible to use the practice.

Epidemiologic investigations in primary care practices allow for analysis of the data to determine the health priorities for the practice. In the practice of COPC, the functions of epidemiology include:

- determination of health priorities on which the practice should focus, and the community's interest and involvement;
- the more intensive epidemiologic investigation for community diagnosis of those conditions with high-priority rating;
- subsequent epidemiologic surveillance of the various community health programs established in the framework of primary care; and
- evaluation of the programs by epidemiologic methods to measure their effectiveness in changing the community's state of health.

Case Illustration of Clinical Epidemiology

The use of epidemiology for the control of cardiovascular risk factors is illustrated in a community oriented primary care practice in western Jerusalem. The program is conducted by a health team of primary care physicians and public health nurses, supported by epidemiologists and statisticians and by a community organizer/health educator. It is focused on all the adults eligible for care who live in four housing projects close to the practice. Known as the CHAD program (*C*ommunity Syndrome of *H*ypertension, *A*therosclerotic Disease, and *D*iabetes), it aims to modify the frequency distributions of blood pressure, serum cholesterol levels, and weight/height index in the community and to reduce the prevalence of hypertension, hypercholesterolemia, overweight, and cigarette smoking, at the same time as ensuring continuing care and treatment of patients with ischemic heart disease, cerebral vascular and peripheral vascular disease, and diabetes mellitus.

The original aim of the program was to test the feasibility and usefulness of incorporating such a community oriented health program as an integral part of primary care. For this purpose, a control area, immediately adjacent to the CHAD neighborhood, was selected. This control population had access to another primary care center situated in the area, providing a primary medical service to those who turned to it for attention. Thus both populations, “CHAD” and control, had easy access to primary care facilities located in their neighborhoods, the one facility utilizing a COPC approach in the control of cardiovascular disease risk factors and the other providing primary care without a community medicine orientation. Both were prepaid services. The program has been described in a number of publications.[2,13–20] We will confine ourselves to one aspect of the program, namely, hypertension.

Determining Priorities

The impression of the practitioners was that hypertension was common in their practice, more especially in middle-aged and older persons. Extraction and analysis of the relevant data from clinical records of the practice provided information about the proportion of adults eligible for care who had previously had their blood pressure (BP) recorded in their clinical files.[13] While only 52 percent of men aged 25–44 years had a record of at least one BP reading, 77 percent of women in this age-group had such a record. There was little difference between the men and women 45 and over, the vast majority having been examined. The percentage of men and women of different ages who had blood pressure measurements in the clinical records was as follows:

Age (years)	*Men %*	*Women %*
25–44	52	77
45–64	89	87
65 and over	82	86

Another fact of relevance to the clinicians' impressions of a high prevalence of hypertension was the prevalence of diastolic hypertension (diastolic BP $\geq$90 mm HG) on at least one occasion, as revealed by analysis of the clinic records:[13]

Age (years)	*Men %*	*Women %*
25–44	14	16
45–64	51	67
65 and over	62	75

As expected in this particular community, there was a sharp rise in prevalence with age, but at that time we were not able to make more specific inferences because of the considerable difference in frequency of BP recordings.

Community Diagnosis and Epidemiologic Surveillance

The CHAD program is founded on epidemiologic surveillance of the practice population as a whole and not only on those who use the practice for care when sick. The program was initially developed through analysis of existing clinic records of the practice together with a comprehensive picture of the health status of the community provided by a community health survey. The latter included the prevalence of cardiovascular disorders and diabetes mellitus as well as the frequency distribution of blood pressure and other risk factors for these disorders. The survey added to the knowledge we had of the prevalence of hypertension, revealing a considerably higher percentage of men and women with diastolic BP ≥90 mm Hg, as shown by the following data:[13]

Age (years)	*Men %*	*Women %*
25–44	37	28
45–64	66	76
65 and over	74	80

Over a period of time every adult with evidence of possible hypertension (at least one measurement with systolic ≥140 mm Hg and/or diastolic ≥90 mm Hg, according to the clinic records or the community health survey) was invited to attend for a series of new measurements in order to determine whether standard criteria for the diagnosis of hypertension were met and whether treatment was required.

Registers are now in common use in epidemiologic studies of hypertension and cardiovascular disease.[21] In this COPC practice the presence of hypertension is recorded on a card register that is maintained for all CHAD subjects and available for use by the nurse coordinator of the program and for each nurse and physician in the practice team. This card register is used for reviewing the progress of the program in measuring the compliance of persons at risk and the response to treatment. It thus becomes the key to the monitoring of individual patient care and to the surveillance of the community as a whole. Almost 90 percent of people who have resided in the neighborhood for at least 2–3 years have come into the program, and almost all known hypertensives receive medicinal treatment. For these purposes the community program defines a hypertensive as a person found consistently to have a systolic BP ≥160 mm Hg and/or diastolic ≥95 mm Hg.

Evaluation

The use of epidemiology in primary care evaluation requires rigorous attention to the use of standardized methods in the practice. These have been described elsewhere.[2,14,19] The care is based on standardized examination procedures, uniform methods of treatment and advice, and defined monitoring of regimes for people at different, specified risk levels. Thus hypertensive patients are put on a stepped-care regime that commences with a diuretic and the addition of other drugs (propanolol, methyldopa, etc.); if necessary dietary advice is given on calorie reduction for overweight subjects and on salt restriction. Other aspects of the program include advice to cigarette smokers to stop smoking, a cholesterol-lowering diet, weight control, and increase in physical exercise where this is advisable.

The program has been evaluated by comparing the outcome with the findings in a control population. This was done by means of community health surveys of the total CHAD (COPC practice) population and the control population at the commencement of the program and 5 years later. The same methods of interview and examination were used in both surveys and for both populations.[16–20]

The analysis included 2,036 men and women, 35 years and over, 524 in the CHAD population and 1,512 in the control population, who were examined on both occasions. The respective response rates were 91 percent and 83 percent of the eligible population at the second examination.

The comparison of change in prevalence with respect to several risk factors, namely, hypertension, cigarette smoking, weight, and serum cholesterol levels, was encouraging.[20] There was a reduction in the prevalence of hypertension in the COPC population of 8.2 per 100, from a rate of 25.0, to 16.8 per 100. The reduction in the control population was 3.2 per 100 (Table 2).

Especially striking was the reduction in prevalence of diastolic hypertension from 17.3 per 100 to 7.1, a reduction of nearly 60 percent affecting men and women equally. Another interesting finding was the impact of the community program on the younger and middle-aged adult groups of 35–44 and 45–54 years (Table 3). In men and women aged 35–44 at the time of the initial survey, the reductions in prevalence were from 11.3 to 6.5 and from 13.6 to 6.2 per 100 men and women, respectively. In the age-group 45–54, the reductions were from 22.9 to 8.9 and from 23.9 to 15.9 per 100 men and women, respectively. The impact on outcome as measured by mortality or morbidity from hypertensive disease, cerebral vascular disease, and possibly ischemic heart disease may thus be expected to reflect itself only after some years, with the further aging of these groups. As yet, 9 years after initiation of the program, no change in this direction has been noted. [22]

Age-standardized mean values of blood pressure and prevalence rates of hypertension are shown in Table 2. The mean values of blood pressure declined in both the COPC and control populations, except for women in the latter. The changes were more marked in the COPC population and were significant in both sexes for systolic and diastolic BP. Thus the net reduction in mean values, that is, the difference between the reduction in the COPC population and the reduction in the control primary care population, was significant for systolic and diastolic BP for each sex. The net changes did not alter appreciably when the data were standardized by education or region of birth, used as an indicator of ethnic group.

Although there were favorable changes in the control population also, these were much smaller than in the COPC population. The changes in the control population might be expressions of an increasing awareness by the medical profession during recent years of the importance of treating hypertension. According to the survey results, the proportion of all adults aged 45 years in the control population who were receiving treatment for high blood pressure rose from 9 percent to 14 percent during the 5 years of the comparative study.[20] In the COPC population the corresponding

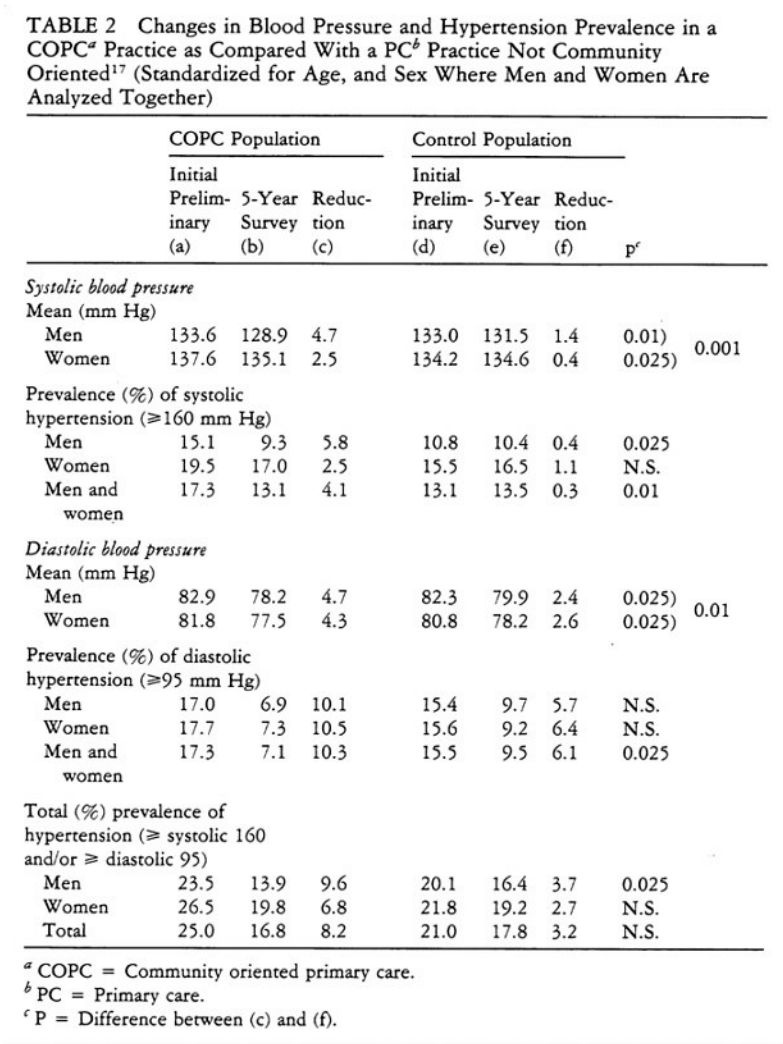

TABLE 2 Changes in Blood Pressure and Hypertension Prevalence in a COPC[a] Practice as Compared With a PC[b] Practice Not Community Oriented[17] (Standardized for Age, and Sex Where Men and Women Are Analyzed Together)

	COPC Population			Control Population				
	Initial Preliminary (a)	5-Year Survey (b)	Reduction (c)	Initial Preliminary (d)	5-Year Survey (e)	Reduction (f)	P[c]	
Systolic blood pressure								
Mean (mm Hg)								
Men	133.6	128.9	4.7	133.0	131.5	1.4	0.01)	0.001
Women	137.6	135.1	2.5	134.2	134.6	0.4	0.025)	
Prevalence (%) of systolic hypertension (≥160 mm Hg)								
Men	15.1	9.3	5.8	10.8	10.4	0.4	0.025	
Women	19.5	17.0	2.5	15.5	16.5	1.1	N.S.	
Men and women	17.3	13.1	4.1	13.1	13.5	0.3	0.01	
Diastolic blood pressure								
Mean (mm Hg)								
Men	82.9	78.2	4.7	82.3	79.9	2.4	0.025)	0.01
Women	81.8	77.5	4.3	80.8	78.2	2.6	0.025)	
Prevalence (%) of diastolic hypertension (≥95 mm Hg)								
Men	17.0	6.9	10.1	15.4	9.7	5.7	N.S.	
Women	17.7	7.3	10.5	15.6	9.2	6.4	N.S.	
Men and women	17.3	7.1	10.3	15.5	9.5	6.1	0.025	
Total (%) prevalence of hypertension (≥ systolic 160 and/or ≥ diastolic 95)								
Men	23.5	13.9	9.6	20.1	16.4	3.7	0.025	
Women	26.5	19.8	6.8	21.8	19.2	2.7	N.S.	
Total	25.0	16.8	8.2	21.0	17.8	3.2	N.S.	

[a] COPC = Community oriented primary care.
[b] PC = Primary care.
[c] P = Difference between (c) and (f).

rise was from 10 percent to 19 percent. Among patients who had ever received treatment for high blood pressure, the proportion who reported discontinuation of treatment when questioned in the second survey was 9 percent in the COPC population and 29 percent in the control population.

TABLE 3 Change in the Prevalence Rates of Hypertension by Age and Sex in the COPC and the Control Populations

	COPC				Control—PC only			
	Men		Women		Men		Women	
Age	Initial Survey	5-Year Survey	Initial Survey	5-Year Survey	Initial Survey	5-Year Survey	Initial Survey	5-Year Survey
35–44	11.3	6.5	13.6	6.2	9.6	6.4	8.9	7.3
45–54	22.9	8.9	23.9	15.9	20.7	14.6	17.9	12.5
55–64	35.1	24.6	36.8	27.6	28.2	23.0	32.9	33.5
65–74	36.4	27.3	43.2	43.2	36.7	33.3	48.1	40.7

The results of this controlled evaluation provided encouraging evidence that the integration of this community focus into primary care was having an appreciable effect on cardiovascular risk factors in the population served. Ongoing surveillance findings support this conclusion. A recent check revealed that 76 percent of known hypertensives were under control, i.e., had blood pressures below 160/95 mm Hg.

A Note on Other Programs in This COPC

Improvements in the prevalence of several other cardiovascular disease risk factors have also been reported in the course of this CHAD program.[20] These improvements are summarized in Figure 1, which contrasts the changes observed during a 5-year period in the CHAD population and the control population. This figure shows the rates in 1975, expressed as percentages of the initial rates (in the same population) in 1970. The decrease in prevalence was greater in the CHAD population for each of the risk factors shown—systolic and diastolic hypertension, hypercholesterolemia, cigarette smoking, and overweight. The decrease in the CHAD population was most marked for diastolic hypertension and least marked for overweight. The figure (which is based on data for both sexes) underestimates the change in smoking observed among men. The decreases observed in the control population (smaller than those in the CHAD population) were ascribed to a general increase of awareness of the importance of the prevention of heart disease, in both the population and the medical profession. The evaluation of the CHAD program also pointed to improvements in relation to diet.

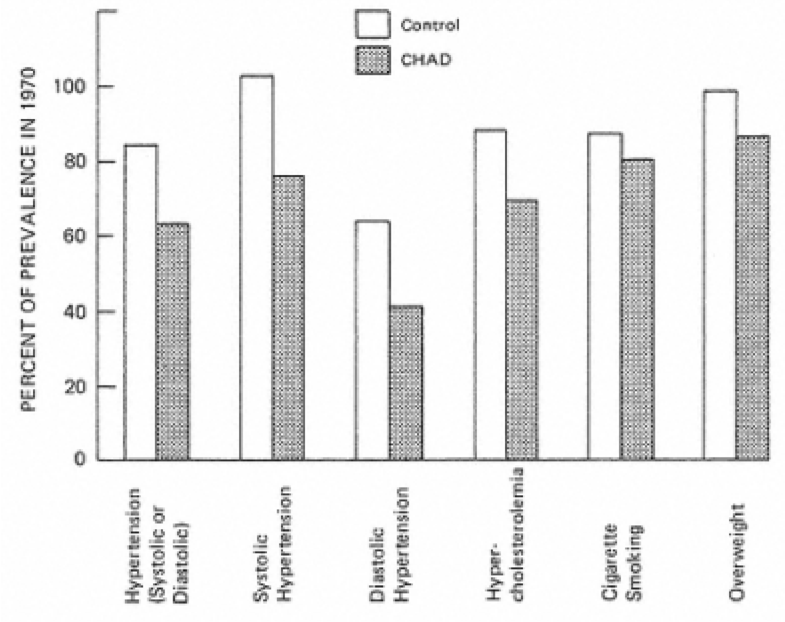

Figure 1 Prevalence of risk factors in 1975 expressed as a percentage of prevalence in 1970, for CHAD and control populations.

Maternal and child health constitutes a most important aspect of family and community health to which COPC has important contributions. In addition to the adult community health programs focused on CHAD, the neighborhood primary care center in western Jerusalem focuses on several aspects of maternal and child health care. The community programs have included surveillance of health through pregnancy and its outcome. Associated with this, several community programs have been developed, such as the prevention and/or treatment of anemia in pregnancy, asymptomatic bacteriuria, cigarette smoking, initiation of breast feeding, and family spacing. The first of these introduced was that concerned with anemia in pregnancy. Program reviews indicated a rapid decline in the occurrence of anemia with general improvement in the distribution of hemoglobin levels of the women at different phases of pregnancy. This anemia is now relatively uncommon. Within a decade of the start of the program, the rate declined from an initial level of 12.0 percent of women exhibiting a hemoglobin level of less than 10 gm/100 ml at any time during pregnancy to 1.6 percent. With this change the intensity of the program has been reduced and the number of blood determinations has been considerably lessened.

Similarly, community oriented programs have been a feature of child health care in this primary care center. These have involved rheumatic fever and rheumatic heart disease, now uncommon in the area of western Jerusalem, and promotion of the physical growth and behavior development in infants and young children with special reference to children of lesser educated mothers and hence of lower social class families. Community diagnosis of child growth and development is an ongoing process in this COPC center. These have been described in some detail in a number of publications. Encouraging has been the fact that the gap between children of better-off and poorer families is closing. And here we would emphasize that this trend is now evident in behavior, including fields such as language and social development. The routine of the child health programs has included attention to ways of improving social interaction and stimulation of infants by their mothers, as well as the nutritional and more physical aspects of child health care. The main somatic defect requiring further attention at this time is that of anemia in infancy, and for this a community program of surveillance and treatment has been conducted over several years, with evidence of satisfactory responses.[23–25]

Social and Behavioral Aspects of COPC

As long ago as the mid-nineteenth century, medicine was said to be a social science by Virchow and his colleague Neuman. And here we are in the 1980s of the twentieth century, witness to the fact that the social and behavioral aspects of medicine still receive scant attention in the practice of medicine. It is true that there have been considerable advances in social policy affecting health services and public health; however, it is the social component of care itself that is being considered here.

A central feature of primary health care of patients or others seeking advice is the relationship between practitioner and patient. Since T. Parson's pioneering analysis of modern medical practice as a case illustration of social structure and dynamic process, a number of medical sociologists have focused on different aspects of medical care, the role of the physician, the sick role, the doctor's functioning in legitimizing it, and patient-doctor relationships.[26–29] It is not surprising that the revitalization of primary medical care that is now taking place in many more developed countries is emphasizing the key role of the consultation when a patient turns to his or her doctor for care and advice.[30]

No less important for COPC is the knowledge that the practitioner builds up about the community. The use of social and behavioral variables has become common place in clinical and epidemiologic studies. Many of these are relevant to COPC.

Measures of social process and of basic cultural characteristics are much less commonly used. This includes important areas such as people's belief systems and practices and value attitudes. COPC practitioners could contribute considerably in improving this situation, because of their close and ongoing relationship with patients and small communities. The methods of social anthropology, as carried out in small communities, incorporated with those of epidemiology, could lead to fruitful, innovative investigations, such as the study of the relationship between culture, personality, and common diseases like coronary heart disease.[31]

The way in which communities function, their social system and culture, has been studied by social scientists in different disciplines of these sciences. But such investigations have not yet been accepted as an integral element of ongoing community health care. A COPC team should have knowledge of social health relevance that will not only define community health in epidemiologic terms, but will also help stimulate a community's involvement in its own care. Such knowledge includes community networks of relationships and social support systems, occupations and activities of daily living, family structure and kinship in the community, and its formal and informal leadership. Each situation in which a member of the health team meets an individual or group of the community provides an opportunity for such observations. Planned surveys, including KAP (knowledge, attitudes, and practices) studies, may be especially helpful when carried out with the participation of members of the community, or even conducted by them.

Community Involvement in COPC

The individual's active interest in treatment of his or her illness is often a sine qua non of successful treatment. This is especially true for patients who need medication or other treatment over long periods of time. For example, one of the first measures of effectiveness of a program to control hypertension is the extent of compliance with the recommendations. The individual's sovereignty is involved in the decisions that have to be made in his or her own interests. Recognition of this would lead physicians and other practitioners to give more attention to patients' perceptions of their health condition and the possible effects of treatment. Cooperation in the program of care is influenced by a number of interrelated factors. Did the patient with hypertension seek care because of illness, or was the hypertension found on a screening survey in which he or she was passively involved by virtue of being a member of a group that was being screened? Was the screening survey conducted by the personal doctor as part of his/her practice, or was it a mass screening survey organized by an impersonal health authority? The answers to such questions and others relating to patients' involvement in decision making about their care must surely influence their response to advice and treatment.

While participation in decision making by the individual patient is important for satisfactory care, it is perhaps even more so in community health care. Study of the determinants of community involvement and participation in its health care is a function of the social sciences in medicine and public health. For the past 30 years or so there has been increasing awareness and a number of reports on the community processes involved in failure to apply our increasing body of knowledge about health to the promotion of community health. The earliest of these reports are still worthy of reading by all those interested in COPC.[32,33] Not only do practitioners need to know suitable epidemiologic methods for studying the state of health of the community, but also social science methods for understanding the community's health-relevant behavior, the people's varied perceptions of health and disease, and their attitudes towards, and expectations from, the health team. What was so well said by George Rosen about the health officer and the community is equally apt for those now moving into COPC, “A knowledge of the community and its people … is just as important for successful public health work as is a knowledge of epidemiology or medicine…. The first principle in community organization is to start with the people as they are, and with the community as it is.”[34]

The problems that have arisen, and the failure of well-intentioned health programs, have been more readily observed in cross-cultural situations, where the health team aimed to produce change of behavior in communities whose way of life, technology, and value-attitudes differed markedly from those of the team. Enthusiasm in attaining objectives for better health is often not matched by understanding of the community and hence lack of sensitivity to possible adverse reactions to the various activities generated by the health program.

One of the major reactions to this increasing body of experience has been recognition of the need for community involvement in the initiation and provision of community health care. What does this mean for the COPC health team and for the community's health? Primary care physicians and their colleagues in practice have had a professional training that not only prepares them for their special role, but also differentiates them from the population and their patients. This difference is not only in their “medical culture,” but often also in their educational and socioeconomic status. Attempts to bridge the social distance between practitioners and their patients have included the appointment by the community, or by the health practice, of community health workers who are members of the community.[35–37]

Understanding the community is essential for a health team that expects to work with, and encourage the active participation of, the community in its own health care. The basic education of COPC team members should include special study with those epidemiologists, health educators, community organizers, and behavioral scientists who have a special interest in the application of their disciplines to the health of communities and individuals.

Community health workers have become the main primary care practitioners in many societies. The "barefoot doctor" of China is an example of this in a large country.[38] Equally interesting but on a more modest scale is the concept of community members themselves functioning within their own communities, not as community members of a primary care health center, but as workers relatively independent of medical services. An example of this is the Community Health Participation Program (CHPP), which is directed by the Department of Social Medicine of the Montefiore Hospital and Medical Center in the Bronx, New York City.[39] Volunteers in the community undergo a training program in the CHPP that includes first aid, with cardiopulmonary resuscitation and emergency handling of persons choking on food, and advocacy and counselling of individuals, families, and other community groups regarding the use of various agencies and their rights in the use of different facilities. These volunteers also learn about systems of social support for those members of the community who are not well integrated in a social network, such as aged persons living alone, disabled persons, teenagers in need of help, and new immigrants.

The potential contribution to community health and well-being of such a resource is considerable, especially if well coordinated with other community focused health care, such as COPC. Much depends on the attitude of physicians and other health professionals to such a CHPP program and the particular community workers living in the community in which the COPC is being practiced. The extent of mutual respect and trust between a COPC health team and the community will be reflected in their reciprocal functioning. Furthermore, a community health council of a primary care center will be more likely to become an effective advisory and involved group if its representatives are well accepted by the professional health team and if it is recognized as representative by the community.

Community involvement in health activities varies from community to community. The variation depends on the nature of the community and the way in which the health service system perceives community participation in health care activities. While action by the community has become a feature of the approach to primary health care that is now being advocated by WHO and UNICEF for developing countries, its usefulness is often questioned in more developed countries, especially in metropolitan cities. Our experience in rural peasant communities and in cities relatively small and very large has indicated that the potential of community involvement is equally great in all settings.

If health is about the quality of life, promoting community involvement is not only for the purpose of achieving specific goals, such as building protected water supplies in a rural community, or organizing a hypertensive program in different settings. Community involvement is in itself a health activity, promotive of social well-being and mental health. The sense of being able to influence the development of one's own community is especially relevant in communities alienated from the dominant social, cultural, and economic classes. It may be difficult to achieve community involvement in those more developed societies where highly organized services are conducted within the framework of bureaucratic decision making and direction. However, the difficulty should not deter community health researchers from studying the impact that community involvement might have on the effectiveness of health services.

Training for COPC

The development of a unified practice of community medicine and primary health care, that is COPC, requires practitioners who have had training for such practice. While some aspects of community health care are beginning to receive more attention in the experience provided for medical students, practical clerkships still have little place in the curricula of medical schools in more developed countries. The multidepartmental hospital, mainly catering to short-stay patients, is the major field of clinical practice for undergraduate and postgraduate students in medicine and nursing. This has been so in developed countries for many years, so that the clinical professors in the teaching centers of today were themselves educated in the setting of the hospital institutions. An encouraging reaction has been the appointment of professors of community health, general practice, and family medicine in a rapidly increasing number of medical schools, and the attachment of students to general and family practices, as well as other primary care practitioners, pediatricians, internists, and in some cases group practices. However, this is still far from the training and experience needed for COPC.

Among the pioneering innovative explorations in medical education of this kind was that of John Grant, who was appointed in 1921 as head of the Department of Hygiene of the Peking University Medical College in China, which had been taken over by the Rockefeller Foundation. Based on his argument that “preventive medicine” must be provided in facilities comparable with those of the teaching hospital, he established a “demonstration health station” in Peking. In this center health maintenance and preventive and curative medicine were brought together and used in the teaching of medical and nursing undergraduate students, as well as public health nurses.

Despite this and other innovative approaches in medical education and practice,[40,41] the vast majority of medical schools of today do not provide suitable training for the development of COPC. The same is true of public health schools, which have neither generated fresh approaches in the development of combined promotive, preventive, and curative care, nor pioneered a unified practice of individual and community health care. If COPC is to progress, university health science faculties must have COPC facilities attached to them in much the same way as teaching hospitals are now affiliated. The staff of such facilities require special preparation in practice, research, and teaching for COPC, and relevant textbooks are needed.[5,14,42,43]

From Solo Practice to Group Practice and the Health Team

In answer to the question who needs training for COPC, we have to face the reality of who provides primary care today, because it is these practices that we may want to extend from Primary Health Care (PHC) to COPC. Among physicians, solo practice is still very common, despite the frequently made statement that this type of practice is on its way out. While this is probably true, solo practice is sufficiently widespread to compel the attention of teaching institutions. Such practitioners attend postgraduate courses and grand rounds offered by many hospitals. There is every reason to extend similar facilities for courses in subjects relevant to COPC. Likewise they may be encouraged to participate in the COPC rounds at community-based teaching centers where these exist.

There are trends, however, in delivery of health care in the community that offer opportunities for COPC and hence for the training of the practitioners. One modern feature is that increasingly physicians are working in groups, whether in a group practice clinic or in a health center. The group may be composed of a number of specialists, or of general practitioners, each having additional knowledge and special interest in a particular field of practice. Whatever the type of group practice, it is clear that redefinition of the practitioners' functions will be needed if the group is to combine the practice of community medicine with that of primary health care focused on the individual patient. The development of community medicine in primary care is influenced by, and in fact depends on, the orientation of the physicians who are key members of the practice teams. Without ensuring their training in COPC and its related health sciences and community orientations, the team will make little progress toward community-focused primary health care.

It is probably true to say that there will not be sufficient numbers of physicians to provide future clinical primary care services. How then can we ask those practitioners to extend their clinical practice functions by adding an important role for them in community medicine? We believe that the answer is to provide them with assistants for clinical work, as well as for community health. Thus a community health care team, made up of different professional groups, is the answer, rather than separating the services along the lines of the traditional separation of personal public health services and curative medical practice. This being so, we need to provide training facilities for various members of the COPC health team. Such action does presuppose that a unified COPC is the desired practice of the future.

Training programs need to take account of various functions fulfilled by members of the health team so that the training is relevant and appropriate. It is useful to consider these as follows:

- central or nuclear members;
- supportive members;
- consultative members; and
- community and the health team.

The central team might consist of at least four groups: physicians, nurses, social case workers, and community organizers/health educators. The physicians and nurses, or their less skilled alternates where circumstances so dictate, should be trained in clinical and community health skills. These skills may be effectively combined by some physicians and nurses who have had clinical and epidemiologic training. However, these skills can also be brought together by complementary functioning of different members of the central team, providing all have had a basic training in the various skills needed for COPC. As key personal “health care givers” in COPC, doctors and nurses need to understand health-related behavior and community determinants of health, since an important part of their work is directed towards changing behavior when necessary. Nevertheless, there is little doubt that the behavioral aspects of community health care also need the attention of special workers, such as the social caseworker and the community organizer/health educator. These, too, need special training for their roles in COPC.

Supportive members of the team include administrators, as well as others whose functions are supportive of the central team's activities, such as laboratory, pharmacy, secretarial work, and health records. Their training needs to take account of their role in COPC, with respect to individual care and community health. Thus, the health recorder will be required to maintain a record system not only for case identification and follow-up, but also for epidemiologic purposes, such as community diagnosis, health surveillance, and program evaluation.

The consultants are of two kinds, those for care of patients and those for the community medicine aspects of the practice. The latter include consultants in epidemiology, biostatistics, medical sociology, and health-related behavior, as well as consultants in planning and implementing specific community programs, such as growth and development, mental health, hypertension, or cancer. Most of these consultants would be more interested and able to function more effectively in the setting of COPC if they had some experience in this field. Thus in the case of epidemiologists, the application of their skills to the relatively small populations involved in COPC, a situation to which they are seldom exposed, may require extra experience. In the case of clinicians, there is need for more knowledge of epidemiology and population medicine.

The community's role in relation to the team needs further mention here. As we have indicated there is a growing movement toward a degree of community participation and involvement in the conduct of community-based health services. Community health workers are often recruited from among the people served by the community health service. There is a movement for communities themselves to elect persons from their own communities as community health workers. These workers then undergo various periods of training. They may become members of the health team, or they may be accountable to the community and as such be seen as the spearhead of community involvement in its health care.

There are at least three important elements in training that emerge from this movement towards community involvement. Firstly, the community health workers require special training to help them perform their roles. Secondly, some members of the health team need training in methods of educating these community health workers, together with experience in formulating the content of the curriculum suited to the needs and wishes of the particular community. Lastly, the community itself needs to be introduced to COPC as a modified way of providing primary health care. This is especially important in countries with long-established modern health services. The present image of the physician is in accord with experience of established practice, and this is different from COPC.

The Preparation of Physicians for COPC

We have been concerned with the training of various professional and nonprofessional groups for COPC, more especially physicians, nurses, social workers, community health workers/health educators, and health recorders. This has involved basic or undergraduate programs as well as postbasic and postgraduate training. In this discussion, we propose to focus on some of the more important aspects of physicians' education for COPC, whether for medical students, residency training for specialization, or limited graduate training.

There are many doctors who have not had training in COPC or its related sciences, whether in the form of systematic courses (lectures, seminars, and exercises) or of clerkships and workshops. Thus, what might be a basic course for such physicians is also a basic course for medical students in a medical school. We will therefore not divide our discussion into various phases of medical experience, student, internship and residency specialization, or other graduate studies, but rather focus on the subject matter and experience, which is in our view essential for COPC. Further, our emphasis will be on those fields that are essential to the fuller development of COPC and not the medical student curriculum as a whole.

Among the course needed to ensure a well-founded community orientation in primary health care are epidemiology and biostatistics, medical sociology, community health education, and health behavior. Practical experience in workshops, clerkships, and residencies in a suitable COPC training center should be a feature of the curriculum.

Epidemiology should include general basic courses: Principles and uses of epidemiology, graded courses in survey methods, and exercises in the use of biostatistics in epidemiologic studies. Special attention should be given to its uses:

- in deciding on priorities for community programs;
- in community diagnosis and health surveillance;
- in evaluation of community programs; and
- in the more immediate clinical situation with consideration of the epidemiologic significance of the findings in a particular patient, in relation to the family and other groups in the community. This might involve more systematic diagnosis of the state of health of small groups, such as family diagnosis and significant changes in life situation.

Biostatistics should include basic courses about statistical inference and descriptive statistics in community health and the use of statistics in epidemiologic investigations of special relevance in COPC.

Medical sociology, which for our purposes includes the social and behavioral sciences, in health care should be offered. Basic courses should embrace sociology, social/cultural anthropology, and social psychology. Their relevance to medicine and public health should be stressed throughout. Elementary courses in economics and political science should similarly be focused on their implications for the health of populations and the organization of health services. Of relevance to health and COPC are more specific studies on community characteristics that would focus on various components of the social system of communities, namely:

- structure and various relational and categorical groupings;
- customary practices, patterns of health-relevant behavior; and
- value-attitudes, belief systems, and framework of health knowledge.

Practical work for physicians in COPC may be organized for medical students or for residents specializing in any of the specialities relevant to primary care practice, such as family medicine, internal medicine, pediatrics, geriatrics, or psychiatry. To ensure a meaningful experience for students or residents in the practice of COPC, the aim should be to provide the following:

- clinical studies in COPC;
- family health care; and
- community health care.

Clinical studies in COPC should include varied case problems, emphasizing common problems of daily practice in a community and ensuring exposure to care of people of different age, sex, and social groups, with acute and chronic diseases, and in different states of physical, mental, and social well-being, illness, or disability. They should also provide continuing relationships with individual patients, and with groups of which these patients are members, more especially their families.

Family health care should involve follow-through of patients' care by further contact with their families, allowing for family health assessment (family diagnosis) and planning family health care. Family health care experience should be so provided as to improve the practitioner's understanding of the family as the most important primary care provider, a key determinant of its members' health, and hence, a focus of attention in maternal and child health, parenting, and care of the aged, with emphasis on nutrition, mental health and social adjustment, and COPC in general.

Within the framework of primary care of individuals and families, practical experience in the community medicine aspects of COPC should proceed. These aspects should include the conduct of community health surveys, epidemiologic investigation of specific health conditions allowing for community health diagnosis, planning community programs for the promotion of health (e.g., growth and development of infants and children), the prevention of disease (e.g., immunization, the control and treatment of hypertension or anemia), and the treatment and care of the sick (e.g., home care of the disabled; control, treatment, and health education of patients and families with tuberculosis, rheumatic heart disease). Students and residents should participate in the planning and implementation of such pro grams in COPC, ensuring the development of skills in community diagnosis, health surveillance, and methods of evaluation of these community programs. They should also be required to initiate and develop at least one program in the course of their practical experience, a program that will be integrated into the COPC practice so that it continues when their period of clerkship or residency training is completed. With the growing appreciation of the importance of community involvement in such programs, their experience in this should include working with community groups in deciding on priorities and in formulating and implementing programs. They should have experience in advocacy and health education in the community and become familiar with agencies in that community.

Training Centers

The teaching objectives of a COPC center require that it be linked with suitable university faculties and schools, such as medical and nursing schools, schools of public health, or other recognized teaching institutions. Over many years the authors have been concerned with the initiation and direction of several such teaching centers in different countries, such as the Institute of Family and Community Health in Durban, linked with the Faculty of Medicine of the University of Natal. This institute was responsible for establishing a network of health centers in rural, urban, and periurban communities of differing socioeconomic groups and races. Differing very markedly from this institute, both in its social setting and size, is the Hadassah Community Health Center in Jerusalem, which is an integral part of the Department of Social Medicine of the School of Public Health and Community Medicine. This school is itself one of the schools of the Faculty of Medicine of the Hebrew University-Hadassah Campus for the Health Sciences. Most recently we have been helping in the development of COPC practicing centers in New York City. Some of these are planned to be part of the teaching campus in community health of the Sophie Davis School of Biomedical Education, City College, CUNY (City University of New York). Others are practicing neighborhood centers of the Residency Training Program in Social Medicine and Family Medicine of the Montefiore Hospital and Medical Center.

While each of these developments has involved health teams, composed of varying groups, they have differed considerably in the nature of the professional groups. Perhaps the most developed in its teaching function is that of the Hebrew University-Hadassah Community Health Center. The number of students of all kinds who pass though the center has been some 200 or more per year during recent years. The amount of time and depth of study has varied from several weeks to full-time block periods of study over several months.

The teaching objectives of the health center are to provide learning experiences in community health care for different students and to develop suitable teaching methods for this purpose. Observations of different aspects of the practice, integrated into workshop-seminars such as the workshop in COPC are conducted at the center for students in the Master of Public Health degree course of the Hebrew University. [44] Active participation and practical experience in the form of clerkships for medical students, nursing students, and physicians specializing in public health and community medicine are also offered. The physicians' residency training program in this setting includes COPC practice over 3 years and the COPC workshop of the masters degree course referred to above.

As in all teaching centers, the most important factor for success in developing a teaching program in COPC is an adequately trained and experienced health team. However, they must be given the support they need to develop fresh approaches to primary medical care practice and teaching. Hospital-based training of the present day is not a suitable foundation for the high-quality community health practitioners required for COPC. New approaches need new forms of practice. New kinds of institutions, such as community-based health centers, group practices, and clinics, need new types of personnel. Schools of medicine, nursing, and public health have a great responsibility for this to happen, but first they need conviction and motivation for COPC.

PROCESSES IN THE DEVELOPMENT OF COPC

In more developed countries the establishment of COPC involves a process of introducing community medicine orientations and methods into ongoing primary health care practices. In less developed countries, and in any community that is poorly served, it is possible to establish a COPC program ab initio. We will focus attention on the process of developing COPC by integrating community orientations into existing primary care practices.[45] The process will be considered in some detail along the following lines:

- preliminary steps;
- community health diagnosis and health surveillance;
- planning of intervention;
- implementation;
- evaluation; and
- decision making for future action.

Preliminary Steps

Traditional primary care practitioners of Western societies, family or village doctors, were renowned for their knowledge about the people they doctored. It was wisdom born of the experience in day-to-day practice and participation in activities of the social world of which they were a part. However, this does not meet the needs of present-day COPC. Helpful as it may be in providing a subjective picture of the community and its main health problems, the systematic development of demographic, social, health, and other relevant data is essential for community medicine in primary care. The information needed concerns the primary care practice itself, the community it serves, and the state of health of the community.

Defining the community included in a particular practice is an important step in the development of COPC in the practice. In some settings the communities are relatively easily defined as in many rural villages, in smaller towns, and even larger cities that have grown to their present size through the incorporation of previously separate villages. Large and crowded inner-city populations offer a considerable challenge to the organization of COPC, more especially in defining the population. Our experience suggests several approaches to this problem. Studies of patient origin often show that geographic proximity of a practice or clinic to the homes of patients is a major determinant of utilization patterns. Beginning with an area immediately adjacent to the practice, an initial defined area (IDA) may be demarcated. The records of all patients using the practice should then clearly indicate whether their household is in the IDA. A body of knowledge is thus built up of the population using the service, or registered to use it in the case of insurance programs such as the HMO's of the United States, Kupat Holim of Israel (Workers' Sick Fund), and doctors lists in the National Health Service of the United Kingdom. As previously mentioned, the registration list may itself be a useful way of defining the population involved in COPC, more especially if it can be related to locality of residence.

We have found it useful to begin with a relatively small defined area (DA) and widen it annually until the total population eligible or likely to use the service is included. The IDA should be related to the census tract in which it is situated, and, as the DA is widened to include more homes, it may be helpful to relate this to census tracts. In this way data available from the census authorities may be used as denominator information for epidemiologic purposes.

Initiating a community program within a primary care practice depends on a number of factors. Clinical impressions of the extent and importance of the problems in the particular population, supported whenever possible by epidemiologic and statistical reports of their prevalence and impact in the region in which the greatest part of the practice population lives, are important at this stage. It is wise to determine the possibility that intervention focused on the community as a whole, or on a particular group, will be acceptable to the community and can be expected to have an effective outcome. And, the feasibility of carrying out a suitable community health program in the framework of the primary care practice needs to be assessed. The planning of programs requires decisions on priorities in the practice, which will be determined by the above considerations and the skills, interests, and motivation of the practitioners concerned. No less important are the interest and involvement of the community.

Community Health Diagnosis

Having decided on the priority of specific disorders, or other health conditions and problems, a more detailed community health diagnosis may proceed. This requires epidemiologic study of the differential distribution of particular health conditions and the factors that determine their distribution For these purposes the record system of a COPC practice should include information on the characteristics of the “denominator” population, i.e., the people eligible to use the practice. Similar information should be available from clinical records of patients, which will provide “numerator” data. The minimal inclusions in the denominator and numerator information systems are sex and date of birth for all individuals in the practice. Other desirable social and demographic data include occupation; education; family, kinship, and ethnic group; religion; social class or socioeconomic status; locality of living; length of stay in the area; and migration.

We have previously reviewed the important role of epidemiology in COPC. Determining a community diagnosis may require training in epidemiology, both formal and in-service, on the part of the primary care physicians, nurses, and other team members. However, this is not always possible. Whatever the reason, the ready use of epidemiologic skills is achieved by only a very few primary care practitioners. This should not deter us from exposing all practitioners of the health team to principles and uses of epidemiology in primary care practice. At the same time at least one epidemiologist should be appointed to function with the primary care health team, or one or more members of the team might be interested in becoming knowledgeable in this field, with special reference to its potential for COPC.

Planning and gathering the data needed for epidemiologic diagnosis is a function of various members of the health team, physicians, nurses, and community health workers. In initiating community health diagnosis in a primary care practice, the data to be gathered should be obtained from patients' records, household surveys, and other programs of the practice, such as on-site school health services and senior citizens clubs. Definitions and methods of data collection and recording should be standardized, to ensure comparability in the appraisal of change in a specific individual or in groups and in the comparison of different individuals or groups.

The process of community diagnosis may be concerned with a broad spectrum, e.g., a community health syndrome involving a number of disorders and their causal factors and effects, or it may be narrowed down to a very specific problem. It may include the identification of high-risk groups or other groups who require special care.

Community diagnosis is a continuing process, along with planning, decision making, and implementation of intervention programs. As the state of health of a community changes, so do the determinants of these changes, hence the community diagnosis changes. This requires ongoing health surveillance in the community, and in fact what has happened in various COPC practices with which we have been involved is that the early community diagnosis of particular health conditions will be followed by built-in routines in the practice allowing for health surveillance of these conditions and their determinants.

Planning of Intervention

The formulation of a plan for a community program in the framework of primary health care will thus be based on knowledge gathered through the preliminary steps and community diagnosis that have been outlined. In addition, answers to the following questions must be obtained.

1. What is already being done about the health condition (or other defined problem)

- by health and other services, more especially by the primary care practice itself? and
- by the community itself?

2. What can be done within the framework of primary health care, in the light of current knowledge and practical constraints? More specifically, what are the resources of the health team for initiating and carrying out a community program?

A case for intervention exists when a problem is considered to be of sufficient importance to warrant action, taking account of competing problems, and there is reason to believe that intervention is feasible and likely to be effective. The planning process includes decisions on general and specific goals, subgoals, and their relative practicability and priorities. It thus involves consideration of alternative strategies, their feasibility and likely outcomes, decision on procedures, sequence, and timing, allocation of resources, roles of health team members, and design of records.

Lastly, it includes the planning of systems for monitoring progress of the program, to answer such questions as “Are we doing what we said we would do?” and “Is the community responding in the ways hoped for?”, as well as systems for the surveillance of changes in community health and the factors determining its health, and formulation of the criteria and methods by which the program will be evaluated.

Implementation

The ways in which the planned program may be implemented include treatment and counselling of individuals, community health education, and community organization, with special emphasis on community involvement in the promotion of its own health. The activities may be of various kinds:

- clinical and individual health care in office practice and home calls;
- laboratory and other special investigations;
- household visits and other group situations for household surveys, health education, and stimulation of family and community interest and involvement;
- initiating and maintaining interagency functioning promotive of the community health programs;
- use of health recording procedures suitable for community analysis, as well as for individual care.

There should be built-in procedures for the surveillance of changes in health status and in determinants of health, and for monitoring the activities of the health team and of members of the community, including their utilization of services and their compliance with advice.

Evaluation

Evaluation may be based on measures of outcome, including both desirable and undesirable changes in health status and in factors that may affect it, and on measures of the care provided, including the extent to which planned activities were performed and the quality of the performance. The program may also be evaluated by measurement of community response, the community's satisfaction, and in terms of economic efficiency.

The COPC practice as a whole may be evaluated or specified aspects of it may be appraised, such as the immunization of infants and children, a program for the control of anemia or hypertension, screening for case-finding of a particular condition, or an antismoking campaign in the practice.

Evaluative studies of health programs may be classified as program reviews and program trials.[46] These are characterized by differences in their aims and methods. The aim of a program review, like that of clinical epidemiology, is to provide information that will contribute to the health and welfare of the community or population served by the program. It is performed in order to provide a basis for decisions on changes and on the continuance of the program, in the same way as a clinician repeatedly reviews treatment of a specific patient in order to decide whether to continue, stop, or make changes. All health programs should be submitted to this kind of review. The review is usually based mainly on information on the performance of planned activities, on the achievement of easily measurable shortterm outcomes, and on the occurrence of any obvious undesirable effects.

A program trial, on the other hand, is designed to yield generalizable conclusions concerning the value of a program of the kind under evaluation. For this purpose it is not enough to show improvement in the health of the population, but there must be evidence that this or other favorable outcomes can be ascribed to the program rather than to other influences. This requires the use of methods as rigorous as those used in clinical trials, such as the use of control groups and other procedures aimed at eliminating or measuring the influence of confounding factors. Program trials are essential, especially for a new form of practice like COPC. They require very careful planning and meticulous measurement and usually necessitate procedures that go beyond those that might normally be undertaken in the practice.

Decision Making for Future Action

The process now comes full circle. Following surveillance and evaluation the situation is reappraised and new decisions are made for continuation or modification of various elements of the program. Modifications may be introduced at various stages of the program in the light of advances in relevant medical knowledge, methods of changing behavior, and as a result of the surveillance carried out as an integral part of the program.

Evaluation of the program as a whole, more especially its effectiveness, offers periodic opportunities for review and modification, or in some cases discontinuing the program. The further development of COPC requires that it be researched as a fresh and exciting approach to an important area of medical and health care.

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The Meaning of Community Oriented Primary Care in the American Context

H. Jack Geiger

Any attempt to examine the concept of community oriented primary care (COPC) and consider its implications for health care in the United States is, for me, a retrospective as well as a prospective exercise, one that recalls powerfully imprinting past experiences and invokes strongly held hopes for the future. At the outset, therefore, I believe I should identify those experiences and, to the extent that I can, the biases they produced.

During my senior year in medical school, in what proved to be the central experience of my undergraduate medical education, I worked and studied for 6 months with Professors Kark, Abramson, and their colleagues in South Africa at the Polela Health Center, serving a rural Zulu tribal reserve, and the Lamontville Health Center, serving an extraordinarily diverse peri-urban, African and Asian population near Durban.[1] That experience led definitively, if circuitously, to my own attempts at an approximation of community oriented primary care in rural Mound Bayou, Mississippi, and urban Columbia Point, Boston—efforts in which Dr. Kark, Dr. John Casel, and other veterans of the South African endeavors served as occasional consultants. More recently, Dr. Kark spent 18 months as a visiting professor at the School of Biomedical Education at City College, assisting in attempts to initiate practices of community oriented primary care—as he now defines them—in Harlem, the North Bronx, and Chinatown.

Although almost 25 years have passed, my memories of Polela and Lamontville are vivid. The health center's task was the provision of community oriented primary care, though it did not yet have that name, and a student's work consisted of the elements of COPC, continuing a tradition that extended back to the community orientation of the Peckham Health Center[2] and the descriptive epidemiology of William Pickles[3] in England, and to the development of rural and urban health centers of the Peking Union Medical College by John Grant in China.[4] The walls of the examining, consulting, and conference rooms at Polela and Lamontville were lined with charts and graphs of community demography, infant mortality rates, other mortality and morbidity rates, and their changes over time. It was almost impossible not to be aware of denominators when seeing an individual patient. The influence of culture, social structure, and environment on health status—and health services—was all the more apparent because all three were, to non-African eyes, exotic. Finally, and most fortunately, I did not learn about community organization and health education as didactic subjects. Instead, I had the opportunity to acquire my sense of community structure and function by seeing patients in the community —in their homes, in schools, in clusters of huts on rural hilltops, at the practices of traditional healers—and by working with indigenous community organizers and educators.

Obviously, this experience made me an enthusiast, though I hope not an uncritical advocate. The later work at Mound Bayou and Columbia Point tempered that enthusiasm with an awareness of the difficulty of swimming upstream against the main current of medical care in the United States. And the recent experiences in New York—working with health centers that have a constantly shifting constituency, in ill-defined communities, in a wildly irrational "marketplace" of personal health services—have convinced me that community oriented primary care projects in the United States should be attempted, in the near term, primarily in rigorously defined settings that might permit rational growth and evaluation. As I will indicate, I believe there are more than enough such opportunities.

DEFINITIONS: THE IDEOLOGY OF COMMUNITY MEDICINE

In all this, I have not yet defined community oriented primary care or examined the definition offered by Drs. Kark and Abramson in their companion paper. To do that, I think we must first examine some of the problems in our definitions of community medicine itself. All of us in the field claim to be practicing community medicine, yet some of us assert it is a clinical discipline, while others tend to limit it to administrative and management sciences, policy studies, or epidemiology and behavioral science.[5] Some see it as consultative to primary care; others insist it must be immersed in primary care and point to the community health center developments of the last two decades as complete examples of community medicine and even of COPC. Still others, interested in COPC as an expansion and clarification of the scope of community medicine, would argue that most of the community medicine efforts of the 1960s illuminated the concept of COPC but did not truly become full-scale community oriented primary care practices. In this view, interest in COPC is not simply nostalgia for the community medicine efforts of the 1960s, and bringing such practices fully into being with the 1980s and 1990s will require us to do a great deal more (and some things differently) than we did then.

I believe this ongoing argument over definitions is important, because it reflects something deeper: a long-standing and profound gap between the theoretical discussions and the working practices of community medicine. At its most general level, it is a separation between ideology, methodology, and clinical practice.

By “ideology” in this context I mean simply the coherent set of principles or beliefs with which we approach a field of work—principles or beliefs that determine the questions we ask, the data we collect, the analyses we make, and the interventions we attempt. The “ideology” of community medicine includes beliefs that are widely acknowledged—but then studiously ignored—in traditional “scientific” medicine. We believe that the biological, social, and physical environments are among the most powerful determinants of health and illness for populations and their individual members. We insist that in practice every individual patient must be seen and understood also as a member of multiple groups and populations; families, age cohorts, occupational groups, social classes, racial and ethnic groups, geographic clusters, and the like. We know that different populations experience different environments (or experience similar environments differently, or manifest different behaviors) and are therefore differently at risk of disease. We believe these distributions of risks (or, conversely, of health, or strengths, or resources) call for multiple strategies of intervention. We care about the management of the individual patient, but we also assess patients as numerators, drawn from that local universe of denominators, the community, which requires us to combine curative with preventive or anticipatory medicine and individual with environmental (or even social and political) change.

Of course, these are the traditional beliefs of “public health”—that is, of concern for the health status of whole groups, communities, or populations, and not just the patients among them. It is the merger of these public health concerns with the clinical practice of medicine, and their application to the defined and socially coherent groupings we call communities, that creates the discipline of community medicine.

By “methodology” I mean in particular the application to organized clinical practice of the methods of epidemiology and the behavioral sciences, particularly sociology, social psychology, and anthropology. By “clinical practice” I refer particularly to primary care, provided in organized health care delivery settings—the kind of medicine least likely to be indifferent to the causes of disease, bored with prevention, excessively focused on pathophysiologic processes, and preoccupied with the details and refinements of technological intervention.

Community oriented primary care (COPC) is an attempt, not merely in the abstract but in the performance of a practice of medicine, to end that separation between the ideology of community medicine, the methods of epidemiology and social science, and the provision of primary care clinical services to communities.

But this is precisely the claim that has been made repeatedly during the last two decades by one practice or another of community medicine. More often that not, these practices approached, rather than fully realized, a definition of community medicine. Though they had one or more of its essential characteristics, calling them "community medicine practices" confused the part with the whole.

SIX FALLACIES IN SEARCH OF A DEFINITION

This confusion has been so widespread and persistent that it is possible, by now, to identify a whole series of fallacies or errors in the working definitions of community medicine practice. Each one has interfered with the development of a shared understanding of the nature of the field. It is important to review them before examining the operational meaning of something even more specific: community oriented primary care.

The Geographic Fallacy

This confuses the practice of medicine *in* a community with a practice of community medicine. It fails to distinguish between passive community facilities that serve an area simply by virtue of their location (a subway stop, for example, or an emergency room) and active community programs that are based on a partnership with a defined community, a mutual definition of needs and programs, and shared goals. One of its variants might be called the "underserved area fallacy." This assumes that projects serving low-income or urban minority populations must, by virtue of that characteristic alone, be practicing community medicine, and it has resulted in such peculiarly meaningless terms as "ghetto medicine."

The Demographic Fallacy

This assumes that the collection or recitation of denominators and population descriptors—census data, vital statistics, morbidity and mortality figures, geographic mapping of patient origins—means that this information is actually being used in a practice and that the practice is therfore targeted effectively at the population or area so described. But in fact, compiling data of this sort is often simply a requirement of grant applications, certificate of need clearances, or local health planning agency approval, and neither the grantor nor the grantees ever look at them again. The same is often true of data on other medical care resources in a target area, of information on utilization, of economic and environmental descriptions, and of other elements of community diagnosis.

A more explicit and troublesome variant of this fallacy, in my view, is the contention that “the community to which COPC is oriented need not be a true community in the sociological sense; it may be the people who live in a defined neighborhood, the list of patients registered with a provider of care, the children in a school, or the workers in a factory,” or “all members of a local union or a mere collectivity of the practice's clients.”

These are useful and important aggregates. They are denominators of a special kind, and looking at them immediately carries a practice beyond the one-by-one examination of patients to an epidemiologic framework and an approach to rates. They may be important for such areas as occupational medicine, maternal and child health, health program planning, or quality-of-care audits. They make more sense when a provider has access to a whole community and wants to look at a part, with that larger denominator always in mind.

But, with the possible exception of “defined neighborhood,” these aggregates are not communities, as either health workers or the members of communities themselves understand that term. A practice that carries out such analyses may increase its effectiveness and efficiency, identify unsuspected problems, and review what it is doing about them, but that does not, per se, make it a practice of community medicine or community oriented primary care. It is this willingness to use the word “community” as a catch-all that has made it the battered child of the literature in social and community medicine, more often abused than respected.

The Organizational Fallacy

This assumes that organized settings of primary care delivery—especially the existence of multidisciplinary health teams, outreach workers, and community health workers drawn from the local population—indicate that COPC is happening. The assumption is more likely to be made if the provider's resources also include a management information system for the analysis of utilization, diagnostic and reimbursement data, or a mechanism for bud geting or health program planning. These are necessary but not sufficient elements in the achievement of COPC. They are present in many programs that do not, or cannot, assume responsibility for the health of a total community or neighborhood.

The Community Orientation/Awareness Fallacy

This is the most difficult to discuss, for I do not mean to suggest that orientation to the community as well as to the individual, or awareness of a community's characteristics, are fallacious. They are among the most important elements in a practice of community medicine; everything else is built around them. They are the central attributes of the new kinds of physicians (and other health workers), defining their professionalism in new ways, that will be needed, together with profound changes in the structure of the health care delivery system, if community oriented primary care is to be achieved as the dominant mode of health service delivery.

Community orientation and awareness require systematic knowledge of the cultural, subcultural, and socioeconomic characteristics of communities and their members—but almost everyone knows, in a general way, whether the community is urban or suburban or rural, middle-class or working-class, transitional or stable, ethnically distinct or polyglot. What is important is systematic use of that information in exploring the health status of populations or delivering health services to individuals: information on family structures, community customs and mores, health belief systems, social networks, definitions of deviance, and systems of help. And also information on aspects of the micro-and macroenvironments: housing, water, sanitation, food, air quality, toxic hazards, and other risk factors.

It is community orientation, the process of continually “looking at” or “keeping in mind” the community, that leads to the formulation of health status goals and plans of action for a community as well as for individuals. A community oriented practice almost by definition must know what's going on in its community, epidemiologically as well as socially and in terms of strengths and resources as well as pathology.

The fallacy lies in the belief that community orientation and awareness are all or most of what is needed to achieve good community medicine. Community oriented primary care is not just an attitude one holds; it is something one does, a set of actions taken regularly and systematically as part of a strategy for changing the health status of a whole population. If for any reason these actions cannot be taken consistently, orientation and awareness themselves will not suffice to accomplish change.

Nowhere is this more evident than in the experience of many highly motivated physicians who worked in community health centers, Indian Health Service projects, migrant health centers, or the National Health Service Corps. They wanted to do more than respond to the complaints of individual patients suffering from disease; they sought to conserve health in populations as well as restore it in sick individuals. In Julian Tudor Hart's striking phrase, they wanted to move decisively away from the entrepreneurial physician's role as a “medical shopkeeper,” passively responding to customers, treating the sick and discarding the apparently healthy.[6] They hoped, instead, to exploit the possibilities latent in everyday practice for the development of community health strategies—not just patient care plans—longer in time and broader in scope. They came to their work committed to community involvement, to “public health” interventions, and even to social and political activism in relation to health.

Further, in choosing community-based care they had freed themselves of the medical establishment's pre-Copernican view of the health care system, which places the hospital at the center and regards the community (and its primary care providers) as the satellites. This is a view expressed powerfully in our professional language: When patients are *in* their communities, their jobs, and their families, we call them *out*patients, and, when they are *out* of all these settings, we call them *in*patients.

But what resulted, in all too many cases, was frustration and burn-out. Despite occasional forays beyond the confines of their offices, they were often overwhelmed by the continual burden of acute illness care, the revolving door they had hoped to escape, and they could not get beyond the presenting symptom in the sick to the risk factor in the population at large. In recent years, furthermore, if teams existed they were often cut back; if epidemiologic information was available at the outset, it was rarely maintained, updated, or used in their work. They discovered, to quote Hart again, that:

> Anticipatory care is generally available in inverse proportion to the pressure of symptom-demand, and since prevention is most needed where contingencies are most frequent, no serious preventive service is ever able to develop. In the absence of planned care, salvage inevitably takes priority over maintenance. Health services evolving spontaneously in directions determined by the conflicting demands of clinicians, each claiming a share of shrinking or stagnant resources, inevitably favor hospital-based salvage, mainly concentrated on acute or what eventually proves terminal illness, rather than on simpler, cheaper care of less advanced disease outside hospital.[6]

This process, in many programs, was reflected in inexorable pressure to increase “productivity”—that is, to see ever-higher volumes of patients for reimbursable acute curative care in shorter periods of time—and by cutbacks in the nonreimbursed services that are essential to a community oriented program: outreach, epidemiologic study, risk factor surveillance, community organization, and health education.

The basic problems faced by these physicians (and other health workers) in practicing community oriented primary care were not those described by Mullan,[7] or reported earlier by Geiger,[8] Gordon,[9] and others in discussion of community conflict. They were, rather, the absence or insufficiency of the other elements of COPC, particularly the community-based epidemiology.

The Community Involvement Fallacy

In the United States, the usual meaning of "community involvement" and "accountability" is a community board, either advisory or with real budgetary and programmatic control, and a staff drawn in part from local community residents. But these are very different than a full-fledged ongoing process of community organization and health education, and they do not in themselves unleash the strengths latent in almost every community and create "the vigor possible when a community is mobilized for an agreed social objective."[6] That vigor and intensity of effort were often expressed when new health facilities or programs were sought for a community, but it frequently proved difficult to maintain them once programs were in operation and access to acute care was established. In recent years, there has been growing recognition that the first locus of primary care decisions is not in health services at all, but in families, social networks, and basic community institutions such as the church. The task can be redefined: It is not simply to involve the community in the programs of a community oriented practice, but rather to involve the practice in basic processes and structures within a community. (Community medicine practices have been guilty of their own pre-Copernican views.) This is the real significance of the development of organized lay referral networks, the training of "health facilitators," and the systematic enlistment of churches and other community-based institutions in health education and case-finding. [10] They have the potential to create "agreed social objectives" in relation to health in specific communities.

The Epidemiologic Fallacy

In a modest number of organized settings of primary care delivery, careful and solid epidemiologic studies have been conducted, usually with special research funding. The participant sites in the national Hypertension Detection and Follow-up Program are good examples.[11] A few health centers have managed to complete annual or biennial household-by-household census listings of their communities and to use them for specific disease or risk-factor studies. Others have used vital statistics from traditional sources to plan their programs. Some are located in geographic areas that were selected for epidemiologic investigation by health departments or academic centers, and a few have active affiliations with such centers.

The mere existence of epidemiologic projects does not necessarily mean, however, that the primary care practices themselves—the routines of office practice, the work of health care teams, or data from outreach workers—are collected in standardized ways according to a common protocol and added in as contributions to epidemiologic investigation. Neither does it necessarily mean that the results of population-based studies are systematically reflected either in the programs of practitioners or in the work of community organizers and health educators. Epidemiology does not always reflect community involvement. Even where the will exists, barriers may be created by the pressures of acute care, limitations of funding, academic versus practitioner conflicts, or problems of the confidentiality of medical records.

I have described these fallacies or imprecisions of definition at such length not to denigrate the activities they represent, each of which, by itself, is a substantial component of clinical community medicine in practice. Neither do I intend to set so rigorous a standard that we will be forced to conclude that “true” community oriented primary care does not now exist anywhere and is impossible of achievement. My purpose is to emphasize that if we are serious about COPC we cannot settle for less than all its essential components, linked by specific techniques as described by Kark,[12] Bennett,[13] and others. It would be as dangerous to the development of COPC as it has been, on occasion, to the general understanding of “community medicine” if we are overgenerous in defining it.

CRITERIA FOR COMMUNITY ORIENTED PRIMARY CARE

With these fallacies in mind, let us turn to the recent definitions of COPC Kark has defined it as a clinical practice that brings together those aspects of personal health care and of community medicine that are suitable for application in primary care. Some basic features include:

- complementary use of epidemiologic and clinical skills;
- a defined population;
- programs designed to deal with the health problems of the community or its subgroups in the primary care framework;

- community involvement in both governance and implementation of the practice;
- geographic, fiscal, and cultural accessibility; and
- integration of curative, rehabilitative, preventive, and promotive health care.

Madison and Shenkin emphasize the orientation/awareness dimension in their definition of a “community-responsive” practice as:

> … one which assumes a larger than ordinary share of responsibility for safeguarding the health of the community, and which follows through on this responsibility of taking action beyond the traditional mold of treating the complaints and problems of patients as they approach the practice one-by-one. Such action must start from the consciousness of community—the notion that there exists some denominator of people from which come those who present at the practice seeking care. The community with which the practice is concerned may be socially defined (e.g., a country, a town, a neighborhood, all members of a local union, all migrant agricultural workers and their families within a two-country area) or it may be a mere collectivity of the practice's clients whether or not they emerge as a social grouping. In either case this consciousness of community together with the awareness of its general health status and some of the problems that affect it is what allows the practice to formally plan activities aimed at designated target populations (e.g., prenatal care, health education programs, nutrition counselling, the care of groups of people at specific risk or sharing a common affliction.[14]

At first glance, these definitions seem strikingly familiar. There is little new about calls for epidemiologic investigation, for the incorporation of behavioral science knowledge into clinical practice, or about the idea of community-as-laboratory. The initial proposals for neighborhood health centers, among many examples, spoke explicitly of defined populations, epidemiologic surveillance, and the merger of “public health” concerns with those of patient-centered clinical practice. They cited demographic data as denominators, used indicators of health status to characterize entire populations, and clearly were based on a consciousness of community. They were comprehensive in their definitions of health care, proposed the use of multidisciplinary health teams, stressed involvement of the community, and emphasized the removal of geographic, financial, and other barriers to access.

Similarly, epidemiologic investigations of discrete communities have become almost commonplace in the United States. The classic Tecumseh [15] and Framingham[16] studies are only the most familiar of many examples. Some of these investigations have originated in health centers—the East Boston studies of chronic lung disease,[17] the Rochester studies of pediatric illness,[18] the Baltimore studies of streptococcal infection[19]—and have been community-based rather than limited to populations of health center users alone.

The recruitment and training of community members as outreach workers has characterized many epidemiologic and primary care projects for at least two decades in the United States, three decades in the United Kingdom (for example, Cochrane's studies of the pneumoconioses in the Welsh mining valleys in the early 1950s), and for still longer at some health centers in developing nations.

Is COPC, then, merely a repetition of these projects, a return to the 1950s and 1960s after all? I think not. What, then, is new about these definitions of COPC? I suggest that it is the *synthesis,* the assembly of these familar components into an ongoing whole and *the insistence that all these elements of community orientation, demographic study, epidemiologic investigation, personal medical services, environmental intervention, community organization, and health education be performed by the same practice or team,* or at least by a small number of practices and health agencies *working as a single system* (not just “coordinated”). It is not just having all the parts, but closing the loop that links them. It is this synthesis that would permit the conduct of a daily primary care practice to become part of an epidemiologic investigation, or permit epidemiologic data to be used as the basis for the addition of specific new routines to office practice, to community outreach, or to health education.

Community oriented primary care, then, is an approach to medical practice that undertakes responsibility for the health of a defined population, by combining epidemiologic study and social intervention with the clinical care of individual patients, so that the primary care practice itself becomes a community medicine program. Both the individual patient and the community or population are the focus of diagnosis, treatment, and ongoing surveillance. In COPC as in conventional primary care, for example, the goal for an individual hypertensive patient is detection, reduction of elevated blood pressure, and ongoing control; but, in a community oriented primary care practice, there is a further goal of determining the distribution of blood pressures in the population served (or potentially served) and intervening to shift the curve of that entire distribution to the left. In addition to the stock of biomedical knowledge, which is the core of every clinical practice, this requires the incorporation of at least two additional bodies of knowledge and their pragmatic application in practice: epidemiologic science and behavioral science. The former is necessary for community diagnosis, problem definition, and a strategy of intervention. The latter is necessary to foster community participation in diagnosis and problem definition and to accomplish changes in community knowledge, attitudes and behaviors, and medical care utilization.

The lack of this functional synthesis in practice has meant, over and over again, that the potential contribution of one or another of the components of a community oriented practice goes to waste because the feedback loop fails to close. Repeated and extensive epidemiologic studies described the changing nature of childhood illness in Rochester, but, as Pless and Pekeles[20] discovered, that did not make any discernible difference in the actual performance or practice orientation of Rochester pediatricians. Epidemiologists at a health center may study the distribution of respiratory illness in a community in relation to environmental factors in the homes, but that in itself does not assure that there will be a systematic effort on the part of the health center's primary care teams to inquire about those risk factors, nor does it necessarily lead to organized feedback of information to the community itself in an effort to reduce or eliminate those at risk. A city health department may conduct an elegant study of the distribution of teenage pregnancies or low-birth-weight infants in a large poverty area; a hospital or health center in that area may use the data in organizing its outreach, family planning, prenatal care, and pediatric services. But that is not the same as a structured, reliable process of planned intervention by all of the area's primary care practitioners. It does not mean that protocols of definition, reporting, and treatment will be followed, that continuing surveillance will occur, or that evaluation and modification of existing programs will be possible.

In hypertension control, several studies of primary care practices have shown that only about 50 percent of men in their forties had their blood pressures recorded even once over a 10-year period.[21] An audit of the care of known diabetics in 38 primary care practices found that 52 percent were not getting supervision from any source, and 40 percent had had no retinal examinations during the previous 2 years, let alone the hours of teaching necessary for the education of patients in the nature of their disease.[22] Similar results were found in samples of patients with epilepsy and with lower respiratory tract disease. Until recently, community-based studies in the United States showed that half of those with blood pressures in the range mandatory for treatment were not known, half of those known were not treated, and half of those treated were not controlled. In hypertension, at least, we now know that when the care of identified patients is referred to individual practitioners in an uncoordinated system, there is a real and measurable cost in preventable mortality.

These gaps and failures are not caused solely by incompetence, or by willful refusal to care about community health. If we are to be more than merely hortatory, we must recognize that they are also the direct result of our definitions of medical professionalism—the roles and tasks that doctors define as their work—and of the organization, structure, and financing of the health care system in the United States.

COPC AND THE UNITED STATES SYSTEM: A PROBLEM LIST

There is a major difficulty, for us, with these definitions of COPC. They are inconsistent with the political economy of mainstream American medical care. They are written in other voices, describing other rooms in the house of medicine. We do not have regionalization of primary care, with registered patients and clearly defined populations eligible to use a specific practice, and there is no way for a single practice to “accept responsibility for the health of a community,” in most instances, even if it wanted to. We have multiple competing providers, selling personal health services to individuals or small groups, not communities. These diverse providers—private practitioners, hospital-based or free-standing medical groups, hospital-based out-patient units and emergency rooms, community health centers and the occasional health maintenance organization—are linked loosely, if at all, through referral mechanisms, but not for purposes of data-sharing, program development, surveillance, or risk-factor reduction. The reimbursement system offers almost no incentive for cooperation, but many for competition. Reimbursement is overwhelmingly for acute episodic curative care rather than for preventive or health-promotive services, let alone for epidemiologic and demographic studies, household surveys, outreach efforts, community organization, or health education.

Most American communities are not anyone's defined population for medical care. Most American consumers of medical care—the term itself reflects the structure of the system—do not regard themselves as part of anyone's defined population. For most people, a sense of belonging to a community does not extend to the process of seeking medical care; there is no perception of shared risks, problems, or goals, except in the face of major environmental hazards or a widespread lack of access to care for geographic or financial reasons, or because of health manpower shortages.

A single family may regularly consult a pediatrician, an internist, and one or two subspecialists, unconnected with each other and located outside the immediate community. In urban areas, a single city block may house a thousand such families, using several thousand physicians and a dozen hospitals among them. Outreach efforts and household surveys may be seen by such families as an aggressive intrusion and an invasion of privacy; they have not decided to be part of any practice's community program.

And the clientele of any one practice may be drawn from a dozen areas, different neighborhoods and communities, and be as diverse as any clientele of marketplace shoppers. Information on the diagnoses, risk-factor distributions, or medical care utilization of such a clientele, even if a practice cared to calculate and analyze them, would refer to no recognizable com munity denominator and yield no community-based rates. By provider and consumer alike, medical care is seen in the main as a commodity, not as an intervention in the health status of a community. This is as true of groups and organized primary care providers as it is of solo practitioners. In implicit recognition of the political economy of health care, the approach by such groups to the "community" tends not to consider states of health or needed interventions, but is couched instead in terms of targeted marketing, market potential, and market penetration.

A further barrier to the development of COPC is the extraordinary mobility of American populations. U.S. census studies show that between 1975 and 1976, 40 percent of the population moved at least once: 72 percent of those 25 to 29 years of age, 63 percent of those 20 to 24, 60 percent of children 1 to 4 years old, 51 percent of children aged 5 to 9, 21 percent of noninstitutionalized adults aged 55 to 64, and 18 percent of those aged 65 to 74.[23] These data, if anything, understate mobility, since they count the number of people who have moved, not the number of moves. The epidemiologic studies necessary for effective COPC are much more difficult when the denominators are in constant flux.

Something more is involved here, however, than the organization and financing of care. For three decades, the British have had a system more rational than ours: a national health service, capitation payment of physicians rather than reward for redundant and expensive procedures, a crude kind of regionalization, relatively stable practitioner lists with small turnover rates, and the removal of financial barriers to access. As in the United States, there has been an increase in utilization of physician services by the poor, to approximate or even exceed utilization by the more affluent (though not when controlled for state of health; the sicker poor are now only seeing physicians at the same rate as the healthier wealthier). Yet the problems of health manpower shortages in the inner cities of Great Britain, and the difficulties of relating primary care practices to the needs of low-income areas, are strikingly similar to those in the United States.

What is more, a recent study of inequalities in health status in the United Kingdom showed a pattern of persistent and sometimes widening differences in mortality between the social classes.[24] The study notes that "despite the creation and the influence of the National Health Service, the health of those in the lower social classes has improved much more slowly than the health of the more affluent." The "lack of improvement and in some respects deterioration" of working class health has been striking over the last 20 years, particularly with regard to the long-term effects of inadequately treated childhood disease; the greatest social class differences are in preventive services and child health. If the mortality rates of the wealthy had obtained among the poor, 74,000 lives of people under 75 would not have been lost during 1970–1972. This estimate includes nearly 10,000 children and 32,000 men aged 15 to 64.

It would be easy to interpret these data simply as supporting that radical critique of scientific medicine that argues that medical care itself can have little or no effect on the incidence and prevelance of disease in populations and that the power of the social, physical, and biological environments is all-determining. But as Hart has argued, [6] the likelier explanation is that scientific medicine—in its fullest sense of anticipatory care and planned efforts at risk reduction—has not been applied to whole populations, because the current organization of medical care does not support such efforts and physicians are uninterested. So long as the practitioner remains in the shopkeeper role, focused on episodic curative activities, the outcomes are not very different: Increased curative medical activity in the United States generates profits and in Britain generates taxes, but in neither case does health status improve. A measureable contribution of clinical practice to improvement in the health status of populations can hardly be expected until there is real regionalization, reward for preventive services, a merger of “public health” and clinical medicine concerns, more community medicine training of physicians and other health workers, and the provision of outreach and epidemiologic resources to practitioners.

Thus, for the long run, the widespread implementation of COPC in the American house of medicine will require transformations both in the structure of the system and the orientation of its work. Some would suggest then that rigorously defined COPC must await the evolution of a fully regionalized, totally accessible, preventively oriented noncommodity health care system. Instead I wish to focus our attention on something less than that millennium. What do we do until the evolution comes?

STARTING WHERE WE ARE, WITH THE PEOPLE AND PROGRAMS WE HAVE

If we list the existing models of COPC that meet most of the Kark and Abramson criteria, attempt to close the loop between community-based epidemiologic investigation and the interventions of providers, and include all the components of clinical community medicine practice, we discover that they share a number of characteristics. Most of them are overseas. Almost all of them exist in systems of medical care that provide wide access to care and remove fiscal barriers, rather than in entrepreneurial market-place systems. Even where this is not so, whether in Western industrialized nations or developing countries, they serve clearly defined communities in the true social sense of that term, and they are usually the major (if not the only) source of primary care for those communities. Both the populations and the providers—the staffs—are relatively stable, with low turnover. Most of these COPC practice models are linked to an outside source of expertise and have additional special funding for epidemiologic and behavioral science study of their communities: an academic department of a medical or public health school, a health department, an epidemiology research unit, a medical research council.

It follows that these are the settings and characteristics we should look for first, even if we cannot duplicate all of them, in selecting opportunities for the further development of our own versions of COPC in the United States. I say “further development” even though I have argued that we have few if any existing American community practices that meet the definitional criteria for COPC (unless we are to revert to fallacious or partial definitions). Rigor need not induce nihilism; we already have many practices that presently have some or many of the elements of COPC—practices that, despite the difficulties and limitations imposed by our medical care system, are already partway there. A substantial number of them are in the kinds of settings that might permit the rational further development and evaluation of COPC. We have reason to believe that they are already effective in terms both of cost control and of impact on health status in their communities. As I hope to show subsequently, we now have evidence that even a partial shift toward organized, community-based care and a preventive/anticipatory orientation—a change of structure and a change of heart—can have highly significant effects on health outcomes. The reports of the National Health Service Corps and the Rural Practice Project—to name just two—are alive with evidence that there are many health workers, in many programs, struggling to develop community oriented practices. It makes sense, then, to start where we are, with the people and programs we have, in furthering the development of COPC.

Some of these practices with the best potential for COPC are publicly funded; others are in the private sector. A disproportionate number are in underserved areas that have proved unprofitable for medical entrepreneurs. Where they are urban, those with the best potential serve well-defined communities that are relatively homogenous and tend to be socially or geographically isolated. In rural or small-town settings, some are the only providers of care. They include community health centers, singly or in networks; urban and rural health initiative projects; migrant health centers; rural and small-city group practices; and community hospital-based primary care practices.

Since community health centers are the most numerous and the best-studied of these (indeed, they are by now a distinct, if small, part of the total U.S. health care system), we should look briefly at their history and development, their achievements and failures, with a special focus on three questions. To what extent did they achieve COPC? What accounts for their success or failure in this respect? What would be necessary to change or add now to further the process?

Community Health Centers and COPC: History and Impact

It is hardly surprising that the initial community health center suggestions were written in the language of COPC, for as I indicated at the outset they were derived directly from COPC models overseas. [25] At the same time, they were extensions and reformulations of either proposals in the United States, dating back at least to the recommendations of the Committee on the Costs of Medical Care in 1932, and they stood on the shoulders of traditional public health clinics and such special ventures as the Navajo-Many Farms project.[26]

The first health center proposal to the Office of Economic Opportunity [27] stated that its purpose was "to intervene … in the cycle of extreme poverty, ill health, unemployment and illiteracy by providing comprehensive health services, based in multidisciplinary community health centers, oriented toward maximum participation of each community in meeting its own health needs and in social and economic changes related to health."

The proposed health services were to "include preventive, curative and health education programs in new patterns of medical care organization." They were to "emphasize the formation of community health association … to stimulate change in family and community knowledge and behavior relating to the prevention of disease, the informed use of available health resources, and the improvement of environmental, economic and educational factors related to health."

Community health action was also defined as including "the training of local personnel" and "the conduct of both descriptive and analytic research on health levels and needs … and evaluation studies." The proposal was based on the premise that:

> Conventional approaches to health improvement … that deal only with narrow definitions of health and illness are unlikely to make major changes. The need is not merely for the provision of more preventive and curative health services, but also for the development of new organizational patterns to make the distribution of such services uniquely effective…. The need is not for the distribution of services to passive recipients, but for the active involvement of local populations in ways which will change their knowledge, attitudes and motivation. The central focus is … community-based health improvement.

All of the first wave of health centers (in Boston, Mississippi, Chicago, Los Angeles, Denver, and New York) shared this orientation. They proposed to have defined communities, to focus on the community as a whole from a base in the community. They planned to use epidemiologic skills in community diagnosis and surveillance, to provide comprehensive curative and preventive care, to remove barriers to access, to foster active community involvement, to define health care broadly, and to form health teams.

Now, some 17 years later, there are 872 such centers, serving some 4.2 million people; of these, according to a 1976 survey,[28] 71 percent were poor, 80 percent were minority, 49 percent had no employed family member, and 41 percent were under 18—in sum, the population that has the highest health risks; the greatest burden of illness, disability, and preventable death; the least access to primary care; and the highest rates of hospitalization. Efforts to describe and evaluate community health centers now constitute a substantial body of studies.

These studies show that, for their client populations, community health centers bring dramatically increased access to primary care, and in some instances utilization by a large proportion of their target populations. At the Bunker Hill Health Center in Charlestown, Massachusetts, for example, in a single year services were used by 52 percent of the 16,800 people in the target population, including 75 percent of the children and adolescents; most were continuing users of the center.[29] Health centers sharply lowered the use of emergency rooms. For primary care services, they were competitive or significantly lower in cost than hospital outpatient departments, clinics, and large prepaid group practices.

Perhaps their most striking and best-documented effect was in lowering the rate of hospital admissions, achieving hospitalization at earlier stages of disease, reducing the lengths of hospital stay, and lowering the number of hospital days per capita. More than 30 studies show reduction in admission rates as high as 44 percent and reduction in hospital days per capita ranging from 25 percent to as high as 62 percent.[30]

One recent analysis, based on surveys in five communities (Atlanta; Boston; Charleston, South Carolina; Kansas City; and East Palo Alto) involving some 20,863 persons, showed that annual days of hospitalization per capita were 50 percent lower for community health center users than for those using outpatient departments and emergency rooms as their primary source of care and 31 percent lower than those who used private physicians as their primary source, holding constant the effects of age, sex, race, education, income, insurance coverage, and health status.[31] Another recent study compared Medicaid beneficiaries (AFDC recipients), using community health centers as their primary source of care, with similar Medicaid recipients using other sources of care in each of three communities. Hospitalization rates of health center users were only 52 percent of nonuser rates; their patient days per capita were only 60 percent as high. Outpatient department and emergency room use was dramatically lower among the health care users.[32]

As might be expected, given these patterns, total per capita costs to Medicaid of community health center users were significantly lower for ambulatory care, for hospitalization, and for all medical care. The total costs per person per year were 6 percent, 31 percent, and 45 percent lower in the three communities.

There is no reason to believe that these costs savings were the result of reductions in the scope or quality of services. On the contrary, the range of community health center services was usually broader, and repeated audits have shown the quality of health center services to equal those of traditional providers.

Perhaps the most important studies, although they are methodologically the most difficult, are those that demonstrate a significant effect of health centers on the health status of their target populations. One recent multiple regression analysis of data from comparable counties, comparing those with and those without a community health center, suggested that, overall, the health centers had accomplished a significant reduction in infant mortality rate, particularly for blacks, and in neonatal mortality.[33] Overall, the reduction attributed to health centers was 2 deaths per 1,000 live births for blacks—or 10 percent of the black infant mortality rate in these counties. Reducing the excess mortality rate of black babies had been identified as a goal of public health policy for a number of years. The study noted that "community health centers have the potential to make a substantial contribution to the achievement of this goal." Moreover, this can be done at a very favorable cost-benefit ratio in comparison with other programs to reduce infant mortality, such as the construction and subsidization of neonatal intensive care units.

Other studies have suggested striking reductions in infant mortality in rural southern counties served by community health centers,[34] in a health center population in Denver,[35] and in Dade County, Florida. [36] A New York study reported a 37 percent decrease in the perinatal mortality rate over 4 years, a 29 percent decrease in the prematurity rate, and an accompanying decrease in neonatal mortality.[37] Finally, a survey of low-income census tracts in Baltimore[19] over a 10-year period showed a 60 percent reduction in the incidence of rheumatic fever—a change attributed to early detection and treatment of streptococcal infection—in those tracts served by community health centers.

We can contend with good reason, then, that health centers:

- have been highly effective in increasing access to primary care;

- have changed patterns of primary care utilization in desirable ways;
- have reduced hospitalization;
- have reduced costs;
- have maintained quality of care;
- have achieved good "market penetration" and continuous coverage of their target communities; and
- have made measurable (and sometimes striking) improvements in the health status of populations at very high risk of illnesses.

But at present we can say almost nothing specific about the extent to which these results are the consequence of the use of elements of COPC in the centers' programs, or about the relative impact of different elements. In fact, different health centers have varied widely, one from another and over time, in the extent to which they employed epidemiologic analysis, used health care teams, mounted community organization and health education efforts, completed risk-factor surveys, or organized campaigns for environmental change.

Variation in COPC: Two Examples

Two brief examples will illustrate the range of variation that has always existed. In one case, a health center was organized with the explicit goal of meeting a community's needs for primary care medical services and at the same time developing an epidemiologic research program for studying high prevalence chronic diseases in the total community. In the other case, a health center accomplished little in the way of continuing community surveillance and epidemiology, but made major efforts at community oriented environmental, health education, and training programs linked to primary care delivery.

The East Boston (MA) Neighborhood Health Center developed as a specific partnership between the community, which badly needed accessible primary care services, and the Channing Laboratory, Affiliated Hospitals Center, Inc., of Harvard Medical School, one of the nation's most productive epidemiologic research centers. The center notes that:

> As early as 1966, East Boston was identified as an ideal community for longitudinal studies of high prevalence chronic diseases such as hypertension, chronic lung disease and bacteriuria because of its geographic isolation, table population (less mobility than any other area of Boston) and strong sense of family and community…. The community based total population studies which have been developed and conducted in East Boston all have been done under the aegis of and by the staff of the East Boston Neighborhood Health Center. The Health Center is governed by a Board of Directors made up of community residents who receive their health care from the center. They have reviewed and approved

> each study which has been conducted. … In this Community Board's review process the following criteria have been applied to epidemiologic research done in the community (1) Is the topic of research important to them as individuals and as a community? (2) Are the research methods acceptable as applied to themselves, their families and their neighbors, in terms of comfort, convenience, safety, and expected benefits? (3) Will some specific measurable benefit accrue to the community as a result of participating in the research program, in terms of identifying and providing referral and/or service for those with health or social needs, in terms of making new or improved services available for the community or in terms of improving the ability of the Health Center to attract funding for improved services in the future?[38]

In the 10 years between 1970 and 1980, staff of the center and colleagues at the Channing Laboratory (many have joint appointments) have published more than 60 scientific papers on the East Boston community: studies of hypertension (the center is one of the participating sites in the National Hypertension Detection and Follow-up Program), bacteriuria in women, oral contraceptive use and bacteriuria, oral contraceptive use and fasting triglycerides, plasma cholesterol and HDL cholesterol, household aggregation and household risk factors in chronic nonspecific lung disease, surveillance techniques for respiratory illness, and familial aggregation of chronic bronchitis. In the area of hypertension alone, the East Boston studies have included familial aggregation of hypertension, longitudinal studies of blood pressure in childhood, studies of blood pressure in newborn infants and their mothers, and methods of community hypertension screening.

At the same time, the health center has offered services in internal medicine, pediatrics, adolescent medicine, obstetrics/gynecology/family planning, emergency service, home care, dental service, social service, nutrition, and public health nursing, together with the usual support services. Its “market penetration” of the community is extraordinary; there are only two other primary care providers in the community, and last year the center provided 111,000 visits to 27,000 persons out of the total East Boston population of 32,000 people.

The center conducts a total household-by-household census of the community every 2 years. Some of the center's staff provide only direct primary care services, others are exclusively involved in epidemiologic research and analysis, and others do both. A major part of the funding for the census, the surveys, and epidemiologic analyses comes from research grants rather than from the medical services budget drawn from federal health center grants and third-party reimbursement.

The center's publications do not describe in detail the ways in which the community oriented feedback loop is closed: the incorporation of practice data into the epidemiologic work, the transfer of epidemiologic information to center practice, the routines of risk factor surveillance in providing primary care to patients, or the linkage of all of these to community organi zation and health education efforts or specific environmental interventions. Clearly, however, the mixtures of staff appointments and funding for both research and service suggest that this takes place.

The Delta Health Center, in contrast, was designed to serve a population of some 14,000 rural black residents in a 500-square-mile area of northern Bolivar County, Mississippi. More than half of that population was clustered around the base town of Mound Bayou and nine other small communities; the rest were scattered in rural areas. The population was characterized by extreme poverty, high unemployment as a consequence of the mechanization of cotton agriculture, low educational levels, an extremely high infant mortality rate, and heavy burdens of both infectious and chronic illness. There was a high dependency ratio: a large and relatively stable population of young children and the elderly and a shifting population of young and middle-aged adults, particularly men, moving back and forth (to places as far away as Chicago) in search of work. The environmental hazards were extreme. More than 75 percent of the dwellings were unfit for habitation, without protected water supplies and with surface privies for sanitation and unshielded small stoves for heat; many had no electricity. Cotton agriculture meant that exposure to pesticides was frequent. Malnutrition was a major problem, and support services (welfare, food stamps, etc.) were minimal to nonexistent. The physician-to-population ratio was very low, and access to care was severely limited by fiscal barriers and lack of transportation.

The center had a strong affiliation with a medical school, but the school was 1,500 miles away. No special funding was available for demography or epidemiologic research. A total community census was accomplished once, early in the center's development, but never repeated; a community-based epidemiologic survey of malnutrition in children was completed, but did not lead to ongoing surveillance. Studies of medical care utilization and of environmental hazards were conducted regularly in the three sectors into which the target area was divided.

In these circumstances, only a very small fraction of the center's resources was devoted to epidemiology. The major effort, aside from the direct provision of personal health services to individuals and families, went into other programs. These included:

Clinical Services	Family Practice Medicine, Pediatrics, Ob-Gyn, Emergency Services, Minor Surgery, Community Health Nursing and Nurse-Midwifery, Home Health Services, Homemaker Services, Mental Health Services (individual and group counseling, diagnostic psychological, and educational testing)
Nutrition Services	Emergency Food Program, Food Stamp and

	WIC Programs, Organization of Cooperative Farm, Nutrition Counseling
Environmental Services	Well-digging and Hand-Pump Installations, Construction of Sanitary Privies, Home Care Package for Acute and Chronic Illness (potable water supply, chemical commode, hospital bed, and washing machine), Home Management Counseling, Housing Repair (roofs, screens, steps, stoves), Vector Control, Environmental Laboratory, Environmental Health Education
Community Health Action	Local Health Associations, Community Development, Transportation Network, Legal Services, Day Care and Pre-Headstart Program, Maternal and Child Health Outreach (high risk pregnancies and newborns), Health Education
Social Services	Social Casework, (assistance in welfare, food stamp, Medicaid and Medicare eligibility), Family Services for Youthful Offenders, Community Programs for the Isolated Elderly

It was an explicit goal to transfer as many of these programs as possible to local community management. Thus, the North Bolivar County Farm Cooperative, Inc., ultimately owned, managed, and operated a 600-acre farm, collectively worked by members of some 1,000 families. Visits to the health center for personal health services in any time period were usually exceeded by individual participation in local community health association activities or by community development, health education, housing repair, and other environmental programs. One study showed that, on the average, some 3,000 individuals each month had contact outside the health center, in the community, with field staff. Since the primary care health teams that served each sector included not only the clinicians, but also sanitarians, social workers, health educators, and other field staff, there was fairly regular and accurate transfer of information between clinical and community programs.

Perhaps the most important of the center's activities, in the longer run, was the least conventional. On the premise that the community's own human resources were its most important asset for change in health status, the health center provided, facilitated, or arranged for the preprofessional or professional training of community residents. These programs ranged from high school equivalency certification and college preparatory courses at the center to arrangements that sent 13 local residents to medical school, about

20 to nursing programs at the LPN and RN levels, and enabled others to obtain certification as sanitarians, physical therapists, medical record librarians, x-ray technologists, and the like. Altogether, more than 100 people participated; more than half are back in Mississippi, many in Bolivar County and many at the center.

East Boston and Mound Bayou, perhaps, represent the extremes of divergent approaches to COPC in the community health center movement. One is an epidemiologic model and the other a community development model, though both are organized around the provision of primary care clinical services to defined communities. Hundreds of other community health centers (and a modest number of health maintenance organizations and rural primary care practices) are located toward the center of the spectrum and represent varying opportunities for the further development of COPC; the diversity is such that no single, uniform model for COPC development will suffice. A very substantial body of experience in health center, rural practice, and group practice programs has been accumulated over the last two decades, but—despite the richness of the documentation of their overall impact—there has been very little systematic evaluation of the effectiveness of the separate components of COPC in changing health status. A new round of experimentation and innovation is in order.

SOME SPECIFIC PROPOSALS

What should be the general direction and content of steps to further the development of COPC in the United States? What follows are a few general proposals, very conventionally grouped into (1) education and training and (2) service delivery.

Education and Training

A number of undergraduate medical educational programs focused on COPC are already in existence at the University of New Mexico, the University of Arizona, the University of Nevada, and other schools chiefly serving rural areas, and at the City College of New York, serving inner-city areas. In addition, students at any medical school, given motivation and opportunity, are likely to find elective clerkships in the United States or overseas that will give them an introduction to community-based epidemiologically oriented practices. Undergraduate programs in COPC, like later forms of training, may suffer from lack of contact with practices in the community and from the marginal role of many departments of community medicine in traditional medical schools. What may be more important is the long gap between undergraduate medical education and clinical practice—a gap filled not only with intensive (and, I hasten to emphasize, necessary) technical education but also with what I have elsewhere described as the latent curriculum of medical education,[39] emphasizing tertiary care, subspecialty practice, and the rewards of the prevailing structure of the medical care system. Most medical students learn epidemiology as a didactic field, unleavened by the admixture of clinical cases or by contact with the problems of a real defined community, in their second year. Six or more years later, when they begin practice, it has often been forgotten. Schools that emphasize primary care, or serve defined communities or otherwise orient themselves toward population-based medicine, may nonetheless have little involvement with community and little influence on the structure of the local medical care delivery system. We need to know more about the impact (if any) of undergraduate training on the system and on the production of change agents with M.D. degrees.

At least as important is the training of COPC health workers other than physicians: nurses and nurse practitioners, administrators, social workers, and community organizers. Without opportunities for working in teams and without field areas in defined communities, their education is likely to be restricted to the acquisition of traditional technical skills for traditional technical roles.

Graduate medical training may offer richer opportunities, particularly if preventive medicine residencies are reunited with clinical practice and if family medicine residency training includes significant amounts of time in practices serving defined communities. This is the optimal time for the teaching (or reteaching) of epidemiology and for the demonstration of its use in the assumption by a practice of responsibility for a community's health status, and not just that of individual patients.

The status of schools of public health in the United States continues to be troubled. They are only now beginning to define COPC as a specific area of interest. Even more than medical schools, they lack defined communities in which they have committed themselves to work with all primary care providers. But there is no intrinsic barrier to such affiliations, and—given them—curricula could be devised for two kinds of 1-year programs: the traditional combined M.D.-M.P.H. study (but preferably after the third year of medical school, to permit prior participation in clinical work) and a merger of M.P.H. study with a residency year or years. The importance of academic links to community oriented practices has already been mentioned. In addition to links with medical school departments, as described by Kass and Taylor,[38] Morrell and Holland,[40] Deuschle and Bosch,[5] and others, such links should also be forged between schools of public health and organized settings of primary care delivery in defined communities.

A special problem, and a special opportunity, is represented by the National Health Service Corps (NHSC). Had it grown and developed as planned in the late 1970s, there would have been, within a few years from now, some 20,000 corps physicians, dentists, and other health workers in the field, many in settings suitable for COPC and with some of its elements already in place. The early experience of the corps, and the testimony both of its administrators and its field staff, indicate the deficiencies of under-graduate and graduate training as preparation for the community dimensions of corps work. The NHSC—on the assumption that it will ultimately grow and flourish—needs its own educational and research center, playing a role for corps personnel analogous to the role played by the CDC for Epidemic Intelligence Service officers. Alternatively, the same functions could be provided for corps personnel by a regionalized network of academic departments on contract to teach, trouble-shoot, circuit-ride, provide formal continuing medical education for COPC, and assist in the conduct of research at NHSC sites.

I have said little about the content of undergraduate or graduate training for COPC, beyond the need for experience in real primary care practices in real communities. The requirement for epidemiology is obvious. The social sciences, usually taught in relation to the management of individual patients or with diffuse reference to cultural differences between communities, have a different meaning to physicians confronting the realities of house-to-house surveys, community organization, and health education in the world outside the hospital or health center. The structure and dynamics of team practice are already taught in some residency programs, but deserve much wider exposure, as do management, program-planning, and fiscal skills. This list approximates the training given to physicians with clinical experience who are to become community medicine district officers in Britain's National Health Service: epidemiology, operations research, the organization of medical care, and management. But, I believe it would be a terrible and regressive mistake in the United States to create a special category of physician, removed from clinical practice, to carry responsibility for COPC (and, by implication, immediately to relieve everyone else of responsibility for it); to do so would lead inevitably, as in Britain, to the charge that this is a make-work job, for those who can't work as clinicians, that makes unnecessary work for those who can.

If the proposal for a center for the corps is to be taken seriously, professional organizations with experience and a stake in the field might be asked to form a study group to consider it, with participants including (but not limited to) the American Academy of Family Practice, the American College of Preventive Medicine, the Association of American Medical Colleges, the Institute of Medicine, and—most important—representatives of the Rural Practice Network, the National Association of Community Health Centers, and the various professional societies focused on ambulatory/primary care.

The Society of Public Health Educators, social scientists, and epidemiologists, obviously, should be included as equal partners.

Service Programs

In addition to community health centers, migrant health centers, and rural practice project sites, health care programs with potential for COPC include health maintenance organizations, rural group practices associated with larger established groups, and community hospital-based primary care groups. If such practices are to begin, or further, COPC, they will need help with the special costs of epidemiologic study, census-taking, sample-drawing, surveillance, and follow-up—costs of the kind paid for with research funds in the national HDFP studies but unlikely to be generally available. There are other costs: the cost of standardizing diagnostic criteria, training personnel in uniform methods of examination and reporting, costs to assure comparable medical record information, and the like.

Special costs—but special opportunities—lie in the use of the microcomputer technology for COPC. PROMIS and other models already exist for the recording and aggregation of morbidity recording in primary care. Software is now available to interface dissimilar computer systems in a single network. Microcomputers have already been used to create automated problem-oriented records for a primary care clinic in Israel [41] and for recording and analyzing patient data in prenatal care in Great Britain.[42]

Microcomputer technology may make possible, at low cost, an extension of the kind of cooperative efforts made by the Mayo Clinic, the chief provider of primary care services to Rochester, Minnesota, and Olmsted County, and virtually all the other primary care providers serving the area's population, to create a pooled diagnostic register for the area.[43] The Mayo Clinic makes 885,000 diagnoses per year, of which about 20 percent pertain to local residents; to these are added the diagnoses made by almost all the physicians in the county. The coverage is extensive. Olmsted County has 95,000 residents (of whom 61,000 are in Rochester); in any single year, about 80 percent of that population is seen by one of the participating physicians. In any 3-year period, the figure reaches 95 percent for most age-groups. In rural and small-city areas with a limited number of practices, providers could usemicrocomputer technology to pool their diagnoses. Such cooperation could make available, at very low cost, a communitywide profile of diagnoses and an approximation of rates, even allowing for all the epidemiologic impurities that flow from unstandardized examination, reporting, andrecording. If risk-factor data were systematically recorded and added tosuch files, every practice in the community, whether presently community oriented or not, would have an invaluable picture of the population's needs. Davis,[44] summarizing the data on community health centers, has argued cogently for the provision of care to Medicaid and other low-income populations on a direct care funding basis, rather than by piecemeal reimbursement to a nonsystem of multiple providers. Direct care and Medicaid capitation could include allowances for some of the costs of COPC. Use of some of the funding in preventive medicine block grants by organized primary care providers could make possible some funding for demographic, outreach, and other elements of COPC.

An unsolved problem, finally, is the question of COPC efforts in large urban areas with shifting populations and multiple unconnected providers. Collecting partial information on an initial defined area, continuing surveillance there, and moving on to additional defined areas makes sense only if there is some reasonable expectation that the denominator will ultimately approximate the community's total population, so that community-based rates can be calculated, and if that population is reasonably stable over time.

CONCLUSION: A NOTE ON DREAMS AND NECESSITIES

The suggestion that COPC may be a romantic dream has particular poignance now. We are in a period of such regression that we will have to fight continually simply to preserve what we already have, let alone move forward. In ordinary times, innovation like that of the 1960s is followed by periods of attrition; ideas from new programs on the margins diffuse into the mainstream, but at the same time, as the “new” programs become established, they begin to conform to mainstream ideologies and forms of medical care. This may be the natural history of innovation in community medicine.

But today we are confronted with something more: a radical restatement of the problems of health care, a definition of the marketplace as the solution rather than a part of the problem, and an emphasis on cost containment almost without reference to health needs or any impact on health status. Health care is even more vulnerable than other sectors to a Social Darwinism that encourages the survival of the fittest—particularly the tertiary-care institutions that now dominate the medical marketplace. The consequences of reduced access to care (whether it is called a procompetition strategy or simply openly presented as budget-cutting of the kind that threatened in 1981 to remove 1.2 million people from access to the services of community health centers) may be heightened by the reappearance of malnutrition and increased environmental hazards for some segments of the population.

In such times, we may have to limit our COPC research and demonstration projects while the current wasteful attempt to rely primarily on the sale of personal medical services for improvement in health status runs its course. The evidence suggests that this attempt will increase total costs for medical care, even if it reduces costs to government, and that it will have no positive impact on health status.

Yet, from what has been shown above, there is already powerful evidence of what could be saved—in both human and financial costs—by a different approach. To the extent that these findings are generalizable, then COPC will, sooner or later, be recognized as a practical necessity. In the interim, the value of furthering COPC in the United States, on an experimental or demonstration basis, seems to me to be clear. In doing so, we may even further the evolution of the health care system. As in biological evolution, it does not matter whether the gradualists are correct, and we are in for a long, slow process of the accretion of small changes, or whether the punctuationalists are right, and we are at the start of some discrete but discontinuous burst of change. COPC, is, for our purposes now, *both* a romantic dream and a practical necessity.

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Discussants

David A. Kindig

For our discussion definitional clarity is clearly in order. The two papers just presented challenge us to consider a concept that goes beyond community-based primary care. The additional aspect that the Kark/Abramson definition of community oriented primary care (COPC) requires is the practitioners' involvement in epidemiologic studies of their community in order to obtain data that feed back into the goals and activities of their practice. The significant element here is not only being aware of what is going on with one's patients as a group, but also of health issues and health risks in the community outside of one's practice. This addition means that the health status and concerns of those who do not come into your office are as important to you as those who do. This is what I took to be the essence of the original OEO philosophy, which this conference brings into focus again. Dr. Geiger points out that the epidemiologic studies per se are not new; they have been carried out in a variety of settings. He makes the critical point that it is the synthesis of primary care practice and community epidemiology that forms this unique concept of community oriented primary care.

I will not spend my time commenting on the exciting potentials that this concept anticipates, not the least of which is the opportunity for the rejuvenation of professional idealism at the grass roots level, which seems so scarce in these times. Rather, I would like to focus on some of the difficulties that may be encountered in a more widespread implementation of COPC into practice settings across the country or world.

One conceptual difficulty is that the COPC model described by Drs. Kark and Abramson appears to require defined nonoverlapping communities with organized practices responsible for an entire community or segment of a community. This may be the case in some small towns or a rare inner-city area devoid of services, but beyond these, the medical care system is comprised of various provider groups and patient allegiances that would seem to make it very difficult to define a practice “community.” This is true at least for the purposes of including in the epidemiologic studies that portion of the community that is not enrolled in the practice. This is a serious problem. Such a series of nonoverlapping areas or perhaps population groups exclusively assigned to one group of providers is not the usual situation in the large number of cities, towns, and rural areas of our country.

This criticism, however, may be applying the model too literally. It is probably not possible or even desirable to insist that every primary care practice be community oriented in this way. What would be desirable would be to have a modest number of such "pure" practices in place while others who provided quality primary care to whoever came through their doors attempted to do some epidemiology on this group of patients and in the community at large, either as extensions of their practice or in conjunction with other practices in the same area.

What kind of settings are best suited to this purpose, and what would be the role of major health care institutions such as medical schools, hospitals, and academic health centers in such practices? I have tackled these questions in a number of ways since the early 1960s, when I, along with others, began trying to get a major midwestern medical school to consider providing primary care services in its immediate community and later as a part of the growing student health movement. At that time, we found most major institutions extremely resistant to such ideas, primarily because the concept did not fit into the common understanding of the mission of a medical school or teaching hospital. In those rare institutions that were open to such concerns, there was precious little experience or expertise in primary medical practice or community outreach and sensitivity so that first moves, even though well intentioned, were often not successful.

The situation is different today, with departments of family medicine and community or social medicine established in most academic centers and certain institutions having distinguished themselves as leaders in the establishment of neighborhood health centers, area health education centers, and primary care medical and interdisciplinary education. However, it is not clear that this change over a 20-year period means that we now have in place established institutions that will be eager to pick up and implement the challenges of COPC? Why is this so? It is tempting to identify the lack of resources resulting from the current economic situation as a primary factor, and it certainly plays an important role. Most institutions, faced with significant cutbacks in all sources of revenue, are struggling to preserve the basic core academic and service programs. New oportunities in COPC or other areas of academic endeavor will not even get a serious review in many places. But what if resources were not limited—would the possibility of institutional sponsorship be increased? It would certainly be more likely, although many administrators have become increasingly skeptical of federal or private start-up funds that leave the institution holding the bag when the 3-or 4-year developmental period is over. Certainly, changes in patient care reimbursement so as to include the costs of such activities would encourage additional institutional involvement or sponsorship.

But is this a desired outcome? Are concepts such as COPC suited for institutional sponsorship, or are they better suited to a more independent community-based location and governance? My current thinking and experience would lead me to the view that intrinsic characteristics of most major health care institutions are not conducive to the growth and development of such new and different undertakings. Medical schools and teaching hospitals are large and bureaucratic with enormous inertia and commitment to more traditional forms of patient care, teaching, and research. They rarely have a community focus or administrative competence in office-based care. The time, energy, and political skill required for such a significant reorientation are enormous. On the other hand, these institutions possess strengths. Much of the conceptual foundation of primary care delivery and epidemiology lies within our academic faculties, and the financial and organizational support and stability that a strong institution can provide to a new concept or organization, once embraced, is not insignificant.

If I were responsible for recommending institutional arrangements for maximum secure growth of community oriented primary care practices, I would first pick small delivery sites such as model family practice clinics, health maintenance organizations, and neighborhood health centers, who see such concepts as a clear part of the basic mission but who are also affiliated with academic centers for backup and consultation and support. The small-to-medium HMO is a most promising opportunity for such developments at this time because of their focus on a defined population and because the epidemiology has the potential for increasing cost-effectiveness as well as quality. Any major health care institution considered for sponsorship should clearly be able to demonstrate why such an activity is in its enlightened self-interest—a motive for which I have growing respect. I am impressed with institutions whose history and philosophy, often from a religious base, give some security and guarantee that the time, energy, resources, and clout will be available when the academic and bureaucratic pitfalls mentioned earlier appear.

Finally, I would like to make a brief observation on education for COPC, which is discussed much more extensively in the paper by Jo Boufford. Both Drs. Abramson and Geiger refer to the failure of the educational system in preparing students for such practice and suggest a number of remedies to address this. There is no doubt that students need more training in basic epidemiology and that, even today, adequate primary care experience is lacking in many schools. I do not believe, however, that academic centers can adequately provide experiences in this synthesis of primary care and epidemiology that COPC envisions. It is counterproductive to expose students to inadequately developed or esoteric practice models prior to their being established as effective patient care mechanisms. The educational demands may retard the growth and efficiency of the practice. The exposure of students to underdeveloped or inefficient practice can either turn them off totally or provide an image of practice that is not feasible in the real world.

Proponents and advocates of COPC should set as their goal the development and implementation of 25–50 operating COPC practice models over the next several years. Perhaps foundations would fund the epidemiologic component that is the missing piece in many settings and that third-party reimbursement will not cover. When these are in place and seeing enough patients to be cost-effective and capable of assuming an additional education mission, I believe far-sighted academic centers will be ready and willing to organize and even pay for appropriate educational experiences. But to burden such innovative practice models at the outset with any significant educational responsibilities would threaten the practices in the short run and their future educational potential in the long run. I would urge that there be early linkages of academic centers with developing practices to provide managerial, professional, and research expertise that can later be expanded to an educational focus.

Fred Diaz

My purpose here will be to try to summarize some of the problems at the Florida Community Health Center (FCHC) and to identify, if any, the confusion over where we are going. I will start with the four main bases that were covered in Geiger's paper. One of them is that the COPC must have a local community to provide its services. I believe that here in the United States, probably contrary to some other countries, “community” has been divided into two groups, those who can pay and those who cannot pay. Therefore, we have developed two systems of health services: one, which is based on a private practice model, and another one, which has evolved with some of the community oriented aspects in it and which has taken the form of community health centers and migrant health centers throughout the United States.

In looking at this, there have been certain regulations that have been imposed on migrants and community health centers so that they can establish their “community.” Part of it comes from the criteria for medically underserved areas (MUA), which include a number of criteria that must apply if a facility is to be started, and the other has to do with limited access to services by migrants or a mobile population with a particular need that no one else is addressing. Therefore, when community health centers and migrant health centers start out, there are overlaps. They usually represent situations that have been neglected and that have been undeveloped because of the economic structure, and then it does become difficult to really initiate COPC.

A second point that has been alluded to is combining the personal health services of individuals and families with services to the community as a whole or its subgroups. Basically, when you deal with subgroups—and I will be talking about subgroups of indigents or migrants or minorities—you begin to also deal with another problem, which is that health is not their number one priority. Sometimes when dealing with the population as a whole and particularly with the subgroups, there are inherent problems that are built into the system that make it very difficult to achieve that community oriented practice. As a subgroup, indigents and migrants must be plugged into the mainstream of health. The way that has been done at the FCHC is by coordinating and integrating the services of various centers with providers of special services, hospitals, and public agencies to create a continuity of care for the individual, his family, and his community. In this area I do feel that we are providing COPC. This becomes rather difficult, however, because the reason the community health center or the migrant health center was started was because of economic problems with a particular population. As an administrator or director of one of these units, one has to try to solve the economic problems and fit this population into hospitals, specialists' practices, and other community agencies. The reimbursement process becomes crucial in determining how successful one is at coordination, integration, and initiation—a total community oriented effort.

Community health centers and migrant health centers have probably been some of the forerunners in developing or working in the team concept. The economic structure has forced them to actually use a combination of physician, dentist, outreach workers, family health workers, and all supplemental services that back them up. I think they are our models and I do believe that FCHC is one of those that has been able to very successfully put this team together in a cost-effective way. An average overall-per-visit cost of $22 to $24 is quite effective when one looks at private practice and considers all the services that we offer the patient.

This aspect of migrant and community health centers has resulted in a well-integrated system. Now, because of the integration and this kind of teamwork, migrant and community health centers are not only forced to, but look eagerly towards, accepting National Health Service Corps physicians, dentists, etc., in their settings. At one time they were given as a gratis contribution; they were repaying their medical school scholarships. This gave them a chance to really work in a community where the services were greatly needed. The picture is drastically changing. The services of these health professionals are no longer free. There is little or no economic incentive for the centers, because now pay-backs must be made to the government for these scholarships and assignments. It does, however, help in rural health care settings, such as FCHC, because it does provide manpower for some of these shortage areas. The third point involves the development of methods of community diagnosis and surveillance, the development and evaluation of programs to modify the community's health—in other words, applied epidemiology. Federally funded community health centers and migrant health centers have been forced into some of that epidemiology by reporting requirements. These centers must collect certain data, produce statistics on numbers of people immunized and those who are not, and report on follow-up. This reporting ranges from a chalk mark every time a patient comes in and leaves the center to highly sophisticated computerized management information systems, as we have at FCHC. But we still fall quite short.

We can correlate most any data in terms of prevalance and incidence within the population served. Basically, FCHC has more than 62,000 persons registered, and, as of this past year, it had more than 36,000 active users. It does create an excitement knowing that community oriented health care has tremendous potential. One of our reporting requirements addresses productivity. We run profiles on all of our medical providers and our dentists, and we do it by diagnosis. How many of a certain of diagnosis are seen? How many of them are newcomers and how many of them are repeated visits? This helps us to determine the kind of productivity levels that are achieved within the hours worked. These profiles also indicate the kind of prevalences that are within our population. We can break it out by age-groups, sex, ethnicity, zip code areas, etc. It has been very exciting. There has been an inherited problem, though, that leads us basically to the fourth point, and that is the application of the epidemiological skills needed to be able to really function under a true COPC.

To be able to run the management information system, your data must be standardized so that whatever data is collected is the same in all your sites. Medical records must also be maintained in a standardized way. There must be very rigid interpretations, and they must be communicated to the providers so that you can rely on the data.

For example, when a diabetic or a hypertensive comes in and is uncontrolled, the right kind of code must be put down to indicate that he is an uncontrolled diabetic and an appointment has been set up for him within 3 weeks. If he doesn't appear for his follow-up visit, there is another computer-generated form that says this person did not return and has not been put into the control column, thereby closing that loop.

It has been very difficult to set up this system, because many of the graduates that are coming out find this kind of regimen very difficult to adhere to. We currently have 11 National Health Service Corps assignees. By the end of this year, with the birthing center that we are putting in to one of the local hospitals, with certified nurse-midwives and obstetrician/gynecologists, we will have more than 22 involved with our total network. That is an awful lot of training and an awful lot of people to orient to a specific type of practice. At FCHC we have found that it takes as much as 6 months to a year to orient the new graduate after he/she arrives. At that point he/she is in one or two dispositions. He is either really catching on to what this whole program is about in terms of the standards that must be adhered to, the kind of coding that must be done, the kind of practice models, his role as a physician in this kind of an institution or a community health center, putting his all behind it, getting very excited over it, and in the last year being very productive; or, he is totally disillusioned because this is not what he had in mind when he went through medical school. He finds it difficult to stay with the regimens of the kind of practice you need, and, therefore, during the last 6 months, his productivity level really drops off and the center becomes anxious for his rotation to be over and his obligation to the government fulfilled.

Therefore, I do agree with the Kark/Abramson paper and the Geiger paper that there is a tremendous need to orient the medical students in epidemiologic aspects of medicine, particularly as they relate to migrant and community health centers as well as COPC practices in general. I feel also that there must be some kind of funding source that will actually bring in a team as described in Dr. Abramson's paper and that will give these centers the kind of support in the form of expertise that they need. The funding should also provide for involvement with medical schools both in terms of faculty and students, particularly students that have an obligation to satisfy and have chosen to go to one of the migrant or community health centers. This kind of involvement may pave the way to a more integral type of team.

Nora Piore

> We cannot absolutely prove that those are in error who tell us that society has reached a turning point, that we have seen our best days. But so said all who came before us, and with just as much apparent reason. . . .
> —Macaulay, 1830

It is good to have the opportunity to join with you in this health care policy conference at a time when society indeed seems at a turning point. Whether or not our best days are behind us—which I doubt—what brings us together in this assembly is the experience shared in those days, the insights gained, and our common concern with making that experience relevant and useful in these difficult and confusing times.

To help us distinguish what may be transient economic and political trends from more underlying and persistent changes in our mixed medical care economy, and to understand better the potential role that community oriented primary care (COPC) and the epidemiologic basis for its operation might play in contemporary society, it may be useful to go back to the roots of these concepts. In the early 1960s the nation embarked on a remarkable series of efforts to address the problems of poverty, discrimination, and equal opportunity. The programs of the Great Society, as Henry Aaron has so well expressed it, were unparalleled by any peace time concensus about the nation's difficulties and the need to tackle them since the New Deal. Unlike the New Deal, which side-stepped the issue of health security, the agenda of the 1960s included a many-faceted approach to improving access to medical care—access to knowledge gained with public support for medical research, to care in hospitals built with public funds, to treatment from physicians trained in government-supported programs.

In a single session, the Eighty-ninth Congress enacted more than two dozen pieces of health legislation. In addition to Medicare and Medicaid, a program of federal grants to voluntary and government institutions was adopted to bring federal resources to populations at particular risk—pregnant women, children and youth, alcohol and drug abusers, the mentally ill, migrant workers, and other neglected segments of the population; and to stimulate new areas of service and new ways of delivering them—family planning, community mental health services, and neighborhood health centers.

"The Congress declares that fulfillment of our national purpose depends on promoting and assuring the highest level of health obtainable for every person…." These words, in the preamble to the Public Health Service Amendments of 1966, laid the basis in that period of unprecedented economic growth for expectations that the nation is still struggling to fulfill, in the quite different climate of inflation, resource scarcity, and skepticism about government that prevails today.

Efforts to reshape the health delivery system in accordance with these mandates took many forms. The neighborhood health center, close to and responsive to community residents—an idea that has emerged periodically in American history—proved particularly attractive to those skeptical about the ability of traditional structures to respond to these new mandates. Less than 3 percent of total public spending went to these programs, while billions of Medicare and Medicaid dollars flowed through the traditional channels of hospital, outpatient clinics' and physicians' offices, and into a new type of provider soon to be named the "Medicaid Mill." Nevertheless, it was the more experimental margin of the public medical care enterprise that attracted more adventurous health professionals and planners. Among these were substantial numbers of the best and the brightest from the nation's universities and medical schools who enlisted to design and develop new health-providing institutions in rural areas and urban slums.

Assembled at this conference are the veterans of this exceptional chapter of American medical care history, together with their younger colleagues and students. Out of the experience of the 1960s—exhilarating, frustrating, unique—there evolved, and has since matured, a systematic set of convictions about the medical care enterprise in our society, a new iteration of views about the interface between medical and social intervention, about primary care and high-technology medicine, about society's responsibility for assuring access to health and medical care.

These views, which some have described as the counterculture of American medicine, have had a substantial impact on medical education and concepts of medical practice, particularly primary care, family medicine, and the role of new types of health professionals, and, while the vision of a network of a thousand neighborhood health centers spanning the nation never materialized, few hospital outpatient departments, emergency rooms, and even physicians' offices remained untouched by the criticism of crowded waiting rooms, long queues, lack of privacy, and impersonal and sometimes indifferent care.

But by the 1970s, with constantly rising medical expenditures, a stagnant economy, and mounting federal and state budget deficits, attention that had been concentrated on access and quality turned to efforts to curb rising health care expenditures and the search for incentives that would reduce what we now see as excessive use of services and unproductive investment of resources.

Now it is another season. The voice of the turtle is no longer heard in the land, stilled by hostile political winds and overwhelmed by the mounting economic recession. One need not take a cataclysmic view of the current outlook to acknowledge that the climate of opinion, the mood of the country, is no longer fixed on issues of equity and opportunity, but rather is concerned with inflation, unemployment, and the burden of taxes to pay for services to meet someone else's needs. This change in the national mood did not occur suddenly, one day in November, with a presidential election. Rather that election reflected storm signals, public uncertainties that had long been gathering. The deeply disturbing experiences of Vietnam, Watergate, and the Iranian hostage crisis contributed to the loss of confidence in our ability to deal with inflation, lagging economic growth, and rising unemployment. Equally disquieting is the realization that the United States, deeply involved in a highly competitive global economy, cannot, as perhaps it once could, rely on an economic recovery strategy geared solely to internal markets. In the face of these developments, we are unlikely soon to see a return to the search for a single, coherent national solution to these complex problems. That sums up the bad news. There is some good news, too.

To begin with, we must not ignore the fact that despite the cutbacks that have occurred and the threat of further disruption in social welfare policies, 28 million Americans today are covered by Medicare and another 21 million by Medicaid. Despite retrenchment and possible further reshuffling of federal, state, and local responsibilities, the important fact is that a floor of health care protection remains precariously in place.

Further, there are some reasons to think that there are limits to how far back the clock can be turned. The amount of cost shifting that is occurring in the health economy indicates some limits to the extent to which denial and deprivation of care can be tolerated, perhaps less because of public conscience and more because of the instinct for survival on the part of provider institutions. Whatever the motivation, the fact is that it is an accepted component of public policy in Maryland, in New Jersey, and now in New York that the bad debt and charity care losses of voluntary hospitals be at least in part absorbed by third-party payers and thence transferred to the cost of health insurance premiums. Whether this is a more equitable or efficient way of providing fiscal coverage for hospital care of low-income patients than the use of the public tax system can certainly be debated. But it promises that some inpatient and ambulatory care losses will be absorbed in this fashion. If or when this burden becomes untenable on the private insurance side, and inadequate as a way to pay for indigent care, the search for other fiscal mechanisms can be expected to resume.

Another indicator of the ineradicable changes in the topology of medical care left from the 1960s is that by the end of the 1970s there had been a substantial increase and extensive geographical redistribution of health care capacity (equipment plant and manpower) in the country. Don Madison, in his paper for this conference, describes the difficulty experienced by a rural neighborhood health center today in maintaining a stable constituency in a community where there are now many competing providers and where those providers now advertise their wares. This presents a very different picture from our earlier view of the rural community health center as a rare and exotic plant, flowering in a landscape empty of health manpower and health care resources. Of course there remain areas where services are in short supply and people who cannot pay. But these observations suggest that the investments in health resources and manpower made in the last two decades have indeed changed the landscape.

Perhaps the most important factor in the current climate is that concern with alternative strategies to deal with shrinking revenues for health services perforce claims the attention of federal, state, and local governments, as well as those in the public and private sectors who provide or purchase medical care. This now stems from practical pressures to make ends meet and to bring rising costs under control rather than from a search for a longrange coherent health policy for the nation. But these immediate pressures guarantee that there will continue to be a search for ways to organize and deliver health care that will maximize the return on resources and anticipate and plan to meet the new demands on these resources that must be expected from changes in the demography of the population and the pattern of health and illness.

In these circumstances the concept of community oriented primary care and the additional dimension of its essential relation to an epidemiologic data base become an effective and essential tool for addressing health policy issues in both conceptual and very practical ways. In the broadest conceptual sense, the development through the use of epidemiology of a systematized rational basis for the identification and prioritization of health care needs is central to any approach to health care planning, whether from a market or a regulatory point of view. From any point of view, a coupling of the ills that are prevalent with a knowledge of the state of the art in their prevention or amelioration sets the agenda for allocation of finite resources. Thus the COPC concept has much to contribute to improving the nation's capacity to make decisions on the basis of knowledge about what's out there to be treated and what is available to treat it with.

Thus, despite the fact that little attention currently focuses on global national health proposals, the need for new mechanisms to operate in the health care economy occupies a central and visible place in the nation's concern. Of the administration's inner council deliberations about the form that the new federalism will take, the glimpses that one catches suggest that, even were there to be a state-federal trade-off between welfare and health care responsibilities, the details of the disposition of whatever health resources are to be allocated to a region or a state or a locality will be left to some lower level of government. Interestingly enough, the most recent version of a Kennedy-type national health insurance proposal also envisaged a structural format for health resources allocation in the nation linked to decentralized allocation of decision making, within whatever national re-distributive framework was agreed upon. Thus decentralized resource allocation decision making by region, by state, by community, or by individual provider would appear to be a likely component of evolving public health policy. The relevance of an epidemiologic data base at each such level of decision making is obvious.

To turn for a moment to more immediate opportunities to make use of an expanded epidemiologic framework, consider developments that are likely to take place regarding the role of state and local health departments. Somewhat in eclipse since the 1960s, they have recently reemerged for two reasons: one, with the end of federal support of planning agencies, in many areas the health department remains the single available mechanism with the authority and the mandate to oversee the needs and resources of the community to take responsibility for marshalling professional and civic concern for the public health. In some places this role of the public health agency extends much further. In New York State it regulates resource allocation, determines reimbursement rates, and serves as the guardian of the public health. Much thought, obviously, will now be given to the role of health departments, and here again the concepts of epidemiologic surveillance, newly emphasized by the COPC movement, are the traditional way of work for public health. A second reason for the reemergence of health departments as important instrumentalities is the new emphasis on health behavior, prevention, and life-styles, again traditionally the health department's turf.

Finally, we come to some specific new opportunities for the COPC movement to play a significant part in shaping immediate changes in the organization and delivery of medical care. As Medicaid funding is reduced, and states and localities have greater latitude to experiment with most cost-effective ways of providing care for the covered population, attention is increasingly turning to the development of capitation-based group practice arrangements for the care of low-income patients. In Massachusetts, under the leadership of Dr. Jerome Grossman and New England Medical Center, a coalition of eight community hospitals is working with the state of Massachusetts to develop a system whereby these hospitals will contract with the state to provide total care for Medicaid beneficiaries who enroll on a capitation basis in the group practice plan offered by any one of the eight cooperating institutions. The theory behind this plan is that, given an identified enrolled population with known characteristics and needs, the group practice can plan to use the total sum available under the capitation contract in the optimum manner to provide needed services for the entire group. This in effect combines the principle of the Kaiser plan on the one hand and of the neighborhood health center system on the other. For the first time there will be the opportunity to test out on a large scale whether these ways of providing care can work for the Medicaid population.

Moving from Massachusetts to the South, and from the initiative of a group of hospitals to the leadership of a state department of health, planning is under way in Tennessee to establish a primary care network of community health centers working in cooperation with public and private institutional providers. Explicit in the planning of this network is the development of a community data base that will include both the epidemiologic information and the identification of social service needs and social support networks that can be incorporated in a unified approach to meeting the needs of this population within the framework of diminishing public funds, commingling Medicaid and other public funds with private grants, third-party payments, and self-pay.

A third illustration of the opportunity afforded by COPC is the development of ties between mainstream medical providers and experimental community health models that have too often operated at the margin of mainstream medicine. Montefiore Medical Center in the Bronx is providing the leadership to develop a prepaid health care network designed to offer comprehensive health care services to Medicaid and other low-income residents of the Bronx. Under this plan, a coalition of community health centers for primary care services would be linked with specially and inpatient services furnished by participating hospitals, with enrolled Medicaid and low-income patients covered by a negotiated Medicaid capitation rate.

These are but three examples of many that are beginning to surface as fiscal pressures force providers and communities to search for cost-effective systematic ways to provide essential services within the limits of extremely constrained resources. Because of the involvement of public and voluntary mainstream providers, together with experimental community-based organizations, these experiments can be expected to bring about the involvement of mainstream medical resources that have eluded past efforts to restructure medical care; adversity may prove to be the foster parent, if not the mother of, invention.

At a time when, unexpectedly, there are new opportunities to extend the benefits of community oriented primary care, one cautionary word may be in order. It has to do with the nature of the scientific revolution in medicine, which in the last generation has drastically reduced some costs while increasing others by providing new ways of healing larger numbers of people who previously could not be helped at all. Many attribute a large share of the increase in health expenditure to these scientific advances.

It is not so clear that improved primary care can achieve the necessary savings to balance off such rising costs. However much health education, prevention, and prompt care can accomplish to prevent, delay, or achieve a net reduction in morbidity, there is bound to remain a substantial and irreducible volume of serious and expensive illness, the crux of the dilemma of rising health care costs. It behooves primary care advocates to be prudent in claims of the extent to which investment in primary care can reduce the need for more advance forms of treatment, with the present state of our knowledge, if they are not to jeopardize their credibility.

Community Oriented Primary Care: An International Perspective

Rodrigo Guerrero

An attempt to describe the many projects related to community oriented primary care (COPC) that are being or have been carried out around the world is an impossible task, not only because of the immense number and wide range of activities included, but also because of my limited knowledge of them, particularly of those carried out in Africa and Asia. I have decided, then, to restrict my discussion to two areas. First, I shall trace the origins of the primary care, family medicine, and community medicine movements in an effort to better understand the scope and future of COPC. Secondly, I will describe the COPC carried out in Cali that involves surgery and surgical care, fields not very frequently concerned with primary care.

MOVEMENTS INFLUENCING COPC

Considerable confusion exists around the concept of primary care. To some it means any health care given outside a hospital, given, as a rule, by a general practitioner or a family medicine specialist. To others is means health care of low complexity, regardless of the agent involved in the delivery of care. Finally, others refer to primary care as the early contact at the home level, frequently given by a nonprofessional in a continuous fashion to defined population groups. In the British literature, for example, primary care tends to be equated with the practice of the general practitioner.[1] Much of the confusion, I believe, arises from three different movements—family medicine, community medicine, and primary care—that had different origins but have at the present time very similar objectives.

The Family Medicine Movement

The term general practitioner was introduced into the English language around 150 years ago and referred to the way most physicians practiced medicine in England. They were surgeons, obstetricians, and pediatricians and they perscribed drugs.[4] Later, with the development of the specialties, the general practitioner almost disappeared. After World War II the term general practitioner became popular as being the cornerstone of the English National Health System. In 1957 John Hunt, one of the founders of the Royal College of General Practitioners, referred to general practice as a world movement, going beyond local health services and party politics toward grouping family physicians. This movement recognized that modern medicine, in order to reach maximal benefits, must reach patients early at the home level and provide continuous care, including prevention of any illness, mental or physical. [5]

In many countries, particularly the United States, the term “family medicine” was introduced to signify almost the same as general practice and became very popular. The American Academy of Family Physicians is second in number only to the American College of Physicians. In Latin American the Instituto Mexicano de Seguridad Social (IMSS) assumed a pioneering role by adopting the scheme of family practitioners and introduced in Latin America the concept and the term. The Seventh Panamerican Conference of Medical Education in 1978 was devoted to the subject of family medicine. Many countries of Latin America have had national meetings devoted to family medicine. The World Organization of National Colleges Academies and Academic Associations of General Practitioners Family Physicians (WONCA) represented all the groups interested in the area.

In the context of this movement primary care is synonymous with the care given by the general practitioner or family medicine specialist. The family medicine movement has been one answer to the health system crisis of industrialized countries characterized by extreme, dehumanized, and depersonalized health care.

The Community Medicine Movement

It can be said that the Flexner Report allowed science to be introduced in medical education. However, the emphasis in the Flexnerian model was the scientific study of the individual patient in a university hospital bed. A number of years ago a growing concern about the social and psychological demands of patients began to appear. The need to study the patient within his social milieu began to influence medical education, and several com munity studies were undertaken by universities. The influence of John Grant and his principles for community projects were important in shaping this community medicine movement.

The leadership role of this movement has come primarily from the academic community. Several American foundations, notably Rockefeller and Kellogg, have contributed significantly to the development of this movement, which was defined by Moshe Prywes as the "the First-born" of a marriage between medical education and medical care.[3] To the organizers of this meeting COPC is an approach to health care delivery that undertakes responsibility for the health of a defined population practiced by combining epidemiologic study and social intervention with the clinical care of individual patients, so that the primary care practice itself becomes a community medicine program.[2] A strikingly similar definition was given by Lathem when he said: "Community Medicine is that branch of medical science which is concerned with the health needs and conditions and with dealing with these by appropriate methods and interventions, of population groups of known size and composition." [3] So, although having had predominantly academic origins, the community medicine movement is actively contributing to improvements in the ways health services are provided to populations of the country or region.

Several of the better known projects have been projects in which universities have become involved in primary health care delivery. Lathem and Newberry's edited volume describes some of these projects. [6] A more recent development has been the emerging of clinical epidemiology, which probably originated from community medicine, since it stresses the need for clinicians to use sound epidemiologic criteria in order to make community projects successful.

The Primary Care Movement

In the developing world during the late sixties and seventies there was increasing emphasis on more equitable health care distribution. Urbanization, together with rapid demographic growth, generated enough political pressure to force governments to study and implement strategies to increase coverage of the health system. The 10-year plan for health in the Americas, signed in 1972, is a typical example of the desire to increase coverage.[7] In 1977 the Thirtieth World Health Assembly decided in Resolution WHA 30.43 that the main target of governments in the coming decades should be "the attainment by all citizens of the world by the year 2,000 of a level of health that will permit them to lead a socially and economically productive life."[9] According to Chaves[8] this provided stimulus for the Primary Care Movement that took a defined form under the leadership of the World

Health Organization (WHO) and UNICEF in a meeting held at Alma-Ata, U.S.S.R., in September 1978. A brief review of the recommendations of Alma-Ata is pertinent to understand the meaning of primary care in this context. According to the Alma-Ata Declaration, the following should be included in primary care:

1. education concerning prevailing health problems and methods of preventing and controlling them;
2. promotion of food supply and proper nutrition;
3. an adequate supply of safe water and basic sanitation;
4. maternal and child health care, including family planning;
5. immunization against the major infectious diseases;
6. prevention and control of locally endemic diseases;
7. appropriate treatment of common diseases and injuries; and
8. provision of essential drugs.[7]

As defined at Alma-Ata primary care requires participation of the individual and the community and can be delivered by health workers, professionals, nonprofessionals, technicians, and even empirical personnel. Alma-Ata gave priority to the health agent or community health worker as a way to reach people in dispersed rural areas or on the periphery of the big metropolitan areas, where availability of health professionals is limited. It was stressed that the training of physicians and nurses should include the training and supervision of these health workers.

As can be seen from this brief summary, primary care, in the Alma-Ata context, is a very ambitious program that involves systems such as education, agriculture, housing, and public works. Since health is considered a basic right of individuals, the definition of primary care becomes a strategy designed to assure the fulfillment of this right. It is obvious that primary health care in this context includes many activities not included in the primary care as defined in the family medicine movement.

Primary health care as defined in Alma-Ata can be visualized in the form of a pyramid. A wide base includes the many aspects of areas such as self-care or care given by the family; a smaller intermediate section that corresponds to the care given by nonprofessionals, technicians, auxiliaries, etc.; and the top of the pyramid, which corresponds to the small part of primary care that requires professional care. On the other hand, as is frequently done, health care can be classified according to the level of complexity. A graphic representation would show a pyramid with a wide base of the many low-complexity (primary care) problems, an intermediate section corresponding to secondary care, and the top section, representing problems of higher complexity or tertiary care. From an institutional point of view, the primary level corresponds to the health care, the secondary level to the general hospital with the four basic specialties and high technology. According to this scheme, a physician working at the base should be called a primary care physician regardless of the training. It is conceivable that specialists such as pediatricians can work at the secondary level and still be called primary care physicians. This often leads to confusion.

Much of the semantic discussion can be overcome by visualizing these two pyramids (as in Figure 1). The top of the primary care pyramid imbricates into the base of the health care pyramid, indicating that the primary care problems requiring professional attention belong to the low-complexity section, and in few cases it may even belong to the secondary level. An example could be the existence of hospital privileges for a general practitioner in a general hospital.

This representation of the relationships of the two movements is taken from the excellent book by Mario Chaves, *Health, A Strategy for Change.*[8] It is obvious that the definition of primary care is closely bound to the social and economic conditions of a country and the definition is relative to the situation of health care. What constitutes primary care in a developed country may be intermediate-or even high-complexity care in a less developed one. Given the wide diffusion and acceptance received by the Alma-Ata conference, I think the term primary care as defined by WHO should be preserved. It is probably easier to abandon the classification of

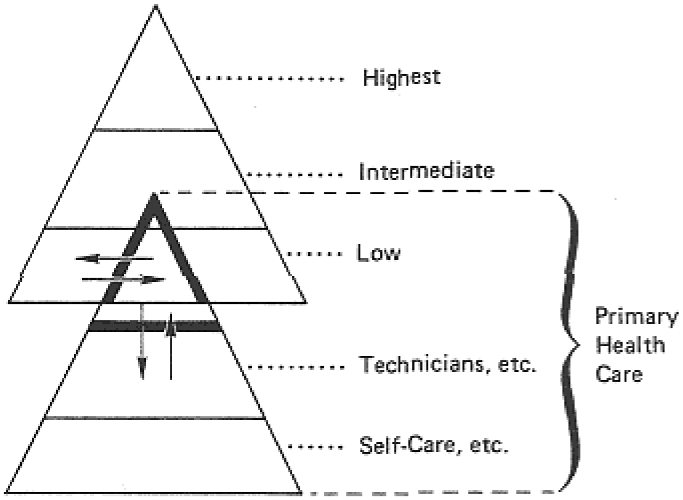

Figure 1 Relationship of two pyramids to explain the extension of the primary health care concept.

primary, secondary, and tertiary care and introduce the corresponding low, intermediate, and high complexity of care. In the same way the practice of a general practitioner in the English health system and the practice of a family medicine specialist in the United States should not be called primary care, but rather general practice or family medicine. By the same token, projects related to the health of given populations or community medicine projects need not have the term primary care included. It is understood that the larger part of their efforts would be devoted to primary care, but, certainly, all levels of complexity will be touched.

REFLECTIONS ABOUT COPC PROJECTS EXTRACTED FROM THE CALI EXPERIENCE

In Colombia we started our first COPC project in 1958 in a rural town near Cali, called Candelaria. The main purpose of the project was to have a place where our graduates could make the compulsory rural internship year useful. Very soon it attracted people from the social medicine and the clinical departments and became our community laboratory. Although most of the experiments do not meet the rigor of the experimental method, most of them developed into experiences from which a great deal was learned. Here I intend to summarize some of the wisdom gained in these years.

First, we found that COPC projects involve social change, and social change takes time, even under favorable conditions. COPC projects have a time span on the order of 10 years, sometimes more. No quick responses are generally obtained from the community.

Second, COPC projects tend to function well at the beginning or in the demonstration stage. One reason for this is the “Hawthorne effect,” which occurs because participants are actively interested in the good result of the project. Another reason is that the strong personality who generally initiates such a project is exercising his influence. It follows then that COPC projects should only be evaluated once they have reached a normal operation stage.

A third lesson is that, although primarily concerned with education, universities and other academic institutions have something to learn from the existing health system. COPC projects will always have some relationship to secondary and tertiary care, if only to develop appropriate referral systems. And, finally, stable financial bases are a key to the long-term success of COPC projects. Grant or foundation monies given, as a rule, for short periods of time may be used to start projects, but long-term support from existing community institutions is needed. As a rule it is better to “graft” a project into an existing institution and assure its participation from the beginning in such a way that when the grant money is finished the existing institution will continue.

An International Perspective on COPC

The emergence of several independent movements with different origins, in different parts of the world, and yet with strikingly similar objectives points to recognition of the worldwide need for a COPC approach. As I mentioned earlier there is a need, on the part of government agencies (health ministries) of both developed and lesser developed countries, for a means to increase coverage of health services and reduce costs. The Alma-Ata mandate is compelling for less developed countries, yet, in affluent countries like the United States, there continues to be a growing concern about rising costs of medical care.

From an educational perspective there is a need to expose health professionals to COPC. This has taken two slightly different approaches. One emphasizes clinical epidemiology. This approach has been sponsored most notably in the United States by the Andrew W. Mellon Foundation and the Milbank Memorial Fund. The aim of this movement is to introduce in medical schools, and more specifically in the clinical departments, a more quantitative approach to problems such as the prevalence and causal factors of the more important diseases in the area. There has been some success meeting this goal. McMaster University in Canada and the University of Pennsylvania in the United States have assumed a training role for clinicians of different countries.

The other educational approach to exposing health professionals to COPC has taken the form of a worldwide Network of Community Oriented Educational Institutions for Health Sciences. Under the auspices of the World Health Organization and support from the Rockefeller Foundation, several educational institutions with innovative approaches to community oriented medical education have organized a network with the primary objectives being the interchange of experience in this area and help in the diffusion of the concept. The University of Limburg, in Maastricht, the Netherlands, has been appointed by the rest to act as secretariat for the group. In the United States, Michigan State University and the University of Pennsylvania belong to the network, while the University of New Castle in Australia, University of Tromso in Norway, Universidad Autonoma Metropolitana of Xochimilco in Mexico, Universidad del Valle in Colombia, McMaster in Canada, Ben Gurion University of Israel, and others from different parts of the world make up the remainder of the group.

An Attempt to Improve the Surgical Care Delivery in the Cauca Valley

The following is an example of what could be called a community medicine project involving surgery, an area not frequently included in similar projects.

Although it had its origin at the Universidad del Valle in Cali, Colombia, after a succesful demonstration project, it has been officially adopted by several cities and institutions in Colombia. Since it deals with low-complexity procedures, it could also be called “surgical primary care,” but, in accordance with the previous considerations, we have not used that term.

The Department of Surgery of the Health Division of Universidad del Valle undertook a large systematic study of the surgical care system of the Cauca Valley, one of the geopolitical divisions of Colombia, with the purpose of seeking ways to increase the coverage of the system. An inventory of physical and surgical manpower resources was carried out. During 1 full year all surgical interventions were studied and later were classified into four different levels of complexity. An experimental surgical unit was organized in the university hospital, and a model of high productivity and low cost for low-complexity operations was tested. After successful results, the model was adopted by the city of Cali and several other cities of Colombia. More detailed accounting of this study can be seen else-where.[10,11] The most striking results were:

1. Thirty-two percent of the existing 478 surgeons performed less than one operation per week. The mean yearly productivity was 120 operations, with striking differences with the specialties.
2. Of the 76 operating rooms, 46 were located in Cali, the capital city of the Cauca Valley. Mean utilization of the operating rooms was 42 percent. As a consequence, it was recommended (and accepted) that no new operating rooms be constructed in the Cauca Valley.
3. Of the 50,782 surgical interventions carried out during calendar year 1974, three-fourths were of low levels of complexity and could be performed on an ambulatory basis with immediate discharge after recovery from anesthesia. Similar results were found in the United States using the same classification of the interventions of low complexity.
4. Twenty-eight procedures make up nearly 90 percent of the low-complexity operations, although they belong to different anatomical regions and, consequently, to different specialties.
5. The cost of a herniorrhafy performed under the experimental model was $30. (U.S. currency) in 1976. Under the traditional system, the cost was five times higher.
6. Patient satisfaction and acceptance were excellent under the experimental model. Overall, this COPC demonstration project in the Cauca Valley has been very successful and has been adopted elsewhere by other institutions in Colombia.

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Discussants

Stephen C. Joseph

I want to pick up on two themes followed by Dr. Guerrero, which are also related to the papers of Drs. Abramson and Geiger. These themes are:

1. The problem of semantics, nomenclature, and jargon in defining what we are about.
2. The importance of the existing worldwide network of those involved in community oriented primary care, or whatever name may be the fashion of the time or place.

I do not mean to obscure the different emphases of the various labels. Certainly COPC, as the newest term, has differences from community health, community medicine, social medicine, primary care, comprehensive health care, and so on. But, whatever labels we place on our efforts, we are, all of us in this field, the professional offspring of John Grant[1] and Will Pickles,[2] and our midwives are named Kark[3] and Deuschle. [4]

COPC, in all its guises, has twin driving forces or underlying objectives. These are *access* (sometimes called availability or entitlement; sometimes expressed in terms of equity) and *relevance,* using epidemiology to show the relationship between a community's highest priority health needs and the deployment of resources to serve them. These twin objectives have been present as part of COPC and related efforts both in the United States and other affluent countries (with perhaps greater emphasis on access than on relevance), and also in analogous activities in the developing countries (with perhaps the emphasis reversed).

For example, there has been a heavy emphasis in U.S. COPC, as Jack Geiger described in his paper, on “bringing the poor into the mainstream.” Most COPC activities in the developing countries have been trying to find ways to stretch very scarce resources to cope with the most high-priority problems (e.g., the development of village health workers, of essential drug formularies, etc.) and have not had much hope of achieving universal or even majority access for the mass of the population.

This was, of course, the great challenge of Alma-Ata, and the greatest excitement of having been there was to see the world health community take up the ideal of fusing the twin objectives of access and relevance as the main means of improving world health, as applicable in Boston as in Bombay or Bogota.[5]

While my remarks today are concerned more with the organization and delivery of services, let me at least mention that these twin concepts of access (I will use the word equity from here out) and relevance need also to be embedded in COPC efforts in medical and other health professional education.[6]

When preparing my remarks, I thought for a time of taking a small sample of this group gathered here at Airlie House, a sample at various ages and career stages, and plotting, or at least calculating, the number of significant prior professional interactions among the sample. In the end, I decided not to; however, I hope you will accept my point in anecdotal form; we are possessed of a worldwide and unusually interconnected network. This network gives us both resiliency and continuity when, in a given period in a given country, we find ourselves in hard times and in a political and economic climate hostile to our COPC aspirations. This is clearly the case at present in our own United States. Our COPC international network (though no one would recognize it by that name) is characterized by slow but evolutionary progress and has taken root and spread almost everywhere that I can think of, and certainly in every country that I have seen, in the past few decades. It is the existence of this network that leaves me less pessimistic for developments in my own country, not that I would urge complacency or less than full-scale criticism of policies that work against equity or relevance, anywhere. But I am confident that our dispersed efforts have a great survival value, that they will continue to gain in impact and momentum, and that we will, all of us, continue to borrow seeds and grains from far places with which to cultivate our own gardens.

COPC has been the most international in all of medicine; it is also important to note that it has proceeded by a process of evolution rather than by quantum revolutionary research advances. These two characteristics have meant that our field shows major local variation in adaptation and coloration and that most of the major tools have been discovered and rediscovered many times. However, in all our diverse settings, whether in affluent or poverty communities, three principles have generally been considered as defining COPC. I want to add a fourth "pillar" to our list, not because I think it has not been thought of before (on the contrary, it is almost always an integral part of any program of COPC), but the fourth element often is left out of the formal listing. The first three pillars are, of course:

1. The care of a defined population or community, with the full and active involvement of that community.
2. The linkage between clinical care and preventive, promotive, and public health services, utilizing a multidisciplinary health care team.
3. Adding the tools of epidemiology and the behavioral sciences to the physician's bag. The fourth pillar of COPC, which I will amplify later, might best be termed:
4. Social and political activism aimed at the root causes of illness and wellness.

Many years ago, Virchow said that "Politics is medicine writ large." We have learned from the international context, and especially from the transnational context, that the converse is also true. One need only think of recent international controversies over the promotion and marketing of infant formula, or over the export and use of banned pesticides, or over the behavior of the multinational pharmaceutical industry, to see very sharp and important examples of how larger political and economic issues affect, not just health in the abstract, but community oriented primary health care, all the way from the health environment of the denominator community, to the costs and benefits of organized services, right down to the clinical primary care of individual patients.

In the history of COPC development, one does not have to look at international issues to track the attention paid to underlying political, social, and economic issues. Back in the days of the Office of Economic Opportunity's Neighborhood Health Center Program, I remember food production cooperatives in Mississippi, lawyers in health centers working on such issues as lead paint in New York City, and a variety of other direct social and political initiatives that were at the heart of what that program was all about. This social activism in the cause of COPC is, I submit, as important as the other three central principles.

I end up, then, with four pillars in my definition of COPC. That definition can be, and has been applied in, settings as widespread as Watts, Wales, and West Africa. This array of international perspectives, at once similar and yet diverse, from which we continue to learn from each other is the proof of our relevance and also our greatest strength.

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Keith Bolden

Dr. Guerrero has mentioned the virtual disappearance of the general practitioner earlier in this century. This, of course, was true in America, but in the United Kingdom there never was any question of the general practitioner disappearing. Indeed, since 1911 the health care system has been structured on this very person, and the 1948 National Health Service Act only reaffirmed this point of view. There are a great many assets for patients in having personal and continuing care from one clearly identified family doctor. This has always been possible within our system, because patients have to access all health care through their family doctor.

My colleague in Exeter, Dr. Dennis Gray, classified general practitioner care into six components. These are primary care, family care, domiciliary care, preventive care, continuous care, and holistic care. Dr. Guerrero defined primary care, and it has been covered elsewhere in these proceedings and on many other occasions. Family care is very clearly described and documented with its virtues by Huygens in his classic book from the Netherlands on family medicine. Domiciliary care and the value of seeing the patient in his own home has been clearly shown by Dennis Gray in his James McKenzie lecture to the Royal College of General Practitioners in 1977.

Preventive care and the important role that the family doctor has to play in this has been clearly identified in the recent Royal College of General Practitioners publication by a working party on this subject. A marvelous example of preventive care is given in this document. It outlines two Nigerian villages that were studied by this group. They looked at the under-five clinic that had been established in the village. This clinic combined preventive and curative services on a daily basis. It was staffed by two nurses and six midwives and dealt with 41,000 visits by under-fives each year. In the neighboring comparison village, there was a local dispensary employing one dispenser and two midwives. It dealt with 3,700 child welfare visits in a year.

The difference in under-five mortality between the two villages was striking and cannot be accounted for by any factor other than health inputs. For example, infant deaths were halved, and child mortality rates in the study village were a third of that in the other village, with a significant growth difference between the children in the two villages. Ninety-nine percent of the study children had vaccinations and only 45 percent in the other village. As can be seen from this simple example in primitive conditions, a great deal can be done with preventive care.

Computerization was mentioned in an earlier paper, and for the past 7 years I have been involved in the Exeter computer project. This project was originally conceived as a means of computerizing the whole of the health care area—both the hospital and the community aspects of it. Unfortunately, over the years, with the steady restriction of funds the original framework has had to be modified, but, nevertheless, this project is still running, and computerization of a community is possible.

Great interest has been shown in the use of computerization in primary care in Britain, and various ways of implementing this for the benefit of the community are being explored. Major epidemiologic and preventive care advantages to the community will result from computerization of clin ical records, which will enable such information as the incidence of hypertension and diabetes to be recorded or the identification of at-risk groups for various preventive activities such as immunization or cervical smears.

The conclusion of this important report places the responsibility for preventive care firmly in the lap of the general practitioner as a coordinator of these activities within his practice. It was interesting to me that Dr. Guerrero was making a claim for the universities to be responsible for this particular field. However, the implications of this general practitioner responsibility are that the family doctor must have the resources to accept it, and he must have efficient record and recall systems and the full cooperation of the primary health care team.

Finally, we come to continuous and holistic care. The Leeuwenhorst Working Party in 1977 defined the general practitioner as a doctor who provides personal, primary, and continuing care. If the doctor, seen by the patient on each occasion, is different, the many advantages of continuous care are lost. The Leeuwenhorst job definition states that the doctor should have empathy with the patient and should use the therapeutic relationship that develops over a period of time for the benefit of that patient. The implication of this is that the patient needs to see the same doctor on more than one occasion, if that doctor is to become his personal doctor.

Working together with the personal care of the doctor is the practice team and the members of this team, who include the secretaries and reception staff, the nurses, and the community workers such as health visitors and midwives. These members should also offer personal and continuing care so that they all work together on a personal and continuing basis to complete the concept of COPC.

Given this emphasis, there is then the matter of training this team. Vocational training for general practice in the United Kingdom has developed rapidly in the past 10 years, culminating in the Vocational Training Act of 1981, which firmly puts the general practitioner on an equal postgraduate training footing with a specialist in a hospital. There are many schemes producing highly trained young doctors to enter general practice. These doctors, besides being trained in the well-recognized fields of clinical knowledge, also include in their training other aspects, such as behavioral patterns, practice organization, and the implementation of principles of preventive care within the population for whom they are responsible.

All patients, as I have said, have access to health care through their general practitioners, and it therefore makes it much easier to implement policies of care related to the community the practitioners serve. Alongside the training of family doctors are parallel developments for the other members of the primary health care team. The Royal College of General Practitioners and the Association of Medical Secretaries have long recognized the ne cessity of a training program for reception staff. Health visitors have to undergo extensive training, including a 1-year, full-time course. At present, I am in a working party with the Royal College of Nurses developing postgraduate training for practice nurses. In addition, there have been some experimental courses such as the one we are running at Exeter. This is a course that has been run on a research basis to look at the ways in which one might train members of the remedial professions on a postgraduate basis. It has proved to be a highly popular course and is giving these people postgraduate support from their peers, which they have never had before.

Now, finally, what about the patient? Patient satisfaction studies in the United Kingdom still show that most patients think highly of their family doctor. However, there are indications that all is not as satisfactory in this area as one might wish, and those complaints can be traced to situations where the practice was not organized on the basis of pesonal care. A recent trend has been the establishment of patient participation groups described in another report fom the Royal College of General Practitioners, and I am sure that this liaison between the health care professionals and the patients can only be good and will expand.

Indeed, I think the challenge of this decade is to involve the patient in his or her own health care, and this, in fact, seems to me to be the basis and cornerstone of COPC.

Opportunities and Constraints for Community Oriented Primary Care

Donald L. Madison

Over the years promoters of community oriented primary care (COPC) have recognized that for COPC to be effective there must be thoughtful consideration given to the opportunities and constraints that influence the success or failure of individual COPC practices as well as the movement as a whole. The environment that creates the opportunities and imposes the constraints must be continually examined, and a careful balance between these factors must be worked out.

The paper is an effort to describe some of the opportunities and constraints that must be considered by today's practitioners of COPC. Let me first consider the forces that are presently working to inhibit the flourishing of COPC. In today's political and economic climate, there are many such forces; my list will necessarily be selective.

Probably the most pressing problem is finding the money needed to get started and to remain solvent. The very nature of COPC makes this basic constraint more significant than it is for more traditional medical practice settings. Professing a community orientation means rejecting the procedure-oriented, fee schedule consciousness of the physician entrepreneur. However, it goes further than that, and so do the financial consequences. Invariably, the community diagnosis will suggest that some of the most important needs are for what the British call the “Cinderella services,”[1] i.e., those items of service and organized programs that show little technological glitter and lack the glamour of more rapid health-restoring interventions but that often turn out to be more beneficial for more people in the long run. The Cinderella services of primary care include educational services,

services directed to people in their home, special programs for identified groups of socially and medically dependent people, and, of course, organized measures for prevention at all of its levels. By definition, a community oriented practice includes in its program as many of these kind of services as it sees are needed by its community and that it can afford to provide or arrange.

Since these services tend to be directed disproportionately to those least able to support them through payment of fees, and since they cost as much as most traditional items of primary medical care but are seldom recognized by insurance carriers or government financing schemes as a legitimate part of medical indemnification, there is little chance that their full costs can be met from the earnings they themselves might generate. Some subsidy is required, either from the heavy fee-generating side of the practice—assuming conditions are such that the practice can have a heavy fee-generating side—or from outside the practice.

Subsidizing unprofitable services from within an organization is frowned upon as a questionable business practice by those who think in such terms, unless the unprofitable services can be made to serve a legitimate business purpose. So, in the language of the accountants, the Cinderella services are given a new name: “overhead.” The marketing people use another term: “loss leaders.” Either term implies an “in the service of” relationship to what is considered the “real business” of the practice. Obviously, in such a relationship the value of these community oriented services will be measured against criteria that are not those of community health. The usual source of an external subsidy is the government. For government to subsidize the Cinderella services, there must first be a social policy that gives priority to restoration and maintenance of people's health, and there must also be some commitment to equity in health services. When these are given attention, COPC tends to grow and prosper. At all other times it struggles.

A second constraint that operates regardless of whether governmental subsidy is available is the fee-for-service method of providing medical care. Under fee-for-service, those items of service that can generate the highest dollar return tend to be favored over those that are priced lower. Moreover, the hours spent by physicians and other fee-generating workers in activities such as planning, teaching, evaluating, supervising, or just meeting as a team—activities of leadership that every community oriented practice requires—are naturally considered to be “nonproductive” time.

A private fee-for-service group might lessen this productivity emphasis by reducing the relationship between an individual's compensation and the volume of fee-generation credited to that individual. But the trend has been in the opposite direction.[2] The emphasis on individual economic incentive within a cooperative practice setting may very well enhance the production of group income, but it is a constraint against incorporating many of the program elements that form the basis for a community orientation. For example, one national study of large, primary care oriented multispecialty medical groups showed a negative relationship between group compensation methods that were based mostly on an individual physician's fee-generating activity and the emphasis given by these groups to continuing professional education, quality assurance, patient care innovations, nonmedical primary care services, satellite locations, and after-hours service. [3]

There is a further constraint that is related to fee-for-service, but is even more basic. A style of medical practice that values technological modalities of illness care as essential and that considers teaching, social and emotional support of the ill, and identification of those at risk as desirable but non-essential modalities has brought about a general preoccupation with cost that leaves little room (and no money) for any services beyond those deemed essential. Departments of medicine in many medical schools ride along on the earnings of two of their subspecialties: cardiology and gastroenterology. Why? Is it because these two have demonstrated the best record of restoring health? Who can say which medical specialty produces more health? The reason is that these two subspecialties of internal medicine offer the most technology for sale. It is now possible with fiber optics to gaze directly upon every nook and cranny along the entire length of the gastrointestinal tract—at $5 dollars per centimeter. Such response to a stomach ache leaves few dollars available for alternative or additional responses.

He who writes the ticket determines the destination. So long as a technology-addicted profession retains control of a nation's health care, the services for sale—the ones the people are told are essential—will be those that feed the addiction. Never mind how much healing results per dollar spent. The Cinderella services that are indicated as part of community oriented primary care will inevitably be caught in the budget squeeze, not because they themselves are especially expensive, although they do cost; not because they are less effective, although they will never be credited with as many dramatic results; but simply because other more expensive destinations are the most interesting to those who write the tickets, and getting there is budget-busting.

Clearly, in the United States a major constraint for COPC is the pluralism of the American health care system. Rarely does any single source of primary care service a clientele that corresponds to the majority of people residing within a given area. Most American communities are served by many physicians from a variety of practice organizations that may or may not be located within the area of the community. Even most rural localities, including many that formerly existed in a medical vacuum, now have access to physicians located in nearby larger towns, physicians in virtually every specialty who depend for their living on many of the people in the smaller outlying communities.[4] This state of affairs makes the practice of COPC health care in its pure form, as described by Sidney Kark in his book of that title, difficult or impossible to achieve except at the margin.[5] In the United States there is no sectorization of responsibility for medical care as there is in the rural area of many developing countries, in the polyclinics of Cuba, or in much of the United Kingdom, where the general practitioner's list tends to correspond approximately, if not exclusively, with a small geographical area.

However, even within the mainstream of a pluralistic system it should be possible to adopt many of the principles of COPC care. This has been described elsewhere using another term, one that perhaps implies a bit more strongly the possibilities for a community orientation by the mainstream. The term is “community responsive practice.”[6,7] It means essentially the same thing, and I use it interchangeably with COPC.

The very basis of community-responsive practice is a consciousness of the idea of “community” on the part of clinicians. All community-responsive practice depends in the first instance on a realization that the clients themselves constitute a “community” that the practice can reach in some way, then on designing services and programs through which those at risk can be better served. By this, I mean that although we usually think of a “community” as being politically or socially defined (e.g., a town, county, or neighborhood, the students at a school, the workers at a factory), it may also be seen by a medical practice as the collectivity of its clients, whether or not they would otherwise emerge as a natural social grouping. The notion is that better, more responsive service is possible from the practice that knows the problems affecting its own “community” of patients. By this modified and somewhat compromised meaning of COPC, it becomes possible for virtually any practice to take on a community orientation; in other words, every practice has a “community” of its own to respond to as soon as it recognizes that it does.

The problem comes in the recognizing. The main constraint is the traditional medical view that medicine's concern is only for individuals as they seek care, not for groups of people. This is a view that physicians are taught and one that the profession has defended repeatedly.

In 1932 the Committee on the Costs of Medical Care published its final report. The central recommendation was that medical care be delivered locally by multidisciplinary groups (“community medical centers”) controlled by professionals with lay participation. These would be hospital-based and regionally organized. The community orientation was never explicit, but the implication of what might be involved was not lost on the members of the committee who wrote the minority report (which was then endorsed by the AMA):

> It is always the individual patient who requires medical care, not disease or economic classes or groups…. It seems almost impossible to those who are not engaged in the practice of medicine to understand that the profession of medicine is a personal service and cannot adopt mass production methods without changing its character.[8]

The legacy of this traditional view still acts as an important constraint. Indeed, one could parody the language of the minority report and say, with some chagrin: It seems almost impossible to those who *are* engaged in the practice of medicine to understand that many problems affecting individuals could be more effectively addressed if such individuals could be considered as belonging to a group or a community, thereby enabling interventions that focus on communities of individuals who may share the same health problem.

Still another constraint is the shortage of the kind of medical leadership that programs of COPC require. I mentioned physicians, and not administrators, nurses, or other health professionals, because I do not perceive as great a shortage of leaders among these others, and also because I believe that medical leadership is critical, the sine qua non. The inertia represented by the traditional practice mode can never be overcome without it. There may now already be sufficient physicians willing to practice in community oriented settings. If not now, there will be soon; in fact, there is every prospect of an employers' market in the United States for physicians' services by the end of this decade. That is a different matter. COPC will still require physician-leaders, people who possess the combination of biomedical knowledge, commitment, creativity, and the skills needed to plan and carry out community oriented programs.

In my experience there are surprisingly few of these physicians available. Perhaps this is because those who might otherwise qualify choose to do other things than primary care; or maybe primary care training fails to emphasize the necessary qualities or doesn't provide the needed skills; or possibly the incentives are simply not the right ones for today's young physicians. Whatever the reason, qualified and committed medical leadership, which may be the most important of all elements necessary for successful community oriented primary care programs, seems to be one of the most difficult to find. And its scarcity must be considered another constraint.

And if the necessary money, professional attitudes, and committed medical leadership were all in place, another question would arise: Who would have the know-how? How does one approach the process of community diagnosis, and what does one do with the results? How does one match community health needs, once made visible, with responsive service programs, and then evaluate their effectiveness? Few physicians or administrators really know how do do this well. If epidemiology is the science they can use, where are they to learn it? Most medical students know epidemiology as the observational science used by investigators of communicable disease outbreaks, or else they think of it as the stuff of large-scale studies conducted from academic centers. In its most recent incarnation, under the lable of "clinical epidemiology," it deals largely with the methodology of clinical trials.[9] All of this is important and necessary, but the application to community oriented primary care is missing. Where does the primary care physician learn to apply the science of epidemiology to community diagnosis? In residency training? In some new kind of community medicine fellowship that does not yet exist? If the science of epidemiology remains inaccessible to the practicing primary physician, the community oriented primary care will lack a science base.

This is not to say that no research is going on at the primary care level. Within the family practice movement in recent years, for example, there has been a considerable amount of research into the content of primary care practice.[10] Unfortunately, there is also a tendency among some practicing primary care physicians interested in research to stop at that point, to acquire what might be called a census-taking fixation. This starts with a careful counting of one's patients and their presenting problems, perhaps using a computer to assist with the counting, revising, and updating; then describing the practice content in terms of the frequency of the various conditions seen, and soon; but it never really goes to the next step—using this intelligence to make the program of the practice more responsive to its community of clients. Baseline data are, of course, important to have, but they should never be an end in themselves. The proof of the pudding, the test for whether practice content research really contributed anything valuable, is found in looking at the practice's program. Given the knowledge that "x" percent of a practice's patients between the age of 40 and 64 have been found to be hypertensive and are under care for that condition, what else is the practice doing about it? Can anything more be done for those being treated. What is being done for other patients in the practice who may be at risk? In the community-at-large? A primary care practice's community orientation begins logically with data, but it cannot stop there. A fixation at this point, affecting some of the best primary care physicians, is yet another constraint.

A recurrent theme in the American experience with sponsored primary care programs is the theme of multiple goals in conflict. In the 1960s the introduction of neighborhood health centers represented an important in novation in American medical care. They were designed to be comprehensive, family centered, and provided personalized attention and other amenities that are expected by most Americans but that the intended clients—mostly the poor of the inner cities—do not usually receive in the teaching hospital outpatient clinics that were their major source of primary medical care. Yet neighborhood health centers were also part of a declared "War on Poverty," with its central themes of economic opportunity and "maximum feasible participation." Neighborhood health centers attempted to address both of these themes—medical care reform and intervention in the poverty cycle—at the same time in a single program. Most of them succeeded. But conflicts did arise over what was most important, what were the priorities. These conflicts were not only between health center staff and local spokesmen for the poor, but also with the sponsoring federal agency and the Congress, which was gradually changing policy objectives.[11,12]

This theme of shifting and sometimes conflicting goals carried on into the 1970s with the federally sponsored rural initiatives, including the National Health Service Corps (NHSC). Conflicts arose over whether these practice settings should attempt to become community-responsive programs, as the leaders of the NHSC and many of the physicians assignees and other staff envisioned, or were they merely a manpower deployment strategy, as viewed by some in Congress, and, as such, to be seen as a temporary and inherently inferior alternative to the less rapid, laissez faire movement to private physicians into the rural areas? The question was of program quality versus the more quantitative presence of a resource. Such differences have led to changing criteria for funding and are another important constraint for community oriented primary care. I can think of no major program in the United States, public or private, that has attempted to sponsor community oriented primary care and has been able to stay free of this ambiguity of goals.

That concludes my highly selective list of constraints. Now, what of the opportunities? It isn't likely that next year will bring a new flurry of federally sponsored initiatives. Nor is there reason to believe that the medical schools and residency programs are about to begin emphasizing a new community awareness and the skills that physicians need to incorporate community-responsive programs into their practices. Still, in this day of cost-consciousness, when the medical care lexicon features "competition" as the favorite term and "marketplace" as the preferred concept, when a physician glut lies waiting around the corner, there may yet be a place for community oriented primary care.

One scenario might go as follows: First, there will soon be too many specialists competing for too few referral sources, including self-referrals. At the same time, those practice organizations that wish to remain in the business of delivering primary care beyond the episodic encounter (a service item now being claimed by a new medical version of the Seven-Eleven convenience store) will start to compete openly with each other for a permanent clientele. Second, in order to attract and retain the loyalties of patients, these primary care providers will naturally emphasize the advantage that can accrue to the patient from maintaining a long-term affiliation with a primary care practice. Not emphasizing such advantages would be to risk losing the client to one of many competing providers in a crowded field. Of course, in order to emphasize the value of a continuing affiliation, some of these advantages must become visible. And this, it seems to me, is where community-responsive practice might find a place.

The primary care practice that views its clients as a community—communicating with them, looking to their needs, and responding with programs of care—should have a decided competitive advantage over practices that continue to view themselves and their patients exclusively in the traditional one-by-one, one-on-one manner. Already, the idea that some additional kind of response may be necessary is getting attention. For example, the AMA's trade newspaper, *American Medical News,* recently featured a report on the competitive importance of organized patient education programs in group practice.[13] Again from the *American Medical News,* in a front page story on practice promotion, the president of a New York advertising firm says, “We're all up against it nowadays. Competition is growing in every field. Physicians can't afford to sit back and wait for patients. They're going to have to develop a media strategy and market their services.”[14] And this copy from a journal advertisement: “Build your practice by doing a public service. Boost your visibility among thousands of potential patients. Revolutionary new MD advertising program. Reply Box 12824, *New England Journal of Medicine.*”[15] I did reply. The scheme is for the private physician to sponsor a series of health messages in the local newspaper, a sort of Mobil Oil series on the common cold, the best kind of exercise, fat metabolism explained, and several other topics, and, at the bottom, a prominently displayed credit line: “this message is brought to you as a public service by so and so, MD.” Advertising is only a start. On the local level, in a crowded market, there must also be performance if the practice hopes to keep the loyalties of the few among those “thousands of potential patients” who may have decided to sample the product. And other things being equal, it is in performance that a community-responsive practice should hold the competitive edge.

Now this scenario assumes that the new marketplace will lease to better programs of care. Of course, it may not happen that way at all. Thinking of the less profitable health care activities in a practice as “loss leaders” or “overhead” instead of an ethical professional response to community needs could instead prove more conducive to the medical equivalent of the white sale, the end-of-the-year, two-for-one special on physical checkup, etc., than to a new recognition that a practice's clients are a community with community needs that ought to be addressed. Yet the possibility for competition to stimulate real community responsiveness does exist and may provide one of the true “opportunities” of this epoch.

It appears to me that greater opportunities for community oriented primary care exist outside the United States, especially in the less developed nations. This is not to say that Third World nations do not have a set of constraints all their own. But some of the more important of these may now be less constraining than they have been in the past. In 1959 Dr. John Grant prepared a report for the International Cooperation Administration (ICA), the predecessor agency of AID, in which he noted a number of problems confronting health care programs in the less developed countries. Dr. Grant was at the time of this report nearing the end of his 42 years with the Rockefeller Foundation, in whose service he had worked all over the world advocating community oriented primary care, although he didn't call it by name. One of the most important of the problems, Grant noted to the ICA, was a tendency by consultants from the United States, as well as nationals trained in the United States, to “propose a type of health care organization for the less developed nations which is unsuited for their needs.” Grant wrote:

> The separation of preventive medicine from curative medicine is almost a fetish in the United States. One of the earliest offenders in exporting this attitude to underdeveloped areas to the detriment of future medical progress was The Rockefeller Foundation. Curative and preventive medical care just cannot be separated in the organization of health services in the less developed countries…. Furthermore, the emphasis of the ICA missions in the health field have largely been directed towards (the technical aspects of health problems), with the result that the larger, more basic problems have most often not been resolved.[16]

The World Health Organization issued a remarkable document for its Conference on Primary Care in 1979 at Alma-Ata.[17] This report is rich both in strategy and specifics, and much of its main theme follows directly from John Grant's earlier observations. A brief quote:

> Health resources are allocated mainly to sophisticated medical institutions in urban areas. Quite apart from the dubious social premise on which this based, the concentration of complex and costly technology on limited segments of the population does not even have the advantage of improving health. Indeed, the improvement of health is being equated with the provision of medical care dispensed by growing numbers of specialists, using narrow medical technologies for the benefit of the privileged few…. At the same time, disadvantaged groups

> throughout the world have no access to any permanent form of health care. These groups probably total four-fifths of the world's population, living in rural areas and urban slums…. Thus, most conventional health care systems are becoming increasingly complex and costly and have doubtful social relevance.
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> They have been distorted by the dictates of medical industry providing medical consumer goods to society. Even some of the most affluent countries have come to realize the disparity between the high care costs and low health benefits of these systems. Obviously it is out of the question for the developing countries to continue importing them. Other approaches have to be sought.

In the Third World, where a country's total resources may be insufficient to afford access to the technology-intensive Western version of health care for more than a small fraction of the population, usually the elite in the capital city, there is now recognition that the acquisition of expensive tertiary facilities must be replaced by national policies of equal access to community oriented primary care. In countries where the political philosophy allows such a collectivist health policy, the opportunities for advancing community oriented primary care are greater now than they have ever been. The economic logic and the ethical soundness of this kind of distributive strategy, as well as some of the individual models that we can expect will be developed in these Third World countries, may well prove attractive and adaptable to other societies in the future.

In the United States the picture looks less promising. Yet if we have learned anything from the late 1960s, it is that the present state of affairs ought not to be projected as the future state. In 1967 and 1968 many of us shared the feeling that if we worked hard enough, virtually all of the nation's disadvantaged citizens would soon have access to responsive community oriented health care programs. A 1967 analysis by the Department of Health, Education, and Welfare projected a need for 620 comprehensive neighborhood health centers in communities with sufficiently high concentrations of poverty so that each center would serve 25,000 people.[18] Fifteen years ago it didn't occur to some of us that the early momentum of the Great Society would not continue until such goals were within sight. The important lesson is recognizing that 1982 will soon be history, just as the 1960s are now.

One school of alchemy holds that history will repeat itself. This theory of historical recapitulation does not, so far as I know, lend itself to proof in the scientific era. It does invite speculation. Earlier in this nation's history an era of progressive reform—in conservation of natural resources, redistribution of wealth, restraints on free enterprise, and equal access to political participation—was interrupted by a “foreign” war. After the war came a decade of prosperity and a time of great personal self-indulgence, the first "me" decade, which merged into a period of economic "meism" with uncontrolled entrepreneurship and speculation made possible by a government that believed its motto, "the business of America is business." Noncontrol soon led to out of control, which was followed by economic crisis and great human suffering. Out of the crisis came also a change in priorities, hope, fertile ground for new ideas, and ultimately a more humane national identity.

I do not make this historical reference as an exercise in nostalgia, nor am I hoping for a complete recapitulation of events that would necessitate another economic collapse before the next era of progress is possible. I sincerely hope that the pendulum, as it swings back, will somehow omit that portion of its arc. The pendulum will surely continue to swing, and there will again be opportunities for community oriented primary care to fulfill its promise as the best way for personal health care to improve health.

There are still people in the United States who are disenfranchised from effective health protection, disenfranchised even if their "access" to medical care, as measured by frequency of physician visits, has increased. There is still a national responsibility to promote the general welfare. And there remain advocates of the notion that relief from the pain of ill health and its prevention can be best accomplished by a single team of health workers who will attend each individual's problems while looking for ways to address such problems on a community level.

The present opportunity, it seems to me, is to further develop and share the methods of community oriented primary care so that they might be applied as widely as possible in a variety of organizational contexts—in prepaid group practice plans and private suburban practices, in urban public hospitals and rural health centers, in training programs for physicians and other health workers, in the United States and around the world. This requires a group of people who have shared the experience of doing community oriented primary care and who feel bound by an ethic of service to continue, regardless of the constraints, so that the goal of better health for all might continue to be pursued effectively by those whose principal task is to heal the pain of individuals.

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Discussants

Luana Reyes

In response to Dr. Madison's paper, I would like to share my experiences with you and discuss the opportunities for COPC more than constraints. The constraints on COPC have been covered rather adequately. They have been with us for a long time, are likely to be around for a bit longer, and, in my view, are constraints that need to be addressed and resolved by another community—the medical community.

In addition to my primary care work experiences with urban Indian health and now with tribal health on an Indian reservation, I have been involved, on a volunteer basis, with an institution that is very important to the rest of my work. I currently serve on the council for a new entity in the city of Seattle. It is the Seattle Public Health Hospital Preservation and Development Authority, a public corporation that last November took over ownership and control of what used to be a U.S. Public Health Service (PHS) hospital. This organization is important because it abounds with many opportunities for the kinds of things that we are talking about in connection with community oriented primary care.

The hospital began its community involvement with a number of community organizations in the late sixties and in the early seventies. Among the earliest organizations involved with the then Seattle PHS Hospital were the Seattle Indian Health Board and an organization called the Public Health Care Coalition, whose members included community activists, the forerunners of what eventually became community clinics, hospital employees, and patient group representatives. The Public Health Care Coalition really organized around the hospital in an effort to keep it open when, in the early 1970s, the Nixon Administration was trying to close the eight remaining Public Health Service hospitals.

The Seattle Indian Health Board, while involved and interested in keeping the hospital open, had another agenda. It was looking for a place to live and a hospital to back up the services that it was beginning to provide in a free clinic environment. However, it was the Public Health Care Coalition that introduced one of the essential elements of COPC (community involvement) into their early relationship with the hospital. They advocated establishing a community governing council for the PHS hospital, even if it continued to operate as a federal institution. The community organizations believed that the institution had to respond to the community and that the community had to define the way in which services were offered. The coalition member organizations and the Seattle Indian Health

Board have continued to exist over the last decade, have survived a number of trials, have grown, and have learned. The sometimes painful, always exciting, evolution has proven beneficial to the Seattle community and the Seattle PHS Hospital. Two years ago, when the PHS hospital began to develop its master plan to improve services and facilities, the relationships it had established with community programs helped secure the valuable support of local, state, and national politicians and a number of the other agencies and groups. The support continued and grew as the hospital became the focus of Seattle's effort to transfer it from federal to community central.

Throughout this decade of development, the organizations fostered effective leadership in their own communities. I believe very strongly that effective community leadership is as important as the development of leadership in the medical community for community oriented primary care. Community leaders expect to be involved in discussions that define how a primary care program responds to community needs. And in my experience, community leaders have learned that such involvement is more likely to occur if there is also some community control. It is especially important when setting goals to avoid conflicting multiple goals that result from differing views of the organization's purposes and priorities.

During the last 10 years, the various community organizations continued and expanded their relationships with the hospital. The local and state governments, the congressional delegation, the University of Washington Medical School, other community hospitals, and the health planning agencies all became involved in efforts to keep the hospital open so that, when the federal government finally succeeded in calling for the closure of all PHS hospitals, a network of interested organizations, agencies, politicians, and others from the community was in place to help the hospital continue its work, a significant part of which is delivering or supporting the delivery of primary care.

All of the various interests were well represented on the task force that identified alternatives for continuing hospital operations when the hospital became a nonfederal facility. When the public corporation charter was developed, there was strong insistence that the mission of the hospital continue its former commitment to provide care to traditional beneficiaries and patients from the community clinics, many of whom would have no source of payment, the so-called unsponsored patient.

In a sense, this hospital has several already well-defined communities about whom it knows a great deal, having served them over a number of years. Some of the aspects of community oriented primary care are absent. For example, there has not yet been much opportunity to evaluate what is known about these patients, except as the individual community organi zations have been able to do. Some limited evaluation has occurred in some community health centers, but progress has been delayed and interrupted by the funding cuts of the current Administration. There is great potential for developing a data system that will track patients served by the network of services around the hospital. Some baseline data are available now on the American Indian population in Seattle. The system needs additional work and refinement, but a good beginning exists.

The COPC element of community involvement is provided for in the Seattle Public Health Hospital structure. The 15-person governing hospital council will ultimately have 5 members of the board drawn from the constituent groups who use the hospital. That will enable patient groups to influence policies that are established for the hospital.

The challenges that remain are many, of course, not the least of which is operating a financially viable hospital while at the same time assuming responsibility for the care of a very large number of unsponsored patients. However, the opportunities that exist are exciting. The energy level is still very high. If we fail to further the concept of community oriented primary care in Seattle, it will not be because opportunities do not exist. It will be because we could not overcome the constraints described by Dr. Madison. Having come this far, that would be unacceptable.

Karen Davis

I would like to emphasize some of the opportunities and challenges facing community oriented primary care. This is a particularly critical time—one that calls for a community orientation in primary care. I think there are four major reasons for that. First, I think the nature of the health problems that face us is very much community-based. This is true whether one thinks about environmental health hazards, toxic waste problems in 50,000 communities in this country, or about life-style that results in major health problems; whether one thinks about economic conditions, such as stress pertaining to local plant closings or high unemployment rates that affect the health of populations in a community. We are increasingly seeing the nature of health problems related to various kinds of factors that affect more than one individual at a time in a community.

I would include in that category things like the aging of the population and the need for community responses to the needs of the elderly in the community. So, unlike the character of diseases that affected individuals at one time in the past, I think we are now dealing with a set of modern-day health problems that are common to communities, and, therefore, community orientation is appropriate.

The second factor is one that Don Madison cited and I would also stress, although perhaps in a more positive light. With the expanding supply of physicians and other health professionals that is occurring and will continue to occur throughout this decade, I think there are increased opportunities for health professionals to assume roles and take on activities that weren't their concern in the past. This may take the form of counseling, community involvement, concern with life-styles, and/or concern with psychological or social adjustment problems of children in a community. As health professionals increase in number and have smaller patient loads per health professional, they may turn to some of these additional types of services that have been lacking in the past. I think expansion in the supply of health professionals also poses an opportunity for community organizations to enter into different types of relationships with health professionals. Where there are more physicians and other types of health professionals being trained, there will be a bigger pool from which to hire or contract with health professionals for health services. Community organizations might then provide an attractive alternative to self-initiated solo practices.

The third factor that I think makes this a particularly important time for community oriented primary care does pertain to the whole problem of rising costs in the health sector and scarce resources, whether that is at a federal budget level, a state or local government budget level, or an individual level. Anytime there is an explosion in health care costs and a tightening up of source of funding to pay for these health care costs, there is a premium on prevention and on fostering individual and community responsibility for health care. I think that the combination of very rapid increases in cost in this sector and a need to impose some stringency from different sources of payers is itself an opportunity that will exert pressure for new approaches, new ways of providing services to communities.

The final factor, and I know it is very hard to think about this one as a positive factor, is the cutbacks and the reduced role of government at the federal, state, and local levels. Because of this reduction in the public role, it does place a greater burden and a greater responsibility on the private sector to pick up many functions that in the past have been handled by government. Health professionals in communities are in an excellent position to speak out and to assume some of these broader responsibilities.

One sees some of this increased responsibility occurring. Recently, a physician in North Carolina pointed out that the limitation on prescription drugs under Medicaid means that one of his diabetic patients will not be able to get insulin. Publicizing the impacts of cutbacks and what effects they have on individuals is important. Health professionals could also take responsibility for planning community wide responses to health hazards in a community. This will be increasingly important with the relaxation of environmental regulations. I think that health professionals are well-informed and well-placed to take on many of these responsibilities, if they will view the responsibility as moving beyond just the care of the individual patients they ordinarily encounter in the practice setting.

I would like to turn to the experience that we have had to date with community oriented primary care. I think this conference is giving all of us an exposure to a variety of community oriented primary care experiences. In work that I have done in the rural area, I have certainly become familiar with a lot of efforts, whether they are models such as the Robert Wood Johnson Rural Practice Project that Don Madison was instrumental in launching; the network of nurse practitioners in primary care health centers in North Carolina; activities of student groups, such as the Vanderbilt Student Health Coalition that helped organize a number of primary care centers in Tennessee and surrounding states; or the community health centers in neighborhood health centers that were originally funded under the Office of Economic Opportunity. We have had extensive experience with community oriented primary care in a sundry of publicly and privately supported primary care programs.

I would like to talk more specifically about the experience of the community health centers, which is one that I have looked at fairly carefully and for which there is some important new information and some new studies.

Community health centers have many of the ingredients of community oriented primary care. They do for the most part provide primary care as opposed to specialized or tertiary care. They are community controlled; that is to say, they have community boards that basically run the health centers. They foresee a broad-based approach that includes an emphasis upon prevention, a concern with education, a concern with nutrition, a concern with environmental health, and, in general, a very comprehensive approach to dealing with health problems. They use many types of health professionals (nurse practitioners, nurse midwives, community health workers)—a whole host of health professionals to pursue a number of different roles. Typically these centers have strong community involvement of health professionals in the affairs of the community such as the Sunset Park group getting involved in renovating housing in a community to a whole host of activities outside of a narrow definition of health.

This experience with the community health center program has been very effectively targeted on high-need groups. More than 80 percent of the patients served by those programs are members of minority groups. Eight percent have poverty or near-poverty income levels. Funds under that program have gone to assist those most in need in getting services. The recent studies that have come out in the last 6 months to a year have found some very interesting things about community health centers. Throughout the experience with that program, there have been a number of isolated studies in this city or that city that had indicated that the programs have had a positive impact on health and reduced infant mortality.

A new study by economists at the National Bureau of Economic Research is a comprehensive analysis of the impact community health centers had on infant mortality. It has found a very marked impact of that program on infant mortality rates, particularly for blacks. Another study coming out of UCLA by Howard Freeman has investigated the hospitalization rates of those who use community health centers as their major source of care and has found that for those who get into that care system, hospitalization rates are 30 to 50 percent lower than for those who use other types of providers in the community. This controls for health status and socioeconomic status.

Similarly, Steve Long and some of his colleagues at Syracuse have found lower hospitalization experienced for community health center users, using a survey of community health center users conducted by the Bureau of Community Health Services at the Department of Health and Human Services. Finally, a major contract has compared the total cost of care for Medicaid beneficiaries using community health centers with those using other settings and has found that the total cost of the Medicaid program is about 30 percent lower for those who have community health centers as their major source of care.

There is a lot of evidence coming out that the programs do improve health and that they can provide care in a cost-effective way and, in fact, at lower cost than other alternatives. They have greatly improved their cost performance with the experience of the program, including reduced administrative costs and improved productivity. However, centers cannot survive without financial support, because two-thirds of the poor are not covered under Medicaid, and, therefore, there are many uninsured low-income individuals using centers and making it difficult for centers to make a go of it without financial support.

Efforts in this area will require political efforts to maintain funding for the program. It endured a 25 percent cut last year, and continuing efforts to maintain funding will be required, but I think there are some opportunities to seek additional sources of funding by developing relationships, for example, with state Medicaid programs to move toward capitation systems of reimbursement and, in general, to make state governments, employers, private insurance companies, and others more familiar with this record and performance of these organizations.

I would like to move to suggest a number of things that, I think, can be done to move beyond the types of experiences we have had in the past toward a new type of community oriented primary care. The dimension that needs to be added is a greater emphasis upon an epidemiologic ap proach. That would require that efforts in education be taken to expose more health professionals to this type of epidemiologic approach so that health professionals will increasingly think about the incidence and prevalence of health problems relative to norms for population groups as a whole. Rather than dealing with people solely as individuals, they need to begin to think about what would be a normal rate of incidence in this community and why does it seem to be out of line with this particular health problem; what can be causing it and what can we do about it. I think this will require efforts to build closer relationships between schools of public health and medical schools and other health professional schools.

The second thing that I think should be done is to take advantage of some of the new competition ideas and try to find avenues for capitation reimbursement. I think Don Madison has pointed out in his paper that a lot of the problems had to do with fee-for-service reimbursement. If we can move toward systems of payment, whether it is under Medicaid, Medicare, private health insurance, or other types of arrangements, which will pay health organizations a fixed amount in exchange for responsibility for the health of that population group, there will be more opportunities and more incentives for COPC.

Thirdly, I think there need to be some demonstrations, looking particularly at the efficacy of building epidemiologic methods into the practice of primary care. To the extent that there can be some documented evidence that this approach does improve efficiency and lower costs and improve health of communities, there would be strong support for wider implementation.

Finally, there is work that can be done in terms of exploiting existing data bases for community oriented type of primary care analyses. One untapped resource is employer health insurance plans. Most employers do provide health insurance to their employees. Their health insurers pay those claims, but nobody really looks at that as a population base and looks at what is the incidence of certain kinds of health problems among this employee group and what could be the basis for those problems. There are a lot of opportunities for linking health hazards in the work place by examination of that data base. A second type of data base that has sprung up pertains to hospital admissions. Some of those arise out of statewide hospital costs or budget review commissions, where one can find for communities various patterns of health conditions that may be atypical or abnormal and reasons for these unusual patterns can be explored.

And finally, there needs to be better use of the Medicare data base on the elderly population to identify variations across communities in kinds of illnesses that would perhaps serve as triggers to health problems that affect that population generally.

Health Worker Roles in Community Oriented Primary Care

John Hatch and Eugenia Eng

Forces of change—industrialization, urbanization, and rising expectations—constantly demand modification and adjustment in organizations and institutions that serve people. Displaced peasants throughout the world are moving to urban centers in search of a better life, while those who remain on the land pray for the relief they believe modern civilization can bring. Black tenant farmers in North Carolina, after years of struggle, belatedly joined the industrial revolution as textile workers and occupied the noisiest and dirtiest jobs. Former subsistence farmers in the United Republic of Cameroon, who have chosen to grow tobacco as a cash crop, were encouraged to seek new land and focus all of their efforts on tobacco. These changes have caused severe disruption of traditional patterns of living, which include the lack of access to schools, health services, and support systems of small town or village life. Few regions on earth are immune to these forces. Even when the changes are perceived as being progressive, the potential for creating a less responsive social and economic system is great.

COMMUNITY INVOLVEMENT IN COPC

Failure to involve community people in planned change will, at best, limit the potential for service, and, at worst, result in social disorganization and lead to gross compromise in the quality of life. There is evidence that our ability to tolerate stressors within the broader environment is related to the quality of relationships and the degree of social support we receive from those who are closest to us.[1–5] Therefore, is it reasonable to believe that significant advance health can be achieved without the involvement of community people and without attention paid to the patterns of relationships between and among those who are members of the community?

Planners in societies structured as differently as the Peoples' Republic of China and our own have come to realize the limitations of traditional responses to the challenges of rapid change in an increasingly interdependent world. Activists and planners with skills in community organization have followed the direction of redefining traditional roles and relationships. Barefoot doctors, cholera control agents, outreach workers, nurse practitioners, sanitation aides, health educators, and many many others are performing roles as old and new as man himself. Their functions are to be responsive to human needs, and as needs change so will their roles.

Health status is more an indicator and a symptom of inequality than its cause. We agree with Dr. Sidney Kark that “changes in the environment, standards of education, and social status as determined by occupation, education, and income exert greater influence than does the medical care system on favorable mortality and morbidity trends, as well as on improvements in health.”[6] If we as professionals committed to the practice of community oriented primary care (COPC) agree with these statements, then what exactly is the charge of the COPC health team? And more specifically, what is expected of community health workers? Perhaps it would be best to begin with some widely held assumptions that tend to impede development of COPC. Given these assumptions, we will then attempt to bring life and immediacy to these questions by attaching real people, events, and time to the evolution of the COPC health worker role in America. We will draw on earlier experiments, for we believe, as John Grant did, that health care should be a social service that must be provided within the context of other basic social services.[7] We can learn from the observation that the many transactions that have taken place thus far between communities and professionals have not yet fulfilled this vision. A review of several initial COPC efforts may clarify our concern that community involvement in human service planning and administation remains conceptually incomplete.

Some False Assumptions

Impeding the full development of COPC or any other community oriented human service that is externally supported and controlled are three very basic, yet false assumptions. The first assumption is that the communities' priorities, norms, and values are sufficiently similar to those of the professional so as to provide a mutually rational framework for peer cooperative action. The reality is that there have always been discrepancies between the intentions of providers and the needs of consumers. This conclusion is borne out by case study after case study of programs theoretically well conceived that fail.[8]

The second false assumption is the belief that social diagnostic tools are sufficiently well developed to provide the outsider professional with an inside view. Household surveys, attitude, scales, interview schedules, ethnographic studies, locus of control, health belief models, and so on are sometimes necessary but never enough for understanding how a community of people operates, survives, and feels. These tools are certainly not the solution for erasing the discrepancies between the intentions of professionals and the needs of communities.

The final assumption that impedes full development of COPC and makes planning and administration conceptually incomplete is that professionals have little to learn but a good deal to teach. Little recognition has been given by the professional community to the uniqueness of community knowledge, skills, expertise, and experience for all aspects of program planning and implementation. The lack of dialogue between outsiders and insiders is not due to the community's lack of having something to say. It is due to the difficulty in communication, both semantic and emotional, experienced by insiders and outsiders alike. Also, outsiders too frequently forget why they need to involve communities when faced with the immediacy of clinical intervention.

Kark and Abramson strongly support community involvement as an integral component of COPC so that certain key questions can be answered: How do communities function? What are their networks? What is the formal and informal leadership? What are the activities of day-to-day living? What is the family and kinship structure? Community health workers are seen as vital members of the COPC team in answering: “What is the state of the community's health?”; “What factors are responsible for this state?”; “What is being done about community health itself and by the services available?”; and “What are the community's perceptions and expectations about services and about promoting its own health care?”

The answers to all these questions are crucial pieces for community involvement in program planning and implementation, but we must not lose sight of why we need these answers. It is not because we need to develop more effective persuasion tactics to increase health service utilization delivered through a preconceived plan. It is not because community health workers are to act as a one-way mirror through which the COPC team reflects to the community what they have to offer. Rather, we need the answers to these questions to help a COPC program strengthen the abilities of a community to influence its own development, especially when the community is removed from the mainstream. This may mean throwing preconceived, professional, and scientific notions of what is effective health care delivery out the window. Although community needs and priorities will rarely fit neatly into the health service delivery model, they will mesh very closely with community development strategies. Fortunately, the two approaches need not be mutually exclusive if we believe that community development has a greater influence than medical care on improvements in health status. COPC workers need not feel torn, for they are the link in the middle.

The authors of this paper, because of ethnicity on the one hand and education on the other, see themselves as occupying a middle-person role with loyalties and roots in both the community of professional peers and of ethnic brothers and sisters. We choose the term “middle” rather than the more commonly used concept of “marginality,” as we feel the former more accurately conveys our sense of place within this spectrum. In our case, the feeling of belonging to either in terms of an ordered state of being is equally strong.

John Hatch, the first author, has his initial professional degree in social work. The message transmitted through that educational experience as he perceived it was that members of his ethnic group were a problem to themselves and, consequently, placed limits on personal development. The logical continuation of this line of thought was that he, too, might be a problem. However, these notions were counterbalanced by his awareness that the expert commentators on the status and mental state of his ethnic group were not black. Later, while working as a community organizer for the South End Settlement in Boston, he met scholars from MIT, Boston University, Harvard, and other academic institutions in the region. He knew that the professors from these universities were interested in understanding how communities worked. He was not, however, aware at the time of the power of theoreticians in developing social policy and in influencing strategies for active intervention.

Several years after these contacts, Hatch discovered that several papers, as well as books, written by two of these professors and their students were being cited by urban renewal and social planning officers as providing deep insight into the functioning of Roxbury and the South End communities of Boston. He took issue with those portions of their research considered to be inaccurate or distorted. It was explained to him that he was too close to the problem to offer an objective assessment. Although he was assured that the scholars respected his ability as an implementer, Hatch was encouraged to entrust overall conceptualization to those who had been trained to think objectively and in abstract terms, since they were the ones best able to identify those options most likely to have a positive impact on future generations.

Reliance on this research resulted in a decision, which was later reversed, by the Boston Redevelopment Authority, to eliminate store front churches from the communities. It has been reasoned that these churches exploited the poor, prevented or compromised the ability of their congregations to focus on the real problems they faced, and were noisy and unsightly. Another researcher “discovered” that pimps were bright, had a strong self-image, and tended toward action. These findings led to a decision to recruit pimps as staff for community improvement programs. When placed in positions of sanctioned authority, they, of course, proceeded to replicate in the community the type of relationship they had previously established with their women.

The sentiments and motivations that led to these outrageous violations of judgment and common sense were quite probably well intentioned. Indeed, there were very serious problems that warranted radical action. However, the missing element in these and many other situations was not only the shortage of technical skill needed to define community for the perspective of the community's own sense of identity and priorities, but also the recognition that there was another perspective.

During the course of preparing this paper, we were informed of the death of one of the most effective community organizers in America over the past half century. Amzie Moore, janitor, lead singer for the Delta Harmoneers, deacon, civil rights worker, civic leader, and good neighbor died in Cleveland, Mississippi. In 1965 Mr. Moore was president of the Bolivar County Chapter of the Central Development Group of Mississippi, an organization correctly perceived by state powers to be somewhat political. In those days evaluation was used as a tool of control. As part of a site visit to assess the quality of citizen participation in the local Head Start Program, a meeting of community supporters, which included Mr. Moore, was held at the Bright Star Baptist Church. The government senior evaluator, who was a university professor, and his staff attended the meeting with Hatch. Later, in discussing the meeting the senior evaluator complained that Moore did not address the audience in terms that made any sense and that the entire evening appeared closer to the rites he associated with exorcism than with a discussion on the impact made by citizen involvement on the program. However, after listening to Hatch's perceptions of the Bright Star Church meeting, and checking with another trusted person, the evaluator came to a better understanding of the meeting and could report more accurately to the funding agency.

During this period, Hatch was involved in collecting ethnographic data to be used in planning the Tufts-Delta Health Center in Mound Bayou, Mississippi. Returning twice monthly to Boston, he was debriefed in sessions held with Donald Kennedy, a medical anthropologist with the Tufts Medical School, Department of Preventive Medicine. This experience was invaluable in raising Hatch's awareness of cultural bias and assumptions. He discovered that there were many important conceptual constructs essential to the daily lives of seasonal workers and tenant farmers that physicians and social scientists did not know existed. We as credentialed workers are still in the process of discovering, but only if we are willing to listen and learn. We are poorer today because of our failure to collect and learn from the wisdom of individuals like Amzie Moore. He had found the way to nurture and inspire thousands of oppressed people toward redefining their role in society. We know so little about the process he used.

This is not to say that there has not been any successful program in health care and other human services that achieved a high degree of sensitivity in its relationship with the people it served. Over the past two decades, we have known a number of movers and shakers in health care and other fields. We are not sure of the characteristics that go into the making of successful activists and community workers, but it is certain that they did not acquire their motivation and skill in professional schools. These individuals can be found among credentialed and uncredentialed persons. The credentialed include people trained as nurses, sanitarians, physicians, social workers, economists, lawyers, clergymen, public health workers, political scientists, and horticulturists. Others involved with activism and community development in health care include maids, laborers, farmers, fishermen, construction workers, coal miners, pulpwood cutters, and others representing a fair sampling of occupational groups in the United States. Of course, we have a few hunches about the qualities that enable some individuals to rise above others and inspire community action. Eugenia Eng is currently engaged in research that examines characteristics that enable community leaders to lead. Which qualities are generic and which ones are culture-specific? Can they be defined in terms of selection criteria for recruiting community health workers? Can they be enhanced through a training program?

Examples of Community Involvement in COPC

In an effort to better understand the role COPC workers should play in the formulation of community action strategies leading to improved health status, we will review two models of community and professional interaction that produced, in our estimation, good results. It is hoped that the examples will lead COPC toward identifying those principles that seem to contribute most significantly to the favorable outcomes experienced.

South End Settlement

Between the years of 1940–1960, Boston witnessed a sixfold increase in the number of black people in its population. When Hatch arrived in that city in 1958, the “service crisis” caused by the influx of “newcomers” was a permanent agenda item for board and staff conferees sponsored by health and human services agencies serving inner-city communities. The newcomers frequently delayed requests for services to the point of compromising the effectiveness and efficiency of delivery. For example, parents often failed to produce immunization and birth records when they were requested. Boston professionals, and particularly those providing services to the communities experiencing increased migration, had difficulty understanding the great differences between the norms, values, and functioning of the newcomers and those of the older established black families in their neighborhoods. Some had hypothesized that perhaps the older established blacks had come from superior stock and were, therefore, better able to adjust to the rigors of survival in the competitive New England environment. It was reasoned that the older established blacks had recognized the value of northern migration two or three generations earlier and had not required intensive agency support for adapting to northern urban patterns of living.

Newcomer families, on the other hand, were not stable. It seemed that newly arrived black males were especially vulnerable to the temptations of urban life. Many developed drinking problems and left their families for street life. Their children experienced learning difficulties in school. They appeared to have problems with understanding spoken English and were themselves unable to communicate clearly with their teachers or the children of older established blacks. Newcomer children tended to be greatly overrepresented in special classes for slow learners and the developmentally impaired.

In 1962 the South End Settlement, which was a Boston-based multiservice organization, was faced with the dilemma of an increase in the demand for services that was greater than its budget could tolerate. In an attempt to deal with this situation, the agency agreed to support Hatch, who was a community organizer trained in social work and a newcomer himself, to mobilize community members to work as front-line workers for the organization. Prior to this time, possession of a bachelor's degree had been a prerequisite for employment with the Settlement House. Some professional employees extended warnings that declining quality of service and loss of trust would be the probable outcome of this experiment. Nonetheless, being the community organizer responsible for this effort, Hatch knew that most of the problems encountered by newcomer families were being managed within the network of community resources. He felt that reinforcement of this system by the Settlement House would be more effective and efficient than hiring two or three recent college graduates.

Hatch's knowledge of community-helping networks was gained in large measure through his experience of living at Mrs. Bailey's rooming house on Columbus Avenue and being included into her social system. Mrs. Bailey seemed to know everybody for blocks around. She was an active church woman, a member of the Sisters of the Eastern Star, and a former domestic worker for several of Boston's influential families. She was active in her block organization, fed alcoholics, and had conversations with the street ladies who marketed their services from the corner nearest her house. In addition to providing immaculately maintained living quarters, Mrs. Bailey's roomers were given generous portions of wise advice on urban survival, even though she would come forward with formidable support when failure to heed her advice landed one in difficulty. On various occasions Hatch had observed her negotiate a suspension of sentence for one of her roomers who had been picked up in a corner dice game, provide counsel in lovers' quarrels, place people in jobs, advise police on how best to intervene in cases of domestic conflict, and confer with human service agencies before deciding to refer her people to them. Hatch would sometimes accompany Mrs. Bailey to special events and would be introduced as “one of her boys.”

Her network spanned the spectrum of urban life-styles, and she appeared sure of herself within each segment of her complex set of social relations. Proud of her origins in rural western Tennessee, Mrs. Baily maintained active linkages with friends and family still living there and often acted as a sponsor and advocate for those who came to Boston in search of work. She felt that lack of decency, trust, and respect were the major barriers to achieving a good community and did her best to make this world a better place. In discussing the development of the new Settlement House project with Mrs. Bailey, Hatch received valuable guidance and was assured of her support.

The five people hired as half-time workers for the project were members of large community networks and fulfilled roles as advisers, counselors, and linkers to the elaborate social system. Miss Troupe was a retired beautician and had lived in Boston since taking a summer job there 40 years earlier. Reverend Willie was the pastor of the storefront-housed Lily of the Valley Holy Church. He, his wife, and five children lived above the church. Reverend Willie supplemented his income from the church by renting rooms in his home and working as a handyman. He had lived in the South Carolina low country prior to moving north to join his brother, who worked at the Navy Yard. Miss Holly was a retired nurses' aide from Children's Hospital and had remained active as an adviser on child health and social problems to the community, linking people to an astounding array of professional and neighborhood support services. She wrote letters for persons who felt insecure dealing with bureaucracies to obtain the necessary documents for employment or for admitting children into the Boston school system. Additionally, Miss Holly knew each person offering informal home child care and held strong opinions and accurate information on the different levels of quality. The fifth worker was Miss Connie, who at that time was employed as a part-time domestic, but had traveled the nation as a dancer. She had settled down in her middle years, but maintained ties with persons of the night life and entertainment world. She would not take jobs that required reporting for work before 10:00 a.m., for she felt that the best part of the day was the night, and she wanted to enjoy at least a part of the best.

Orientation for the team of community front-line workers was carried out in a seminar format, focusing on the Settlement House's history, philosophy, and minimum standards for record keeping and employee accountability. Completing case records was a collaborative effort in which Hatch guided the interviews in accordance with standard case work protocol, recorded them on tape, and summarized the content for the agency's permanent files.

In retrospect, the relationship between the Settlement House and the community workers could be construed as being somewhat exploitive, because they worked more hours than they were paid for and were available during evenings and weekends. However, they did seem to appreciate the recognition and especially the title of Social Outreach Workers. Each of them carried an active case load larger than any one carried by the agency's professional workers. During his 3 years of working with them, neither Hatch nor the agency had received complaints from a client. There were, however, points of conflict with professionals from other health and human service organizations.

Miss Connie had used strong language with the social worker at the Travelers' Aid Society when, during the course of discussing a case, the social worker had said that the society would do all it could to send the colored girls back where they belonged. Miss Troupe had caused a minor incident by forcing her way into a child custody hearing to defend the right of a sometime, part-time prostitute to maintain custody of her children on the grounds that this woman was a good mother. She had asked the adjudicators if any of them had ever violated the legally prescribed norms of sexual behavior and added her opinion that, if they had not, then she felt sorry for them. Another conflict occurred when Reverend Willie had managed to have a basketball court paved but had neglected to gain approval from the city before negotiating with cement truck drivers to dump their surplus at the site. The Settlement House had been working with the city's Department of Parks and Recreation for quite some time to carry out this task, but shortage of funds was continually given as a reason for why it could not be done.

The team of Social Outreach Workers survived these and other conflicts with the established health and human service delivery system. As a result of this process, the known pool of resources had been vastly expanded, and the latter agency had gained respect and trust from the community due to its association with the Social Outreach Workers.

Hatch met with them on a weekly basis to discuss and assess the course of their work. In time they began to observe certain patterns. Young women who had entered the city as domestics with no support from friends or family comprised a disproportionate percentage of the agency's case load. These women were being exploited by some of the employment agencies that had recruited them from the South, by their employers at times, and finally by streetwise males on the women's days off. As evidence for these patterns became stronger, the Social Outreach Workers felt that they should act to prevent these occurrences rather than continually react to the crisis. The agency community organizer wondered quietly how a young social worker, a holiness preacher, and four middle-aged and older women could possibly make a dent in an activity highly valued by persons with vested interests in prostitution and the drug trade.

Miss Connie suggested going to the suburban bus terminal on Thursdays from 10:00 a.m. to 4:00 p.m. to talk to women getting off the bus who looked like maids coming to the city for weekends off from work in the suburbs. Lack of anything to do in the evening was identified as a major problem for these women. The Social Outreach Workers also discovered that pimps, pushers, and hustlers were also meeting the buses. The four women and Reverend Willie met with each of the employment agencies to inform them of the situation. Miss Troupe set aside a room in her house and identified other people who were able to offer shelter to maids on their days off. More importantly, it was anticipated that the renters of rooms would also provide advice and counselling to these newcomer women. The selection of these renters was made with this expectation explicitly stated.

Within 6 months the NAACP, local women's organizations, other health and human service agencies, storefront churches, and fundamentalist evangelical churches joined a planning group to consider the needs of single women migrating to Boston to work as domestics. The up-front, no-nonsense character of the Social Outreach Workers enabled them to cut through bureaucratic protocol and objections that could have been barriers for a professional. The NAACP representative, for example, initially questioned the merits of an effort aimed at improving the status of domestic workers rather than providing them with assistance to find other occupations. Miss Holly responded by reminding him that his mother had been a maid when he was a boy, and that if she were still alive, she would want him to use his education to improve conditions instead of criticizing.

After 18 months the program received funding from the United Fund and the Department of Labor. A service aimed at upgrading the skills of domestic workers was staffed by Mrs. Bailey and several wealthy women who had formerly been her employers. Posttraining salaries were, on the average, 50 percent higher, and all domestic employment was covered by contracts specifying duties, obligations, and responsibilities. The program continues to operate under the sponsorship of the League of Black Women and has a Board of Directors that is broadly representative of the innercity communities. This group was eventually able to lobby the Massachusetts state legislature to pass regulations protecting domestic workers.

Willingness and conviction to upset the status quo through unorthodox means of intervention—cussing sometimes, praying other times—are necessary for transcending barriers that separate people from their rights to services. To whittle down the barriers means establishing a double flow of communications going up-down and down-up by developing interactions and rapport such as that described between the Social Outreach Workers and the professional social worker who coordinated their efforts. Their intricate and unique knowledge of their community, coupled with a degree of honesty from professionals who felt uncomfortable with Miss Connie's statement of “Who in the hell gave you the right to determine where black women should live?” was much more effective in helping an agency identify an appropriate intervention than a professional conference on perspectives would have ever been.

Mound Bayou

Our second example of meaningful interaction between communities and professionals occurred in 1965, when the Department of Preventive Medicine of the Tufts University School of Medicine gained support from the Office of Economic Opportunity to develop a health center in Bolivar County, Mississippi —a site 1,400 miles from its home base in Boston. In addition to responding to the desperate needs of the citizens in this county, it was felt that a health center in Mississippi would provide professionals with insights into the social norms, values, health attitudes, beliefs, and behaviors of a population that was becoming increasingly important to health and human service agencies working with the inner-city districts of Roxbury, South End, and Columbia Point. It was also felt at that time that the nation had at least decided that all of its citizens were entitled to health care.

Believing that national health care coverage would surely come within the decade, energies were shifted from advocacy focusing on the passage of legislation to the search for a health care model that would improve the health status of the population as well as be responsive to the legitimate demands of communities. Each of the three individuals primarily responsible for the design of the Mound Bayou model brought with them prior experiences that would strongly influence the structure of that project.

Both Count Gibson and Jack Geiger were familiar with the health care needs of rural poor Mississippians, as a result of several years' work with the Medical Committee for Human Rights. Gibson was also keenly aware of the limitation of medical care alone as an effective intervention for meeting the health care needs of many low-income consumers from his experience as director of a home health service provided by the Department of Preventive Medicine at Tufts. From his work with Kark in Polela, Geiger brought notions of health worker roles that were considerably more advanced than those held by community oriented practitioners of that day.

John Hatch contributed knowledge of organizing strategies from his experience gained through 5 years of neighborhood development work in Boston's South End and Columbia Point. He was to discover later, however, that a strong consideration in his selection was prior experience as a qualified cotton picker, because it would be in that role that he would make his first contribution as a member of the planning team. He spent the first 3 months of his employment as a university assistant professor picking cotton on various plantations in the Mississippi Delta. Field notes from those 3 months were especially useful in the design of social service, health education, nutrition, environmental health, and training components of health care models.

It was powerfully tempting to plan services for the community based on the priorities the planning team had hoped the people would hold. However, local concerns about the price of a fatback and molasses or the location of the heaviest cotton in the region were much stronger than those related to health care, voting, or the quality of education. The number and magnitude of the planning team's mistakes were reduced considerably because of their deeper understanding of:

- the patterns of mutual support;
- the role expectations and interactions between family members and friends;
- the locally recognized illnesses;
- the community's experiences with health care providers;
- the role of the church in community identity and control; and
- the interactions that crossed class and racial lines.

As program planners for the Tufts-Delta Project, Hatch and Gibson could be considered to some degree as being bicultural in that their origins in the rural South rendered them less strange to this environment than Geiger, their colleague whose roots were in New York City. Knowledge of folkways and mores was of some value for gaining access to and assessing the responses from the community influentials. It was, however, Hatch's task to devise strategies that would involve community people in planning and decision making for developing the health center. He began the process by holding informational meetings in each of the 10 communities in the service area. The purpose was to let people see some of the staff and to begin promoting a redefinition of health.

These meetings also provided an ideal setting for arranging smaller group sessions to discuss the project in further detail. These small group discussions produced quite useful knowledge about community leaders, influentials, social networks, and subsystems in each of the 10 areas. Expressing ideas, asking questions, and voicing doubts were less threatening when the individuals were on their own turf, in the company of persons they had invited to the sessions, and had safely outnumbered the staff people. Several of the persons eventually hired as community workers for the health center were first noticed in these sessions.

During the life of Tufts' involvement in the Mound Bayou project, more than 100 different individuals were hired to fill various auxiliary positions with the center. Each department in the center was able to employ community members for roles at the aide level. Most of these persons performed satisfactorily, a few did not perform at all, and a few made exceptional contributions toward the realization of COPC. A brief sketch of the exceptional workers and their roles may help to provide clues for developing more reliable selection criteria and insight into enhancing the role and function of noncredentialed COPC workers.

Miss Pearl had been chosen as a community worker by her neighbors and was hired essentially on the strength of their recommendations. She was at the time about 50 years old, considerably overweight, had a wonderful sense of humor, and impressed others as being competent and in control. Prior to joining the center's staff, she had been a junk dealer, restaurant and rooming house operator, tenant farmer, Eastern Star member, and church leader. Her means of raising issues was through asking the team questions such as “Why do you people say you want people to take part?” (Because we believe that people have expert insight into the health care needs of their community.) “What will you people do if the people see needs that you and Washington don't see? Do you people think that food is a health need?” (Most assuredly.) “The people in my neighborhood need food now. How can you help?”

Miss Pearl saw the contradictions between the rhetoric and the reality. She tried to do something about it. She was greatly concerned about the needs of elderly people and did her best to move the health center's resources toward a sharper focus on the problems of that population. She discussed the issue with health association representatives and urged them to discuss the problem at a meeting attended by professional staff. Miss

Pearl wondered how the professional staff could be so concerned about the lives of the unborn while neglecting the needs of those entitled to some comfort in their declining years. At professional staff sessions, she urged allocation of more resources to the needs of the elderly. The nearly unanimous response from professionals was to cite infant and maternal mortality rates as being the most sensitive indicator of health status in a community, and therefore, agency efforts should focus on maternal and child health problems.

In time Miss Pearl was able to convince several professional staff of the need for services for the elderly. She pointed out that a greater percentage of the population was elderly now than 10 years ago due to the outmigration of younger people in search of work. Until recent years, she told us, there was always family and nobody lived alone. She considered living alone and being socially neglected to be a worse fate than missing meals.

Demand for service was, in fact, closer to Miss Pearl's perception of need than to the level of demand projected by an in-depth demographic study by Yankelovitch et al. Physicians had been recruited by specialty area on the basis of population size and national levels of demand for services. The median age of the health center's target population was 15 years, and, given the great need to counteract a startling infant mortality rate, the local community had little basis in experience for expecting health services to extend beyond crisis intervention for the essential care of infants and children. Care for the elderly had declined during the past decade, and, with the advent of the project, there was a basis for them to expect better conditions. However, it became evident that the health center had recruited too many pediatricians and child-oriented health workers who were not able to meet the demand for geriatric services.

When Miss Pearl asked for an appointment, Hatch had anticipated her purpose and began to outline the essential resources that would be required for developing a volunteer-based, social and nutritional program for the elderly. Geiger reviewed the outline and added physical examinations and medical monitoring as a necessary part of the service. While they had learned to appreciate the sharpness of her mind and obvious ability to inspire others, they wondered if their decision was an appropriate one. What if she failed? Jim Taylor, Hatch's associate for managing the Health Action Division of the center, agreed to work out a records system and provide administrative support. At the appointed time they met with Miss Pearl and said that they would appoint her with the Health Council's approval as senior coordinator for explaining the feasibility of a volunteer-staffed service program for elderly citizens. Hatch and Taylor felt ambivalent about asking some of the poorest people in America to donate the time and services necessary to operate a countywide program for the elderly.

Determining appropriate degrees of responsibility for persons not credentialed through the traditional means was difficult. Hatch had no doubts that Miss Pearl was one of the brightest individuals he had ever known, but he did question her ability to organize and administer a complex health and human service function that was usually managed by experienced college-trained professionals. She did it. Volunteers came forward. She found office space, involved other agencies, gained support from private donors, developed health care monitoring services, organized entertainment for the elderly, and managed the entire operation very well. More importantly, she convinced the professionals at the center that some community workers were able to far exceed the helper roles usually designed for community residents.

There were others. Mrs. L. C. Dorsey was hired as a community worker based on experience as an activist and a strong base of support in her community. She had completed 10 years of formal schooling, was 26 years old, the mother of six children, and helped her tenant farmer husband in the fields. L. C. was active in the civil rights movement, the Head Start Program, and the church. She was also angry and had little patience for white liberals and moderate blacks. L. C. considered Hatch to be moderate and minced no words in making him aware of her assessment.

Hatch had agreed to assume the directorship of a cooperative for low-income people on the condition that the cooperative's board appoint the best person they could find to work with him as codirector and who would assume full responsibility within 2 years. In their wisdom the board chose L. C. Dorsey. Hatch and L. C. agreed that the mission of the cooperative would take precedence over personal conflict. Finding a common ground in the force that had shaped their lives, the two grew to respect each other over the time they worked together.

Since that time, L. C. Dorsey has earned a masters degree in social work and continues her work as a change agent. She has not retreated from the objective she was seeking in 1965—equality. Although her strategies seem more sophisticated today, she has not lost her rapport with and commitment to poor people.

Miss Pearl and L. C. Dorsey were a generation apart in age, yet very similar in other aspects. Both enjoyed strong grassroots support and were each in their own ways trailblazers. They challenged traditional wisdom and insisted that professional staff not only listen to but respect their position. Both were exceptionally bright, perceptive, and able to grasp the essential norms and values of professionals' worldviews and to understand at which points those could be integrated with their community's view of the world. They were each able to grasp the concepts essential for channeling, syn thesizing, and integrating the wealth of intelligence found in the world of communities and the world of professionals.

LESSONS LEARNED

The lessons COPC can learn from these two experiences are not limited to application in the United States. The linking of community and professional expertise to the vitality of concrete experience is much more conducive to change than the pathways usually followed by credentialed advocates who act on the behalf of poor and near-poor communities in America or in developing nations. The experiences we described are by no means complete, but they represent movement in the right direction. The role of the COPC worker is indeed to act as the bridge between communities and professionals, and we envision that bridge to have at least three levels.

The first level, of course, is to be a *translator,* not only of the meaning of words, but also of the spirit in which they are said. With minimum training a COPC worker can translate technical knowledge and techniques into lay language or collect information on community beliefs and practices as part of an agency's social diagnosis protocol. However, it takes added skill to be able to graft technical knowledge and techniques onto the daily life experiences of communities in such a way that they become a part of the traditional beliefs and practices and are meaningful within the conceptual framework of a culture. There is a structured and ordered system for explaining the world and for legitimizing behavior in a community, just as there is a logic for scientific theory. The key, therefore, to effective bridging as a translator is the ability to interpret events, thoughts, and actions in terms of a particular social system, be it theirs or ours.

Eugenia Eng worked as a health educator in three rural health dispensaries in Togo, a tiny country in West Africa, to develop an outreach program with each of the dispensaries' staff, which consisted of one male nurse and one auxiliary midwife. The health conditions of Togo in 1970 would not be considered unusual to anyone who has lived and worked in a developing nation —a 50 percent infant mortality rate, 1:9,000 nurse to population ratio, and clinics so poorly equipped that needles were only sterilized after every fifth injection due to lack of alcohol, or with a bit of ingenuity used locally distilled spirits as a substitute. One of the three dispensaries, Gadjagan, had an unusually low rate of deliveries at three per month when compared to the other dispensaries in the region. The nurse appeared concerned and allowed the auxiliary midwife and Eng to focus on increasing maternal and child health outreach activities. The assumption was that women were not delivering at the dispensary because they were not aware of the potential dangers involved with childbirth, and this was a serious problem with the large percentage of high-risk cases among pregnant women. The nurse, however, remained in the clinic, seeing patients in the mornings and sitting at his desk reading the Bible in the afternoons.

For a year the midwife and Eng developed a prenatal care service that included a regular patient education program on the prevention of maternal and child health risk problems. The midwife translated these sessions into the local language. An afternoon program of home visits was also established to follow up on pregnant women who were at high risk, to meet with pregnant women who were not receiving prenatal care, and to talk to nursing mothers. Again, the auxiliary midwife was doing the translating of the words and concepts.

At the end of the year, there was still no change in the number of deliveries performed at the dispensary. The walls had even been newly whitewashed to improve the physical appearance of the clinic. Frustration and discouragement led the midwife and Eng to the village chief to ask for his help in understanding why, after all their efforts, women still did not come to the clinic to deliver. His response was to call a “palaver” with the dispensary staff present to discuss the matter.

The community forum was held in the traditional meeting place under several trees on cleanly swept and solidly packed earth. The dispensary staff were seated beside the village elders, who presided while the remaining village men, women, and children stood around them. The midwife and Eng were asked to present the problem, and then the village chief asked the audience to respond. The level of emotion began to rise as individuals began to cite incidents of abuse to women during labor and delivery at the dispensary, after normal service hours, from the nurse, who drank heavily in the evenings. The midwife lived in a neighboring village and consequently did not deliver babies after hours. As the voice levels and accusations heightened, the nurse became increasingly nervous, but never uttered a word.

Whether he consciously had known all along that he was the reason why women would not deliver at this clinic, Eng never knew. Everyone else, except her and the midwife, did. The scene was not what Eng had expected. The palaver was closer to her idea of a trial that had somehow placed her and the midwife into the role of jury, with the nurse as defendant and the villagers as prosecution witnesses. The community leaders placed the problem within their own cultural framework to communicate their interpretation to Eng and her colleague, for obviously these outreach workers had either not been understanding or listening to them for the past year. Despite the two workers' discomfort with the emotion that surfaced in passing judgment on their immediate supervisor, an effective 2-day dialogue was finally established. Most of the translating and interacting that had taken place over the past year was essentially a one-way flow of information from the workers to the community and was following a vertical path of up to down rather than the more horizontal direction of peer to peer.

The latter form of dialogue is usually more difficult to achieve, because professionals usually assume that the information given from up to down is correct. However, the result is their unconscious failure to integrate “down” data into the program planning or even to realize its usefulness. If, indeed, two-way dialogue between communities and professionals as peers is weak, then perhaps COPC workers should share their technical knowledge of basic epidemiology, biostatistics, and health education with community people to enable them to participate more adequately as partners in planning. Additionally, COPC workers need to admit that there is a lot they do not know about the community and pose questions to the people themselves rather than to totally rely on published materials. Why should COPC workers be afraid of or feel intimidated about learning from the communities they are serving? Gaining the community's own interpretation is the key to being an effective bridger for partnership planning.

And this partnership continues in determining the best solutions to the perceived problems. This brings us to the second level of bridging the gap between communities and professionals, which is for a health worker to act as a *linker* to outside resources from the wider society. Quite often, communities removed from the mainstream not only do not understand how larger political, economic, and social systems operate, but also do not know what their relationship is to them. Being a resource linker means explaining and, more importantly, demystifying those systems in such a way that communities would not feel intimidated about making the system work for them. Gaining entry into the world of bureaucracies and professionals would be a necessary first step for community members to experience personally the demystification process.

The citizens of Gadjagan, for example, were not completely aware of the options available to them for resolving the problem other than passive resistance to a man who had been the nurse in the dispensary for the past 9 years. As outreach workers adequately acquainted with Togolese government regulations on health personnel, Eng and the midwife later met with the village elders to make the options known to them. They described the centralized nature and lines of authority in decision making in the Ministry of Health for personnel matters. They also told the village leaders about supervision rounds of the dispensaries made by the ministerial director of maternal and child health services. The decision the leaders made was for Eng to find out when the director had scheduled a visit to the Gadjagan dispensary, and the village chief would be sure to be present on that day.

The reasoning behind this particular choice of action was that they wanted the nurse to be replaced but not fired, for they believed him to be a basically decent man with a drinking problem, and they wanted to be sure that the authorities understood the problem to be manageable if appropriately monitored. Writing letters was not felt to be an effective means for achieving these objectives, nor was it a method of communication with which they felt comfortable. Interpersonal interaction was, and so the leader of the community would speak with the leader of professionals.

The director arrived as scheduled and inspected the clinic records and facilities, making note of the low-utilization rate and paucity of drugs and equipment. A message was sent that the village chief wished to greet him in his home. It was there that the problem was introduced and discussed fully. Within a month the nurse was transferred to a dispensary outside of the region and replaced by another who was just as unenthusiastic about outreach, but did not have a drinking problem. Over the course of the next 3 years, while Eng was still working in Togo, the director of maternal and child health services always asked about the people of Gadjagan whenever he saw her. The experience for him was as meaningful as it was for the community, because it linked him to and demystified the world of the villagers to some degree.

By combining their own wisdom and priorities with new knowledge about the provider system, the people of Gadjagan sharpened their ability to function as partners with professionals in problem resolution. Their repertoire of legitimate choices was expanded, and they gained more confidence about what they already known and do. By arranging the meeting between the director and their traditional village leader, the community was actively involved in the entire process of conflict resolution with the health care system. The health workers did not intervene on the community's behalf by either writing letters for them or going directly to the director to present him with the problem to arrive at a solution about input from those who are experiencing it. The act of linking the community to available resources became one of enablement—enabling it to experience a sense of influence and control over its own community's welfare and development.

COPC workers can and must fulfill a third role, that of *enabler,* by facilitating community action in which the worker does not take the lead, but is there to support community initiative and momentum. Choices, potential obstacles, and possible consequences are the contributions of an enabler. The final decision and commitment to work toward it must come, however, from the community. There is a difference between working “on behalf of” and “at the behest of.” Who has the most vested interest in effecting change? Who is more effective in persuading policymakers, decision makers, and other officials to respond than the ones who are not being treated equitably? By mobilizing community resources, COPC workers can make a significant contribution to community development. Leadership and, most certainly, the desire for a more satisfactory quality of life exist within any community. COPC workers need to be trained in community organization skills to be able to identify and strengthen indigenous leadership to meet that desire by developing strategies with them as peers. Reducing barriers to health care may be a first step in the enabling process, but it definitely is not the final one.

In conclusion, we see the challenge for COPC workers as that of being able to:

- translate the perspective of communities and of professionals to each other;
- link communities to the resources available from professionals, as well as link professionals to the strengths and ingenuity of communities; and
- enable communities to take full advantage of the resources and knowledge for initiating community action.

If the vision of COPC is to increase the abilities of poor and near-poor people to influence their own community development, then are COPC workers ready to extend their arena into social and political action? If COPC truly believes that changes in the environment, standards of education, and social status have a greater effect than the medical care system on health improvements, then are COPC workers ready to go beyond the use of biostatistics, clinical epidemiology, and biomedical services for defining the problem? As we stated in the beginning of this paper, poor health status is an indicator and a symptom of inequality, not its cause. Will COPC continue to treat the symptom and not the cause?

There is a wealth of knowledge, experience, and skills for dealing more effectively with the causes of health status. COPC has been unable to draw upon and use this knowledge to date. It is out there with the communities in which we work and with the ones we want to involve in program planning and implementation. At times we recognize it but do not know what to do with it. At times we look for it but do not see it. And then there are the times when we both see it and use it and a true partnership begins. COPC workers and supporters have all had some experience with a meaningful relationship between communities and themselves. We shared some of ours in an attempt to identify those principles that seemed to contribute to favorable outcomes and to offer more reasons for why COPC is the hope for neglected communities.

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Discussants

Richard Smith

I have been, and continue to be, critical of primary health care (PHC) or community oriented primary care (COPC) as it is characterized by hundreds of demonstration or pilot projects scattered around the world, limited in scope and funds, and predominantly serving the needs of the sponsoring institutions and donor agencies that carry them out. The wreckages of increasing numbers of these small projects are strewn across the landscape of scores of countries. And along with these projects are the imagery and reputation and future of PHC. Confidence in PHC as a viable entity is being eroded at the local village level by the combination of unbridled zeal to do something—anything—on one hand, and the inability to follow through with successful programs and resources scaled up to meaningful levels, on the other. Much of this is being described with a “diarrhetoric” that talks of success as if we already known how to provide PHC to the majority of populations. Such is far from the truth. And such are my fears for COPC in this country, along with economic crunch, that is going to stall progress in this arena.

I would like to take this brief time to talk about two related issues: (1) community involvement in primary care and (2) the roles of nonphysician providers of primary care services.

Health services in developed countries like the United States are rigid and resistant to change—entrenched and tracked with organized medicine, institutions of education, and technology development. They seem resistent to change when compared to emerging health systems in the less industrialized world. In the Third World, the movement in health is to get out from under the often inappropriate, irrelevant, resource-consuming yoke of the Western medical mode. And there is much for those of us in developed countries to learn from the Third World, as many developing countries are opting for primary health care as a guiding force.

PHC overseas is defined with much more community involvement in the health system. It is seriously concerned with other sectors that impinge on health and vice versa. We can take safe water supplies and solid waste disposal almost for granted in our country; 80 percent of the world cannot. Health and well-being for most of the world has to be concerned with such things as: food production, preparation, preservation, and storage; immunization against common preventable diseases; income generation from cottage industries; oral rehydration of children before they defecate themselves to death; transportation and marketing of goods; and curative care of common health problems. These are but a few of the components of PHC as viewed in the Third World. But they are the guts of COPC or PHC in those nations and have to actively involve the community, since limited resources mean that for the most part they have to be self-sufficient. However, as John Hatch describes it, we still talk here in the United States of PHC as a "top-down" laying on of hands, doing things in the community for the community, to the community, and less so with the community. The message coming out of Professor Hatch's paper that needs reiteration is that the American community has something to contribute to its well-being in this scheme we call COPC. The message coming out of the developing country experience is the same.

The economic dilemmas we face now in health care are going to worsen. As they do, the poor and the minorities and the elderly will suffer more. The communities many of us work with will be changing in character. Middle America will have to face the same biting winds of change, with pain familiar to many of us. The present health system in our country is weighted heavily towards technology, services, and resources instead of needs. It will have to respond to the present call for reform in a way different from the marketplace predictions. I think we will see opportunities for

COPC increasing—I repeat—the opportunities will increase. However, I am an idealist and have no illusions that the American people want to take advantage of these opportunities and read history; so frequently they seem only to want to write it.

The history I am talking about reading refers to the efforts that have been made to identify the character of “working-together behavior,” demonstrating that health professionals can and will work on a large scale with people in their communities who are prepared to assume their rightful role in responsibility for their own well-being. It is an investment behavior that is different when one is part of a truly COPC program, one characterized by responsibilities that “bubble up” as well as “trickle down.”

The history I am talking about is the experience with extenders of health services over the past two decades (e.g., physician extenders, nurse practitioners). I have been involved in that experience, working not only with new health professions roles, but with equal concern for the management support systems that form the receptive framework in which those people are to work. We have been engrossed in creating roles with linkages and translating capabilities between doctors and their communities. In our work in the Third World, the intermediate-level workers that we generically refer to as “medex” (most of whom are nurses) are now operating connectors, bridging the technical and cognitive distance between high-level professionals and communities. The enabling mechanism has been created.

The history I am talking about are the bonuses that this kind of COPC can bring to fee-for-service doctors if they have the guts and smarts to pursue it. I am talking about the increase in income and leisure time for physicians, the increase in coverage of some practices, and the maintenance of quality care that has been demonstrated in practices with medex-type workers. I am talking about the cost containment and, in some instances, demonstrated savings that resulted from the use of these primary care providers that can be passed on to consumers. But now that movement has plateaued and has actually begun to diminish for reasons that may not withstand the coming economic difficulties.

The history I am talking about is the spreading of work of people like Ruth Lubic, producing 40 percent savings potential to patients and communities using birthing centers staffed by nurse-midwives. I refer to the use of nurse-anesthetists who give nearly half of the anesthesia in this country, while anesthesia residencies for physicians, already reduced in number, go unfilled each year. Someone else has had to fill the role, of necessity.

This history that will be recorded in the next few months is work by McMaster University's Gregg Stoddard. I refer to a study that found that Canada could have saved $200 million in 1980 if the country had a na tionwide nurse-practitioner program. That number was a rock-bottom conservative estimate, and Stoddard feels that between $500 to $600 million is a more realistic figure. Extrapolating that figure, which was for insured ambulatory services only under direct physician supervision, to our own country, where we have proven that this type of worker can do much more with physicians and hospitals and communities, there could be an estimated annual cost savings of $5.5 billion.

The possible working combinations involving communities, nurses, behaviorists, doctors, community workers, and others to meet the needs of COPC are part of our history. Do we have to wait two more decades to catch up with the Third World in appreciating the role of the community in PHC? Do we have to be helpless spectators to nursing and medicine locked in their own agonies of change and adaptation. I think we would see nursing as the template for COPC in this country if we all could only look through the swirling dust together as we prepare for our roles in the strained period ahead. These problems and the history glaring at us are the backdrop against which the next difficult act is to be played.

Fay W. Whitney

The title of Dr. Hatch and Ms. Eng's paper is disarmingly broad for a nurse who views all patient contacts in primary care as health care contacts, thereby defining all who deliver care as “health workers.” Their emphasis is upon the community-based person who may or may not be a formally trained health professional, but who is used to help integrate primary health care services into an existing community. My emphasis is on nursing and nurse practitioners in particular.

An early (1929) model of COPC nursing is the Frontier Nursing Service, where midwives and public health nurses, responding to community needs, brought to the hills of Kentucky a kind of health care that met not only the immediate need, but that has endured more than 50 years. Their epidemiologic mode was called case-findings and has been the basis of primary nursing care since the beginning of nursing history. Early in my public health career, I found, perhaps less elegantly than the many examples in Dr. Hatch's presentation, the lesson of his three false assumptions. I began to fashion my practice after the needs of the community as they were expressed and found they were not very different from the professional intent—just different in emphasis. I learned the language and, without throwing away my tools, learned how to build relationships that told me what the “real world” was.

I was helped to understand by able teachers, my patients, their friends, and their neighbors that there was much to learn about people and how they behaved that no amount of formal education could bring to bear. More importantly, I learned the law of the consumer—if they don't want it, they won't buy it. We call it noncompliance—they call it “no sale.” What is often forgotten as we go about our planning for health services is that the initial choice to use or not use services rests in the hands of the patient. As Keith Bolden has said, “the patient is the cornerstone.” It is only after he has given himself up to the system that he is in danger of losing control of choice. In primary care, the patient never truly does so.

In teaching nurses to be nurse practitioners, what one does is move the center of focus from acute to primary care. Nurses are largely educated in acute care settings. Nurses with baccalaureate, masters, and doctoral degrees have some practice in community health, but they comprise only 15 percent of the nurses. Less than 30 percent of nurse practitioners are baccalaureate prepared. It is an interesting task to reorient the nurse to situations where it is the patient who determines whether or not he will follow the plan prescribed. Nurses are edgy and angry when patients return and have not “complied” with “what they were told.”

Dr. Hatch has suggested that community health workers can perform at least three tasks: (1) translator, (2) linker, and (3) enabler. Each of these tasks is concerned with negating the three false assumptions that he feels will impede the development of COPC in any community. The tasks are role-related. In the last 15 years, nurse practitioners have been very successful in primary care. They, too, have been translators, linkers, and enablers. Dr. Hatch suggests that the communication role is vital to both understanding and change strategies that will have lasting effects on the population. Nurses learn to view the patient/provider interaction as a team event early in their practice.

The nurse is a credible provider in primary care, because the background brought to delivery of service is an action-oriented, patient-centered thought process, concerned with seeing an outcome rather than merely entering an input. Many recent studies show the effect of adult nurse practitioners (ANP) in reducing numbers of hospital visits, pediatric nurse practitioners in increasing patient compliance with well-child regimens, and nurse midwives in reducing the number of low-birth-weight babies born out of hospitals. There is evidence of improved hypertensive outcome in ANP clinics and reduction in the number of low-birth-weight babies and child abuse following delivery in Teen Pregnancy Programs, run by nurse practitioners in high schools. Patients' attitudes of acceptance and positiveness toward their care with nurse practitioners probably stem from a long history of patient-centered nursing practice. Nurses use health workers in the community more fully than other providers. The nurse knows and accepts these vital people as part of practice and can use the communication network that is provided with less confusion than many of the other health workers.

The linker is a person whose role is finding resources in the community that are not commonly known. Every profession or service provider has "contacts," people who can help unwind the famous "web of causality." The linker gives the provider true diagnostic tools from an inside perspective, teaching them the role that will effectively accomplish the patient/provider mutuality of purpose. Nurses have acted as the informant "linkers" for years. They are the second opinion in the neighborhood. As nurse practitioners they continue to use this system in productive ways.

The enabling role is the role that produces the effect. It is the role that must come third. It requires successful working through of the other two. The enabling role is one that requires skills in negotiation. The political and power elements of the community are involved. Often, in this situation, the provider becomes the liaison, the translator, and the linker. They are effective only if they have maintained appropriate relationships with the power structures outside and inside the community and can bring credence to the situation based on understanding and power within that structure.

Nurses have long been enablers. They have been called "handmaidens," "left and right hands," "advocates," "go between," and "gap fillers," and, of late, some less admirable things such as meddlers and protagonists or competitors. In primary care, nurses are often the vehicle through which things get done. They have been inordinately successful. They are often the ones closest to the community and to the establishment. They live where primary care patients are. Our figures relating to graduates show that of 250 graduates, 75 percent have returned to the underserved areas from which they came. National figures show that 69 percent of nurse practitioners are practicing in primary care, most of them in inner-city or rural areas.

I am constantly asked, what do nurse practitioners do? After 2 days of this conference, I can say with assurance, they practice in a COPC model as part of a health team, responding in individual ways to meet the needs of the "community," however defined, in which they find themselves. Another question is, are they effective? The terms effective and efficient are often intermixed. Efficiency is often used to describe the outcome as effective. How many patients can they see? Effectiveness is more complex than efficiency. Nurse practitioners do not see as many patients per minute as physicians. If they do, they are probably not doing an effective job as a nurse practitioner. We do know that 50–51 percent more patients are seen in practices with nurse practitioners and physician's assistants; that they provide 64–73 percent more direct patient care time in practices than was provided before; and that practices with nurse practitioners have a 42–51 percent increase in income. But primarily, nurse practitioners must be concerned with whether services produce desired results—lasting effects and changes in social and personal structures. There have been many ef ficient services. Even in Togo, walls were painted, education classes held, mothers taught, but still mothers did not come; services were not effective. It is this aspect of COPC that makes it so important to understand and accept the roles of health workers other than physicians.

From my perspective, there are some threats to COPC that will have an impact upon its effectiveness in the United States. The Graduate Medical Education National Advisory Committee (GMENAC) report, while telling us that there will be an oversupply of total numbers of physicians, warns that there will not be an oversupply of primary care physicians. It also tells us that relocation of physicians to primary care settings will not be over-whelming. The National Institutes of Health predict that, although 60–70 percent should be in primary care, only 39 percent will be. The GMENAC report does suggest holding firm on the introduction of increased numbers of nurse practitioners and physician assistants during the next 10 years, until it can be seen whether physicians will take up primary care roles. It is my guess that they will not. However, regardless of what medicine does, it is inaccurate and short-sighted to suggest that limiting the practice of one category of health professionals will necessarily affect the problems of maldistribution within another. Studies have proven that nurse practitioners, while they share many primary care roles, do provide distinct and needed services in primary care. We know that much of the move to block adoption of appropriate legislation for the practice of nurse practitioners in several states has been through physician groups. In New York State, this is true. They appear to want control of the practice of nurses who might compete with them. They want to hold in line all health professionals so that they may direct all activities in health. Several speakers have stressed a different tack for the future in COPC. Donald Madison called for a team of health providers to share and develop methods of health delivery. Luana Reyes said that it was not a medical community that must be developed, but a health-conscious community. Nora Piore spoke to a deployment of resources that was a reflection of the epidemiologic needs of the community. Dr. Guerrero outlined a WHO definition of primary care that could not possibly be fulfilled by a single health professional. To Steve Joseph's four pillars, I would add a fifth—other health workers. As David Kindig suggests, studies of communities will help define services, and, I would add, not unless the kind and number of providers available for particular purposes are written into the equation.

Another threat is the present payment mechanisms that exist for reimbursing health providers for services. Fred Diaz suggests there are two kinds of patients—those who can pay and those who cannot. The largest block of patients are those who do not but rely on third-party payers. The fee-for-service structure, coupled with third-party reimbursement that centers most of its payback on high-technology services, rather than preventive, primary care, has sent us reeling toward uncontrollable costs in the past 10 years. Although there has been legislation to ensure that health care is a “right,” none of the plans to support it have included increasing costs for primary, preventive services, nor to include other, less costly, effective health workers in the payment scheme. Weston's study (Weston, 1980) regarding nurse practitioners shows that nurse practitioners in rural, underserved areas are largely deterred by lack-of-payment mechanisms for their services. Except in some federally designated centers, services provided by health professionals other than physicians cannot be reimbursed. Many of the clinics that might have fallen under the Rural Health Act were unable to fit the guidelines. Many closed. No health care replaced the primary health care provided by nurses and physician assistants in these clinics. Primary nursing services, many of which are the needed services in the communities and which interact with the social, environmental, and community life-style needs, cannot now be purchased through third-party reimbursement mechanisms. Although I share Karen Davis' optimism for the increasing role of health care providers in helping define and direct the distribution of scarce resources in the coming months, I see little movement to include primary care nurses in the decision-making process. To exclude them is to maintain an economic status quo that will not only topple the economic health of the nation, but also fail to develop the needed team concept of COPC and, in the long run, fail the citizens who need our combined advocacy to create a climate of health and productivity.

Last, continued dependence upon the vertical hierarchy of present-day organization of services will not bring us closer to usable models in primary care. We need to understand and implement matrix structures in health, with multiple providers and varied project and functional roles. There are many roads to health. It is important that the organizational structure of services does not form the roadblock to utilization and ultimately to access. COPC services must have flexible structures that reflect the best mix of people, payment mechanism, and methodology to do the task.

If we are to look at health care as part and parcel of the social and environmental structure of the community, we cannot continue to weave a fiber that has only one dominant profession, a single answer, or an economic and organizational structure that is neither efficient nor effective. Use of community health workers, nurses, physicians, social workers, home health aides, respite programs, day care centers, elder programs, and the like will be a better approach to team solving of complex issues in the community.

Dr. Geiger has asked, is COPC a romantic dream or a practical necessity? From my view, we do not have the luxury of the romantic dream. The necessity is upon us, and the solution is practical. To Dr. Abramson's two essential elements we must add multidisciplinary health team. Without this there is no ability to provide an integrative curative, rehabilitive, preventive, and promotive plan or comprehensive approach, as outlined in the essential elements of COPC.

We need a team, whose captain is the patient, whose playing field is the community in which he lives, whose league is made up of a broader scope of players, and whose coaching staff has the good sense to call upon each other to provide their special skills for the purpose of winning the many faceted game of health delivery. Because we have already begun, I am sure we can do it together.

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Medical Education and Training for Community Oriented Primary Care

Jo Ivey Boufford

In the opening chapter of his book *Community-Oriented Primary Health Care,* Sidney Kark systematically provides definitions for and distinctions between “primary care,” “public health,” and “community medicine.” The clarity of Kark's distinctions makes it possible to understand the importance of their integration into the concept of community oriented primary care (COPC), the focus for this conference. Jack Geiger has noted that the integration or synthesis of a variety of familiar features of health care into a unifying, action-oriented program is the uniqueness of COPC.[1] The tradition in American medicine and health professions education has been to keep these approaches to health care separate. Population-based medicine (community medicine, public health, social medicine) has continued to grow further away from the mainstream of curatively oriented, high-technology biomedicine in both training and in practice. The debate between investment in the “personal encounter system” of care versus the “public health system” of care is well laid out in McDermott's paper “Medicine: The Public Good and One's Own”[2] and is familiar to all of us. This polarization has characterized the American approach to solving the problems of providing health care for its people. In order to accept COPC, a conceptual shift is required in most of our thinking. Such a shift would allow for the synthesis of ideas and programs that tend to be portrayed as antithetical and whose proponents and practitioners often appear to be competing with one another. To be truly effective, this synthesis that is COPC must take place in the clinical practice setting that will present a challenge to both educators and practitioners. It is the purpose of this paper to examine the implications of COPC for medical education and training.

MEDICAL EDUCATION AND MEDICAL PRACTICE

Three main components of the health manpower development process have been identified by Fulop[3]: planning, development (education and training), and management (in the work environment). He and many others feel that, ideally, each of these steps should be integrated into a single process. This is sometimes referred to as "controlling both ends of the pipeline." Those responsible for planning the health care delivery system also exert control over the training process to assure that those health personnel who will enter the delivery system are appropriately prepared to perform the job that is required of them. This approach has often been the guiding principle behind the development of "new health roles," especially in developing countries with a dearth of "health professionals"—doctors, nurses, dentists, pharmacists, etc.[4,5,6] It was also the general approach used in the training of new health workers during the OEO period of support for the development of neighborhood health centers in the United States. [7,8] In this approach, the needs of a population or community are identified, and individuals, often members of that community, are specifically trained to perform the needed role.

In some systems of state medicine, the Ministry of Health or its equivalent controls the apparatus for education of the various health professionals. The numbers and types of physicians, nurses, and others can be regulated and, often, their practice location predetermined according to health system needs. This continuity of planning, development, and management has certainly not been the pattern worldwide, especially for the profession of medicine. It is interesting to speculate about what influence physician education and training has on later practice when the control of education and practice are not coordinated, as in the United States.

There are clearly two schools of thought. One holds that there is little connection between education and practice. Fulop[3] supports the notion that forms of practice are the deciding variable: "medical doctors as well as other health workers tend to adapt to the existing health system even when they have been trained for different tasks and circumstances. It is, therefore, in the health system that change, or at least careful plans for change are first required, then in the training of personnel for those systems." Funkenstein[9] in his National Representative Sample study of medical students between 1958 and 1976 shoots holes in the alleged power of the "role model," at least in undergraduate medical education: "One of the most cherished ideas of the faculty has been their influence as role models on the career choices of their students. No data were found to support this. In none of the years of studying … students, did more than 18% of the students feel that anyone of the faculty had influenced their choice of career." Funkenstein attributes the greatest power to influence student career choice to economic incentives and ideology (or the societal value of the time). He feels that both must be present and congruent to influence the student toward a particular and societally favored career; otherwise students are likely to follow their basic characteristics, either the "bioscientific" or the "biosocial," each leading them in different directions. He sees the trends of the late 1970s towards primary care and family medicine in the United States as related to government action, economic viability, the ideology of the times, the decrease in funding for academic medicine, and the perceived excess in the number of specialists and surgeons.

Based on these kinds of findings, I should probably end this paper here and we should all go out and set up some COPC practice models with a good program of in-service education for all who would work there! Yet, being involved in medical education, I am not willing to write off its influence on the career choices of physicians, nor its potential to facilitate the implementation of COPC.

There is considerable evidence elsewhere in the medical education literature that something is happening to large numbers of students as they pass through the educational process. The extensive review of a vast literature on the influence of medical education on medical practice conducted for the report of the Graduate Medical Education National Advisory Committee (GMENAC) Technical Panel on the Educational Environment[10] revealed three important factors:

1. Faculty role models can be influential in "passing on values and attitudes that can have long-term impact."
2. The student's ability to "role play" or test and practice newly acquired knowledge, skills, values, and attitudes is important to professional shaping.[3,11]
3. Institutional influences, at least the allocation of program resources, determine the power of first-order influences (role models and role playing opportunities).[10]

Availability of funds and the social climate in turn shape these "institutional influences." Prior to the impetus of the 1972 Health Professions Education Assistance Act to promote selection of primary care specialty choice and location in medically underserved areas, students were clearly choosing careers in the surgical and nonsurgical subspecialties over those in primary care. While recent figures seem to indicate that more than 60 percent of first-year residency positions are now being selected in primary care disciplines, it is not clear that this trend will continue. In fact, a recent article in the *New England Journal of Medicine* suggests that gains made in primary care from 1970 to 1975 may not be holding up over the period 1975–1980.[12] This may reflect a decrease in the “ideology factor” proposed by Funkenstein, as federal funds to support institutional initiatives in this direction have been declining.

Graduate medical education, on the other hand, is a less studied period of education intervention. The data to date would seem to indicate that it may be the most fruitful and influential period for exposure to models that influence medical practice. Studies by Wilson and her colleagues[13] of former National Health Service Corps (NHSC) and non-NHSC physicians practicing in primary care specialties in underserved areas (mostly rural) show that, while personal background characteristics of the individual are the strongest factors in practice location and specialty choice, those locating in shortage areas tend to have perceived faculty in their residency programs to be more supportive of shortage area practice; they are also more likely to have done their residency in a clinic or health care facility in a similar area to the one in which they are practicing be it low-income and/or underserved, both rural and urban. Hadley[14] also shows a high correlation between site of residency and ultimate practice location. The overall experience in the field of family practice since 1969 has clearly demonstrated the trend of family physician graduates entering communities of 30,000 or less population that have previously been without a physician.[15]

The implications of these kinds of findings can be summarized in the following way. People do not voluntarily subject themselves to experiences for which they feel unprepared. Exposure during education and training, especially graduate training, to the forms and locations of practice and to individual practitioners that support the implementation of desired practice forms (COPC for example) will, at the very least, demonstrate options to individuals who would otherwise never be exposed to them and, at best, significantly shape how individuals in these programs will practice in the future.

MEDICAL EDUCATION AND COPC

In addition to role models, practice environments, and institutional/societal influences, there is a fourth factor that likely influences student behavior and later practice forms. That factor is the specific content areas or educational experiences of undergraduate and graduate medical students. If we examine medical education, there has been a history of efforts to introduce the components of COPC into U.S. medical education and into medical education abroad. In reviewing these efforts, the obstacles to an integrated presentation of COPC in the current models for medical education in the United States become clearer. Recognizing these obstacles, strategies can be suggested for educational change to facilitate and promote COPC practice.

Briefly, the critical components of a COPC practice are:

- the provision of primary care services;
- a focus on the community as a whole in assessing needs, planning and providing services, and evaluating the effects of care;
- a community-based activity;
- involvement of the community in the promotion of its own health; and
- the team approach.

Each of these program components implies a constellation of skills to be learned by the future practitioner. A variety of efforts have been made to provide educational experiences for medical students and residents in one or a combination of these skills. Though there are very few educational programs, probably none in the U.S. that represent the total integration of COPC components, the experiences that have been offered could be characterized under three general headings:

- primary care experiences (undergraduate and graduate);
- community "oriented" educational experiences; and
- training experiences in the principles and skills of "community medicine."

Primary Care Experiences—Undergraduate

For the purpose of this review, primary care is defined as first contact care that is comprehensive (promotive, preventive, curative, rehabilitative), coordinated, and provides continuity of relationship between patient and physician. This is the definition originally proposed by Alpert and Charney in 1974.[16] The Institute of Medicine in its report "Primary Care in Medicine: A Definition" adds the concepts of accessibility (in time and location) and accountability of services rendered by a team.[17] These additions are certainly consistent with our intent.

Primary care educational experiences are found throughout the undergraduate and graduate medical education experience in the United States. The major impetus for the development of these programs has been the support of federal funds under the various Health Manpower Development and Training Acts beginning in 1972. The major vehicle for undergraduate primary care exposure has been the "preceptorship." The definition of a preceptorship used by DHHS to guide its program support efforts is "at least two weeks continuously under the supervision of a physician preceptor in the practice of primary care outside the academic medical center."[18] In a survey of 95 medical schools conducted as part of its preceptorship program evaluation activities, DHHS determined that in 1976–1977, of 92 medical schools responding, all but 1 indicated that they had a preceptorship program that met this definition, and 73 of 137 such preceptorship programs were federally funded. The federally supported programs were more likely to emphasize primary care, preventive medicine, and location in underserved areas than those sponsored solely by the medical school. Overall program evaluation indicated that student satisfaction was directly related to the amount of "desired hands-on experience that was actually received" and that more than 50 percent of students felt that such an educational experience assisted in clarifying their preference for a specialty, size of community, and form of practice. Seventy percent of students selecting family medicine had had one or more preceptorship experiences, but this correlation was felt to represent student self-selection rather than the fact that the preceptorship was a critical incident in specialty or location choice. In addition, the effective structural variables in the preceptorship could not be identified.

Several types of perceptorships have been implemented and documented. In one type the majority of the student's time is spent in the clinical setting with a physician and the other time is variably scheduled for a seminar on community health issues, a placement in a community health agency, or work on a community health project. Morrison[19] describes such an experience for a psychiatry clerkship. Since 1979, the American Medical Student Association (AMSA) has run a preceptorship program for National Health Service Corps scholarship recipients on behalf of the Corps. Medical and dental students are placed for 4–8 weeks with NHSC physicians in Corps practice sites in health manpower shortage areas. Most students are at the clinical level and the majority of their time is spent in preceptorship relationships with the NHSC physicians in their clinical practice. They are also assigned a small community project, usually clinically related, performing tasks such as developing health education materials or organizing a screening program. Preclinical student placements involve "shadowing" the clinician and a larger-scale project effort often involving community assessment. The goals for these preceptorships are acclimation of the scholarship recipient to the underserved setting and exposure to a primary care physician role model. More than 800 students have been placed in the past 2 years. Buttery and Moser[20] describe a combined community and family medicine clerkship in which 5 half-days per week are spent in the physician's office, 2 half-days in a structured seminar on the epidemiology of three clinical entities, 1 half-day in the ER, and 1 half-day in a public health agency. While the clinical portion of this preceptorship was evaluated according to traditional performance parameters, the student's performance in the seminar was evaluated on the basis of "participation." Student followup over a several-year period showed an increasing frequency of selection of family practice residencies by students taking the clerkship.

A community-based medical education experience was offered through the Appalachian Health Services Manpower Development Project out of the University of North Carolina.[21] Fifty-five percent of the student's time was spent with the preceptor, either in the office or hospital; 5–10 percent of time was spent in a "nonhealth related" community service; 15 percent in "other community health services," and 10 percent time on a student project. Evaluation showed an increased awareness among students of community needs. Fourth-year students preferred the clinical experience and younger students the community experience. Students felt 6 weeks was long enough, while clinical preceptors felt the program should be at least 8 weeks in length.

The Upper Peninsula (UP) program of the Michigan State University (MSU) College of Human Medicine described by Werner et al.[22] presents a complete revision of a medical school curriculum stressing primary care as the unifying thread of all training. Located in a remote site (the Upper Peninsula of Michigan) and taught by a special primary care faculty and community physicians, this 10-students-a-year program uses separate admission criteria and evaluation standards that assess success in relation to the goal of encouraging primary care practice in remote sites. The first graduating class showed equivalent performance on standard evaluation measures to other MSU students not in the special program, and 8 of 10 UP students selected a primary care specialty, all in a rural location. The Beersheva Experiment in Israel [23] and University of New Mexico Primary Care Curriculum[24] did likewise build an entire medical education program around the needs for primary care in a given area.

Thus, with notable exceptions involving major curriculum revision, preceptorship programs have generally been the most common vehicle for the introduction of primary care in the community to undergraduate medical students in the United States. The goal of federal programs has generally been exposure of students to underserved communities in order to see what it would be like to practice there. Medical-school-sponsored programs have generally focused on exposure to primary care physicians, largely family physicians, practicing in the community. While increasing numbers of medical schools require an ambulatory care clerkship for fourth-year students, many of these required experiences are still in traditional hospital OPD's and offer predominantly ER and subspecialty clinic experience. The opportunity for continuity is often dependent on the practice organization of the medical center ambulatory care services. The degree to which primary care is provided there determines the degree to which students get a primary care experience rather than merely an ambulatory care experience. Few preceptorships offer systematic instruction in principles of community medicine or the team approach, and the preparation of practitioners for their role as preceptors is variable.

Primary Care Experiences—Graduate

The surge in graduate medical education programs for primary care is a relatively recent phenomenon in the United States, though Stoeckle [25] recounts a period between 1900 and 1940 when residents at Massachusetts General Hospital spent nearly one-third of their time in the OPD because there were 2–3 times the number of outpatients to be seen daily as there were beds in the hospital. He maintains that the hospital's economy and work have determined the content and sequence of residency training, rather than any educational considerations.

The specialty of family medicine was created in 1969, and, with strong federal financial support, residency programs mushroomed from 15 in 1969 to 364 in 1979. Most medical schools now have a department or division of family medicine, and nationwide about 13.6 percent of graduating students are now selecting family medicine for residency training.

Family medicine programs have tended to stress the principles of primary care elucidated in our original definition. This usually includes training in internal medicine, pediatrics, psychiatry, surgery, and OB/Gyn in a hospital setting (frequently a community hospital) as well as a continuity of care experience in a “family practice unit”—a model practice developed for the residency in which faculty and residents, often in a team organization with other health professionals, serve a defined population. The family practice unit may be community-based (off-site) or may be hospital-based. In some institutions, the family medicine unit serves as the outpatient service for the hospital. The curriculum stresses comprehensive care for the patient in the context of his family, psychosocial skill building to maximize the effectiveness of stability of the doctor-patient relationship, and a variable amount of attention to issues of community medicine. Donsky and Massad[26] conducted a survey of 122 family practice residency programs in 1978 to determine the extent to which formal concepts of community medicine were taught. In the introduction to their study, they point out that the accreditation requirements for family practice residencies indicate that “principles of epidemiology should be taught; community medicine should provide the resident with an approach to the evaluation of the health problems and needs of a community and to the improvement of resources to meet community needs more adequately." Of 39 percent of the programs responding to the survey, only 38 percent indicated that they taught techniques for evaluating the health care needs of a community. Thirty-six percent taught issues and strategies involved in the organization of health services to meet community needs. The authors concluded that "community medicine" is taught more often as context than as a set of skills to be learned by an effective practitioner.

In 1979 Rosinski reported on his study of the 13 residency programs in primary care internal medicine and pediatrics funded by the Robert Wood Johnson Foundation. These programs and six residency programs funded by DHEW contracts in 1973 (some of which were the same) were the precursors of the programs in general internal medicine and general pediatrics that increased dramatically (from 63 to 109) during the period of 1976–1980 with the impetus of federal funding under PL 94–484. They stressed the development of a primary care experience for internists and pediatricians seeking to become primary practitioners. Most were based in academic health centers and utilized converted hospital OPD's or group practices for the resident continuity experience. In Rosinski's study of the Johnson programs, he found that only two programs provided an opportunity for residents to take nonclinical electives. One allowed 3 months of electives with weekly seminars in epidemiology, environmental health, sociology, political science, and quality of care assessment. Another offered elective opportunity to learn office practice management, sex therapy, decision theory, and behavioral science teaching. The overall evaluation of the programs was variable, but a consistent dissatisfaction was noted when the practice site was poorly organized. Residents expressed a desire for more structured approaches to the learning of primary care.[27]

After the inital contract period, a major federal grant program was launched in 1976 in support of general internal medicine and general pediatrics residency training. To be eligible for federal funds, programs had to meet certain criteria:

1. Twenty-five percent of residents' time had to be spent in a continuity ambulatory care practice over 3 years (for at least 9 months in each year).
2. Behavioral science teaching had to be integrated into the residency training.
3. The practice site had to be organized to assure smooth provision of primary care services.
4. The team approach was encouraged.
5. The introduction of "nonclinical" subjects related to primary care, e.g., epidemiology, organization of health services, health economics, etc., was encouraged.

Though no systematic assessment has been done of the teaching of these “nonclinical” areas, informal data appear to indicate that most are seminars on a weekly or monthly basis; some are elective opportunities in community-based agencies or projects, but there is little systematic teaching of a curriculum in community medicine. While some general pediatric and general medicine residencies offer the continuity experience in a community-based practice site, the vast majority feature hospital-based practice models.

An exception to the hospital-based continuity experience and the low emphasis on community medicine has been the residency program in social medicine at Montefiore Hospital.[28] Started in 1971 as an integral part of the medical program at the Martin Luther King Health Center in the South Bronx, the program was designed to train physicians as members of health teams for inner-city practice in underserved areas. Up to 5 months of time is made available for social medicine electives during the 3 years of residency, and a regular Tuesday night curriculum in social medicine is offered. Over the years, there has been a trend toward increased structure for this social medicine time.

There is now a core curriculum in social medicine, including epidemiology, organization and financing of health services, and community assessment. All residents will be expected to take part in the curriculum and complete a required social medicine project. While efforts are being made to further integrate social medicine and clinical teaching, the lack of administrative control over the practice site creates obstacles to developing needed practice systems. Werblun describes a similar evolution towards a more structured curriculum in community medicine in the University of Washington family practice residency program.[29]

To meet a perceived need for primary care physicians with community medicine or primary care research skills, a small number of primary care residency programs in pediatrics, medicine, and family practice have begun to offer joint residency training in both a primary care specialty and in preventive medicine. For example, the University of Utah has a joint program in family medicine and preventive medicine. Montefiore offers a Master's in Public Health degree with a clinical residency program, and residency programs can be combined with master's programs in community medicine at Utah, community health at Rochester, and business/public administration at the Wharton School, University of Pennsylvania. In addition, postresidency fellowship opportunities are increasing in individualized programs of health administration, health services research, management or health policy—for example the Johnson Clinical Scholars and recently the Kaiser Fellowships in Epidemiology (Beth Israel). However, with these few exceptions, residency training efforts in primary care have focused largely on the teaching/learning of primary care as defined by Alpert and Charney.

Community "Oriented" Educational Experiences

While primary care has joined the vocabulary of medical education, community is not a commonly used word in educational course titles in medical schools or in residency program rotations. The most recent introduction of the community to medical education in the United States began to a great extent during the ferment of the 1960s. Medical students turned towards the community for "relevance" and an opportunity for "service." Clinical faculty were largely uninvolved in this trend and certainly avoided its incorporation into core medical education offerings. Rather, faculty rationalized medical school activity in the community because it was a "living laboratory for research,"[30] a laboratory in which the medical school studies certain problems."[31] The mission of the medical school in the community was thus defined by one segment of the academic community—the students—as a "service" and by the other—faculty—as "research." Because of the nature of the times in which these positions were drawn and the political turmoil that often characterized the involvement of medical schools in the delivery of health services *in* or *to* "the community" during the 1960s, the development of community-based or community oriented medical education activities has remained controversial and thus problematic. In 1963–1964 the Student Health Organization (SHO) was begun in Los Angeles and Boston. This interdisciplinary group of health profession students shared concerns about social issues and the role of the health professions in addressing them. In 1966 the California SHO placed more than 90 students in rural and urban settings throughout the state with the financial support of OEO and the University of Southern California. The following summer, similar student health projects in Chicago, New York, and California placed more than 250 students of medicine, nursing, dentistry, law, etc., in community service projects. Madison[32] describes three goals for the SHO community project in the South Bronx, goals that generally characterized these programs:

- to provide an educational experience in community medicine;
- to stimulate community action for social change; and
- to provide direct services to community residents.

Different groups of student participants assigned different priorities to these goals. Because the projects were organized by students, the goal of community action became preeminent. Expectations were high for seeing significant impact in the community during the project period. When this did not occur over the few weeks allotted, frustration and disillusionment set in among activist students. The role of students in direct service remained unclear, as most were not yet clinically trained. The community medicine educational goal for the project remained, but rather than pursuing a formal course of learning community medicine skills, students, especially the politically radical, opted for "sensitization" to community needs and discussion and debate of strategies for change. Madison quotes Bronston and McGarvey writing of the 1966 California project:

> The most exciting idea that came from the total project was that the students had the ability to establish their own health school in the great tradition of the renaissance university. Retaining the ultimate initiative, the students decided on what they wanted to learn, who they wanted to learn from, and what they wanted to experience. [32]

While this excitement and its resulting commitment supported the development of a strain in medical education that has persisted to the present, the ethos of the learner defining "what community medicine is, who will teach it, and what will be experienced" has persisted, to my mind, to the detriment of true skill-building for the practice of community medicine, certainly the kind required in COPC.

The notion that community medicine is experiential, politically activist and change-oriented, while the rest of medical education, especially mainstream clinical medicine, is academic, politically conservative, and supports the status quo has served to set community medicine apart from the mainstream of medical training and practice. In many medical schools, student enthusiasm for "service opportunities" and the desire of community medicine faculty to avoid the stereotyped rigidity of traditional medical school faculty probably contributed to community medicine being seen as without discipline, representing an attitudinal, contextual learning rather than a set of skills to be learned, practiced, and integrated into clinical medicine.

In the 1970s the student projects changed as the American Medical Student Association (AMSA) assumed a leadership role among student health organizations and SHO broke apart. In 1969, the Student American Medical Association (SAMA, now AMSA) began its medical education and community orientation (MECO) program. Students spent 4–8 weeks in a community, initially based at a community hospital (arranged with the hospital administrator) and later with a private practitioner. Most students were preclinical, and work was almost entirely project-related—on a project identified by the sponsor. This program continues, and currently places about 400 students a year in 16 states. It's goal has been increasing community awareness and community service. AMSA's Appalachian student health projects in 1969–1970 and the further expansion of the MECO program into a variety of summer programs, developed in conjunction with community leaders and in service of their identified needs, gave somewhat more structure to the student projects, though the stress was still on experiential learning and nonclinical service. Departments of community medicine became considerably weakened on medical school campuses in the late 1970s. Their missions became diffuse, and primary care clinical experiences (preceptorships) in the community, having federal support, tended to supplant the community experiences offered by these departments. Students could now enter "the community" by doing a preceptorship with practicing doctors who were already there and under the auspices of the mainstream clinical disciplines, not just through experiences sponsored by departments of community medicine. These departments and their work consequently lost some of their attraction for students.

Medical education in the community remains a source of confusion for students and faculty alike. Many "community oriented" students, especially activist ones, see structured learning in the community as "using the community" and as research that must be balanced with providing a service. Most faculty remain inexperienced in design and implementation of organized experiential learning activities outside school walls, especially those integrating clinical and community medicine.

Training in Principles and Skills of Community Medicine

There were and are some notable exceptions to the experiential, sensitizing focus of "community oriented" educational experiences in community medicine. McGavran[33] proposed a model for the scientific diagnosis and treatment of the community as a patient with its own health status and health needs. The University of Kentucky community medicine program, from its inception, sought to train students to study and analyze the health status of the communities to which they were assigned. A required 6-week senior clerkship featured an analysis of community health needs and service availability. Advanced electives in community medicine focused on epidemiological studies of community health problems. [31]

Schwarz[34] describes an integrated course in preventive and community medicine in Australia spanning the forth, fifth, and sixth years of medical education. The course combines formal training in the skills of community medicine with exposure to principles of prevention in a rotating assignment to general practices along with an extended epidemiologic investigation as requested by a community.

Geiger[35] describes an intensive and sophisticated graded curriculum in community medicine designed to prepare the graduates of the Sophie Davis School of Biomedical Sciences in New York to be primary care physicians in inner-city, underserved areas. Combining field work, classroom work, community health diagnosis, and problem-solving, the program seeks to train primary care physicians who are clinicians, community health promoters, researchers, and change agents. Because students in this program must complete their last 2 clinical years in five rather traditional medical schools, the integration of this community medicine training with clinical practice is not yet possible within the Sophie Davis setting.

Bennett describes the evolution of his approach to community medicine training of medical students and community health workers in Africa over the past 20 years.[36] Using an interdisciplinary faculty (biomedical, community medicine, and clinical) in "teaching health centers" and "teaching health districts," students assume progressively more responsibility for design and implementation of community diagnosis in conjunction with the community and other health workers.

Finally, Deuschle and Bosch[37] define a collaborative model for primary care and community medicine practitioners. The "service" role of the community medicine doctor is seen as the planning, development, and evaluation of health services for populations, identifying problems through epidemiology and solving them via better organization of health services—primary, secondary, and tertiary care. Morrell and Holland favor such collaboration and describe the link of epidemiologists and primary care faculty in research efforts within a department of community medicine in London.[38] Kark and colleagues[39] describe a field workshop offered at their health center in Jerusalem to train practicing health professionals to integrate epidemiology and primary care practice.

These and other programs clearly define the specific training needed for the practice of community medicine, but for one reason or another this training is rarely conducted in conjunction with training for primary care in primary care service settings. One exception appears to be the model described by Guerrero in Colombia in which primary care delivery sites are used as the focal points for graded teaching of clinical, community, and preventive medicine to medical and nursing students.[6]

Team Approach and COPC

The team approach has been a feature of educational experiences within each of the categories outlined above. The team concept really came into its own with the development of primary care practice forms. The complexity of the task pointed out the need for a coordinated team of different health professionals. Kindig[40] traces the evolution of the health team concept from its inception through the OEO period into the early 1970s. The Institute of Health Team Development funded by the Johnson Foundation at Montefiore Hospital and Medical Center, the Office of Rural Health at the University of Nevada, and others have demonstrated models for faculty training and student education in interdisciplinary team concepts and methods.[41,42] Again, a federal grant initiative in the early 1970s fostered wider development of educational models for health team development. With the decline in federal funds, the numbers of formal team educational programs have declined, but the concept has been adopted in legislation supporting the development of new health professionals, primary care residencies, and general curriculum development initiatives.

The team approach has, like “community oriented experiences,” taken on a slightly political flavor, connoting less hierarchical forms of interprofessional relationships. The use of applied behavioral science techniques for team building requires explicit attention to concepts slightly foreign to the health professional as a focus for education, topics such as group process, conflict management, leadership and authority, and communication skills! By failing to focus on the team as a work group, many team development efforts have assumed the role of providing interpersonal or group support and have been discredited as “touchy-feely” exercises that take valuable time away from the task at hand—delivery of health services.

Thus, while the label “team” is widespread, the word has many different meanings. The clarity of goals, role definition, and appreciation of the resources other disciplines may bring to a particular health care task—all critical to a well-functioning team—are highly variable. The need for a team approach to the teaching and practice of COPC is evident and, in my opinion, the educational methods and technology for team practice are well tested and just waiting to be applied in COPC programs.[43–45]

The need to integrate the teaching of these different elements of COPC has been articulated in several national reports, including *A Manpower Policy for Primary Health Care* issued by the Institute of Medicine in May 1978[17] and a report on the National Rural Practice Project sponsored by the Robert Wood Johnson Foundation in support of “community responsive practice.”[46]

STRATEGIES FOR MEDICAL EDUCATION AND TRAINING FOR COPC

I think the evidence is compelling that there are at least four strategies that can be effective in education and training for COPC:

- developing faculty role models;
- developing role practice opportunities for students and residents;
- developing an integrated curriculum for COPC; and
- influencing societal values and values of medical education institutions in favor of COPC.

Developing Faculty Role Models

Primary care faculty have organized themselves in a number of associations. In the field of family practice there is the Society of Teachers of Family Medicine (STFM); internal medicine has the Society for Research and Education in Primary Care Internal Medicine (SREPCIM); and pediatrics has the Ambulatory Pediatric Association (APA). Members of these groups, both as individuals and in the aggregate, represent some of the more sophisticated and “self-conscious” (in the best sense) educators in institutions of medical education today. Family medicine evolved as a new academic discipline over the past 12–13 years. General internists and pediatricians who have struggled to define a true “primary care orientation” within their parent disciplines are likewise creating new training models. These clinical medical faculty have been exposed to behavioral scientists, educational evaluators, nurses, social workers, and nutritionists, as well as ethicists and philosophers, and have been accepting of them as legitimate teachers of their students and residents. This group of faculty are uniquely open to colleagueship with community medicine faculty and to the inclusion of systematic principles of community medicine such a those espoused in COPC as an integral part of primary care training and practice. Community medicine faculty are increasingly involved in health services research. These faculty and others with clinically related research interests should be open to COPC to further develop their professional domain and area of academic activity.

More traditional internists, pediatricians, and other subspecialists need some appreciation of the role of epidemiology in their practice of medicine. With the advent of screening programs, the demand for planning and regionalization of health services, and the application of principles of clinical research, there is increasing demand on them to learn about the “community” of individuals that are potential users of their services. Though this community orientation may be different from that of practitioners of COPC, the “mind set” can be similar—thinking of the problems of aggregate populations as well as individual patients. This common “context” can facilitate communication about COPC between primary care and specialist colleagues.

In order to prepare faculty for the teaching and practice of COPC, I would recommend the following:

1. The national professional organizations of primary care faculty (STFM, SREPCIM, APA in medicine and analogous organizations in nursing, health education, and other disciplines) should be introduced to COPC concepts at national meetings of these groups. Training opportunities for members

should be made available through CME and special faculty development programs sponsored by these organizations.

2. Certain health professions institutions with a readiness to implement COPC teaching models should be assisted in the effort. Support should be at the undergraduate level in both medical training and training of other health professionals and most especially at the graduate level in primary care residencies. As in the early 1970s, foundations will need to take the leadership in supporting exploration of new educational models. Grant programs should encourage the collaboration of departments of community medicine, schools of public health, or their analogues with primary care residencies and clinical departments sponsoring primary care clerkships. Such efforts should include faculty development programs in which faculty are trained in COPC (using models like the training workshops of Kark and others) and then actually practice and teach COPC under supervision.
3. Many schools of public health are increasingly trying to attract practicing health professionals and medical faculty to their programs. Special Master's in Community Health programs could stress training for COPC. Current graduate programs in epidemiology could be reoriented toward COPC, adapting workshop models such as those used by Kark and colleagues in Jerusalem.
4. National Health Service Corps (NHSC) practitioners are offered 1 half-day a week for continuing education in an area of their interest. In addition, the corps contracts with educational institutions to provide formal offerings 1 day per month for these physicians. Integration of COPC training into these formal programs or offering NHSC practitioners the option of learning this approach in their CME time could help develop not only a cadre of role models for the scholarship and other students placed with such physicians for educational programs, but also will orient a group of future primary care practitioners to COPC.

Developing Role Practice Opportunities for Students and Residents

Because current reimbursement systems tend not to support community health needs assessment, surveillance, or the health promotion efforts of COPC in the clinical encounter, other sources of support for these activities will be necessary. Foundation support and special arrangements with third parties to test this new practice form in model practices will be necessary. The most logical focus for these initial tests may be:

- family practice centers that can serve as sites for both practice and educational models;

- community-based practices that lend themselves to COPC and that may eventually welcome students and residents into the practice; and
- a selected number of National Health Service Corps practice sites.

Service and teaching COPC centers should be established to permit careful evaluation of all aspects of the COPC approach. It must be stressed that COPC is not a research methodology, but is an expanded concept of the practice of primary care. Thus COPC offers the opportunity to document the effectiveness of community health interventions that could provide support for reimbursement experiments involving physicians and other health professionals in community outreach, health education, and health promotion.

Developing an Integrated Curriculum for COPC

The word community must reenter the vocabulary of medical education. “Community oriented,” “community responsive,” and “community involved” must begin to represent substantive programs and approaches that are understood to expand and improve the practice of medicine. COPC as defined by Kark, is a uniquely appropriate vehicle to end the polarization between segments of the academic community over community-based education. The integration of community medicine skills into primary care practice expands the ability of the clinical practitioner to provide service to the community (users and nonusers), evaluate the effectiveness of medical programs, and eventually provide opportunities for substantive research on health problems conducted *with* the community, not *on* it. By overcoming philosophical arguments about the role of medicine in the community, the combined resources of the academic community can be channeled into the development of a new approach to clinical medicine for individual patients and populations.

The training of faculty role models, the establishment of COPC practices, and the integration of the different curriculum components of COPC into teaching programs will provide the basis for a comprehensive educational test of COPC. Support will be needed for planning, testing, refining, and evaluating each aspect of the educational model. Graduate medical education programs in primary care are the most fruitful focus for this activity for many of the reasons mentioned earlier: readiness of faculty, the existence of model primary care practices that can be modified to COPC relatively easily, and the focus on clinical training for primary care, which would be enhanced by COPC emphasis. Students seeking careers in primary care are increasingly more sophisticated educational consumers. While 5 years ago any “primary care” residency program was acceptable if offered at a quality institution, now specific questions are being asked about formal teaching in behavioral science, community medicine, and epidemiology. A program's ability to offer an integrated educational experience will increase its ability to attract excellent candidates for residency and prepare them for COPC practice.

Influencing Societal Values and the Values of Medical Education in Favor of COPC

It should be remembered that the different elements of COPC are separated in U.S. medical education because they have not been an organic part of the mainstream of medical training in this country. Many of these elements of COPC have become part of medical education because of pressures from different sources outside the medical education establishment. The push for primary care education came largely from federal and foundation initiatives in support of documented societal needs for increased numbers of primary care physicians in underserved areas. The public's felt need was translated into health policy and implemented partially through an educational strategy.

While public demand for health services in the late 1960s and early 1970s centered around needs for traditional primary care for acute and chronic medical problems, times are changing. The self-help movement, emphasis on prevention both in the media and to some extent in federal policy, and the increasing utilization and legitimacy of complementary therapies like meditation, biofeedback, etc., signal a new sophistication among consumers of health services. The public demand is increasingly for “comprehensive primary care services” and for better relationships with health care providers. It has not yet extended to COPC, but as Sidney Kark said, “the community cannot demand what it does not yet know and has not yet experienced.” Any observer of the current cutbacks in health services in neighborhood health centers has noted the increased dissatisfaction of patients who object to declining social, mental health, and outreach services they learned to expect in the 1960s. Patients of private practitioners are increasingly assertive about their rights to certain services and information from their physician.

Thus, one of our action steps must be education of the public to what COPC can offer. To the degree that public concern, expectation, and demand can affect medical practice and medical education, it must be mobilized by publicity about COPC successes elsewhere and by documented evidence of models established and evaluated in the United States. COPC has appeal and offers resources to all segments of the public seeking primary care services.

The current “societal” emphasis on reducing health care costs may be creating a climate more receptive to the scrutiny of new models for the delivery of primary health care services that have long-term potential for improving health status and decreasing cost to the system. This societal value will have an impact on health care institutions and medical schools to an increasing extent. One of the major problems facing these institutions and their teaching hospitals, especially in large urban areas, is what to do about demand for primary care services. For those institutions whose OPD's are becoming overwhelmed by demand, COPC practice offers the potential for enhancing the utilization of community-based primary care centers. For those institutions seeking new models for primary care services that can increase the appropriate use of their existing inpatient and subspecialty capacity, COPC also has promise. Changes in reimbursement for primary care services will be critical to the support of this shift in health care system emphasis.

The systematic study of primary care practice made possible through COPC can offer primary care faculty in the academic institutions the opportunity for clinical research that can add stimulation to the work environment and increase their academic productivity. For practitioners in COPC facilities, the stimulation of this expansion of practice scope can enhance retention and improve quality of practice over time.

The student body is still an important influence on the institutional climate in medical schools. Without the student activism of the 1960s, the community-based and oriented educational experiences that do remain a part of medical education would likely not exist. The enthusiasm of students for primary care has really driven the machinery initially set in place by foundation and federal support for educational model-building in primary care. The fact that 10 percent of the student body of a certain biomedically oriented medical school elected family practice residencies when that school has no family medicine department, division, or teaching program is a sign of the will of students that can override faculty and institutional intent. Introduction of COPC to students through family practice clubs at medical schools, programs of the American Medical Student Association, and selected educational meetings have been an important impetus for educational change.

With all of the emphasis on technology and hospital-centered medicine, we often forget that 98 percent of all patient contacts with a physician occur in ambulatory, primary care settings and do not involve hospitalization. A reorganization of medical practice at the primary care level can have the most profound influence on the health care system. I think that medical education can exert a major influence in support of such a change, for change often comes about as new generations enter a field. As Julian Tudor Hart has said and educators for COPC must echo:

> I am asking those young doctors who will be the innovators of their generation to do more than excellent transactional care … and begin to explore this new dimension of anticipatory care of whole populations. [47]

This is the challenge of education for community oriented primary care, and I believe it can be met.

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Discussants

Robert Tranquada

I have approached this assignment from the pragmatic point of view of a medical school dean who presides over the processes of allocation of resources in the academy, those fiscal and space and personnel decisions whose sum makes up the character of the school itself. I must view the subject of education for COPC from this vantage point, because that is where I am.

I bring with me considerable baggage that biases my view as a dean. I have been a chairman of a department of community medicine, I was involved with the Watts Community Health Center, and I have participated in the reorganization of the Los Angeles County Health Services Department from three separate departments to one significant whole, which was probably one of the more unnoticed but greatest ventures in recent times. Moving a very large county health department into a mode that embodied much of what is involved in COPC is no small undertaking.

The department of community medicine that I founded is now almost entirely devoid of anything that might be called community medicine and is concentrating entirely on very sophisticated—not unnecessary, but very sophisticated—epidemiology. The Los Angeles County Department of Health Services has been gradually torn asunder and dismantled towards its more primitive mode of specialized areas of hospitals, mental health, and public health. The Watts Health Center continues to struggle successfully in spite of diminishing federal support.

As a dean, I have to ask myself why this retrogression from so much promise 15 or more years ago and how can more lasting results be achieved from the enterprise in education for COPC. In short, what can we do to ensure that education for COPC can have a significant role in today's medical school training? What can we do?

No matter how dedicated we may be to the cause, we are constrained to operate within the resources made available. Because of the nature of the sources of those resources, our degrees of freedom in shaping their use are practically limited. We must respond to the fiscal and political realities that keep our institutions housed and our programs fed. A moribund institution isn't going to produce anything, much less COPC oriented students. What are the realities then from the dean's perspective?

Dr. Boufford refers to the important effect of student attitudes on institutional climate. As a participant at USC in the days of the Bronstons and McGarveys and the Student Health Organization, I can attest to the veracity of that observation. In my own school, over the past 6 years, in a school dedicated to the production of primary care physicians, 75 percent of our graduates have entered the primary care specialties of family practice, internal medicine, or pediatrics, against a national average of about 52 percent. This year, the indicators are that no more than 55 percent will do so. While this may well prove to be simply an aberrant class, we cannot help but look at the burden of debt at high-interest rates that they are taking with them and speculate that low-earning primary care roles are simply not attractive, in spite of our best efforts. We must face the realities of the economic burdens now shouldered by the majority of our graduates and consider how these realities will influence career choices. All indications are that they will get worse and not better in the next few years.

We in the medical schools continue to struggle to find experienced and capable faculty to staff our primary care programs. The immense growth in these programs, the 20-fold growth that Dr. Boufford mentioned as happening over the past 12 years, has left an enormous gap in the availability of seasoned faculty expert in primary care fields to teach and serve as the very significant role models that we need. Too many of those that are available or that we are able to bring on board are either from other backgrounds or are young products of what must be described as immature and tentative primary care training programs, which have had great difficulty in defining themselves in terms that are clear and understandable. A recent report in the *Annals of Internal Medicine* on primary care internal medicine programs in the United States[1] reveals that only 11 percent of the faculty of such programs are specifically trained in primary care internal medicine. Thirty-five percent come from subspecialties and 30 percent come from chief residencies in traditional internal medicine programs. We have a manpower shortage in role models and in teachers.

The accrediting agencies for the primary care programs have concentrated so much on process and staff characteristics of primary care programs that energy has been diverted from the essential task of defining the congnitive values of those specialties in understandable and achievable terms. In the more-or-less global definitions that have been used, the talk about cultural anthropology, sociology, biostatistics, and epidemiology points in a general direction only. There is a need for definition of the field in product-oriented, cognitive, and measureable terms in just the same way that we can define vascular surgery or gastroenterology. Only in this way can we expect the other specialized faculty to come to some understanding of what it is really all about and to increase their respect for the practitioners of these vital primary care areas. More explicit and understandable descriptions of the expected roles of COPC-trained physicians, better standardized curriculum—you will forgive me for that, but I will make the point again—and much clearer translations of the utility of the nonclinical portions of the curriculum are required for those purposes.

Funding is increasingly a problem. Our primary care departments and training programs are all deep in the red. They are supported by reluctant subsidies from the earnings of the rich departments and surreptitious allocations from general funds through the dean's office, which are being questioned more and more. As we move closer to the limits of funding of medical education and justification of these methods, the willingness of other departments to share scarce resources will become increasingly more difficult. The dean's task of supporting these efforts will be more and more subjected to pragmatic considerations, most of which are unfriendly to the charter of COPC.

Funds for subsidizing the settings in which COPC has grown are disappearing. The litany is familiar to you all: The OEO is gone; Community Health Center funding is under increasing attack from the current Administration; block grants threaten many backbone programs to which we are tied; and medical school capitation is dead. The private foundations cannot be expected to pick up all the slack. Faculty resistance remains. We have not yet made our case with the rest of the faculty. We are seen as do-gooders who are concerned with special systems applicable only to captive populations or to the disadvantaged, and what does that have to do with real life? The definition of what we are doing remains vague and unclear. Besides, the money well has dried up and where is the incentive? Traditional university and medical faculty appointment and promotion systems do not work well for any but the most outstanding faculty in COPC. Such systems tend to force well-motivated faculty to ignore hands-on issues and to return to the bench or the calculator.

Objective incentives to students who aim for COPC practice do not exist. Wellness care is not paid for, nor home visits, nor nutrition counselors, nor, I am sorry to say, teaching nurse practitioners, nor epidemiologic studies of communities, nor most of the intervention methods that have been mentioned. Unless a program of universal entitlement arrives, this will continue to be the case. This is a very tough reality with respect to incentives for all of us who would move in this direction.

It is a discouraging picture, at least to this dean, and the question, of course, is where do the solutions lie? I am not sure I know where they all lie. What positive actions are most likely to move medical school education for COPC on to a firm foundation? Time obviously doesn't allow a detailed discussion, and I will just briefly outline a few recommendations.

First, we have a powerful ally in that progress in health sciences has brought the personal and community health concerns together as the heart of a viable health care practice mode. Until recent years the primary concern of public health has been infectious disease. Politically, this has been translated into the task of keeping the dirty diseases of the poor away from the thresholds of the rich. That has made traditional public health supportable as a governmental activity at public expense. Today, the most dramatic issues of community medicine affect rich and poor alike. Properly exploited, this reality should enhance the chances of adequate funding for community oriented concerns of COPC.

We cannot rely on that alone. We need a much sharper operating definition of the cognitive requirements of COPC. Even if we are wrong in our first cut at this, sharper definitions will diminish the not totally unearned view in which we are now held as muddle-headed idealists. If we are wrong with our first definitions, we can change them as we learn. Those cognitive definitions must be translated into a clearly defined and more standardized curriculum. We are at a point where I believe that too much room for innovative programs leaves us without any standards against which we can ask to be judged.

We must concentrate on the development of a significant cadre of outstanding teachers of COPC. Two or three or four centers ought to be established with clear mandates, objectives, and well-defined curricula to help us with the preparation of outstanding teachers and to produce the seminal supply for the rest of the country. That is how every strong program in clinical medicine had its beginning, and I believe it must be the foundation if there is to be a strong academic program in COPC.

We must concentrate on the development of clear evidence of the effectiveness and efficiency, the health and economic advantages of COPC. If we can not do this, we can kiss the idea goodbye. Expensive idealism in health care will not be tolerated on any significant scale in the next several years.

We should, effectively, hole up for the winter while these other tasks are being achieved. We should concentrate on preserving only the best programs, which can tide themselves over with modest foundation support. A half-dozen innovative and excellent academic centers nationally are probably all that can be well-supported in the short run. These should be responsible for programs of visitation, seminars, preparation for academic roles, and development of meaningful accreditation requirements for less favored programs.

We must develop models of COPC clearly applicable to circumstances other than the special or marginal populations with which we have done most of our work; middle-class HMOs, group practices, or segments of university practices come to mind as logical places to start. It is a significant challenge. Otherwise, we must consign ourselves purely to a role of applying these principles to captive or disadvantaged populations only. Nevertheless, we must continue to utilize the special settings where nascent or mature programs have evolved.

Finally, we must divorce ourselves from the image of the fuzzy-minded do-gooder and create a well-defined, hard-headed discipline that can evaluate its achievements in other than emotional terms and that is unified by a clear understanding of its boundaries and its central themes. There is a lot of work to do. Times are hard. Stakes are certainly high. Certainly others will differ from what I have said here, but from the perspective of this dean's chair, something akin to the preceding is required if COPC is to come of age in medical education.

References

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Richard Kozoll

I presume that my comments follow Dr. Boufford's and Dr. Tranquada's, because I am a physician in the current practice of community oriented, responsive, centered, or guided medicine. What I do confess to is the leadership of a very unusual community practice. I believe that I am in the practice of community oriented primary care, but I am certain that many of my patients are unaware of it. My board of directors probably suspects it because my revenues rarely exceed my expenses. It is probably my wife who really knows it, because our incidence of uninterrupted suppers rarely exceeds 300 or so per thousand. In fact, you might talk in terms of community oriented life.

Dr. Boufford has identified a number of critical components and categories of preparatory experience for community oriented primary care. However, I do not feel that these really reflect the inventory of knowledge or skills that I need for the day-to-day operation of a rural health system, my community oriented practice.

I have attempted a list. Forgive me for its length, but I assure you that these are all areas of knowledge or skills that I either have developed, learned indirectly, or am in need of. They include clinical problem solving; behavioral intervention, including individual patient counseling and education; personnel management, including salary and wage administration; job description development; motivational and team leadership skills; fiscal management, including budget formulation and monitoring; accounts receivable and payable management and nonprofit accounting procedures;

grant preparation and contract negotiation; data systems use; public relations, including the development of informational materials; other marketing skills and media use; public communications skills, which must be adapted for three cultural and language groups; nonprofit corporate board organization and function; knowledge of federal, state, and local agencies and health programs; knowledge of third-party covered services and reimbursement procedures; emergency medical system development and operation; school health service development and operation; clinical protocol development and quality of care evaluation techniques; community hospital organization and medical staff responsibilities; Joint Commission on Accreditation of Hospitals and/or federal program certification requirements for clinics and hospitals; facility financing and construction; other physical plant requirements, including fire safety codes; development of patient education materials; knowledge of other health professions, including licensure or certification requirements, regulations, and professional capabilities (part of the knowledge needed to organize an appropriate health care team); and principles of population medicine, including use of census and vital statistics data, rate determination, and research design.

Perhaps the most important skill of all is personal time management, one I have not yet mastered. These skills are not conveniently offered by any physician-training program in the United States of which I am aware. I agree with Dr. Boufford that the present schism in the United States between public health and medical practice may impede the development of training programs integrating these two different perspectives.

The impediments, I think, are overcome by an appropriately motivated health professional in training, as well as a flexible training program. I know of many others as well. I feel that I was able to overcome them, and I know of many others who did as well. So much then for the knowledge and skill requirements for COPC.

Dr. Boufford has alluded to community role models as an important factor in education for community oriented primary care, and I agree whole-heartedly and have served from time to time in this capacity for student or resident preceptees from the University of New Mexico. I believe, however, that several predisposing conditions must be met for the role model approach to work. First, the students or residents must be activated. They must fully elect the experience. They must be able to participate actively in their own education. They must feel comfortable in interacting with the teacher or preceptor to whom they are assigned. I feel that development of such activated students is the responsibility of training institutions.

Secondly, the student or resident must make an informal contract with the preceptor. The time and economic demands of the preceptor preclude the continuous sort of attention that full-time faculty may be able to provide.

The preceptee may need to help out in certain practice situations in order to free up the preceptor for later one-to-one sessions. This sort of trade-off should be negotiated in advance and should not suddenly and begrudgingly occur in the busy practice situation. The structure of the preceptorship should be negotiated early on to the satisfaction of both parties. Awkward inactivity and inappropriate responsibility for the preceptee may be avoided through this negotiation process.

Thirdly, the preceptor must be prepared to share his or her entire life with the preceptee. In this way the preceptor's personality, as well as his or her professional function, influences practice choices of the preceptee.

And, finally, the chosen practice must be stable, successful, and of high integrity. I think both Dr. Boufford and Dr. Tranquada referred to this point. The potential for “turn-off” rather than “turn-on” should be minimized if medical schools are careful in their choice of community oriented practices. The potential for future replication of the practice by the preceptee, I would think, would be enhanced by an early “turn-on” experience, rather than one of a different kind.

I would now like to reinforce the importance of the timing of preceptorships and other community experiences. I think they should begin early. Dr. Boufford has referred to the concept of ideology or perhaps the prevailing attitude of the microsociety of which the medical student is a part. I think this ideology is most flexible in the initial few months of medical school.

Students must leave the classroom, and they must leave the academic center, even for just a month. We have seen examples all around us of community oriented health professionals who participated vigorously during the 1960s in student projects. The approach works. I know it does. I was one of those students. Students identified as being predisposed to community oriented primary care need to be continually reinforced. It is going to be an uphill battle for them. Electives, fellowships, special projects, and further role model assignment must follow. They should be, and they should feel favored in their schools.

The Checkerboard Area Health Systems participates in a unique program at the University of New Mexico, called the Primary Care Curriculum. We were fortunate to have assigned to our health system two students from their initial class and one student of their second class for a 6-month, second-year, rural health rotation. We are gratified that all three of them are coming back during their fourth year and we intend to reinforce whatever preliminary decisions they may have made. I think more of this should take place.

I would also like to make an argument for including more structure in the community preceptorship. I agree with Dr. Tranquada in this regard. I would like to mention that the structure would help not only the preceptee, but also the community preceptor as well. Everybody would be more comfortable, and the students may feel that community medicine is far less alienated from other areas of medical expertise.

Like Dr. Boufford, I am not willing to write off the influence of medical education on physician career choices. The existing community oriented primary care practitioners in conjunction with innovative training programs can, I believe, shape or at least significantly influence the future of American medicine.

Frankly, if we are not practicing, promoting, teaching, or funding the elements of community oriented primary care, what are we waiting for? The alternatives will be wasteful for society, probably transient, and, in my opinion, a lot less fun.

Thoughts on Community Oriented Primary Care

David E. Rogers

During the intense and productive 2-day conference, discussion focused on the emergence of community oriented primary care (COPC) as a concept. The definition of COPC was refined, and its applications to a variety of settings in both developed and developing nations were described. Attention was also given to the roles various health professionals must play in developing effective systems of community oriented care, as well as to how physicians might be educated and trained to be more effective in furthering such programs.

Summarizing what has transpired during the conference is an unenviable task. It cannot be done adequately in one short commentary, but I will try. I have done so by playing a somewhat unusual role. I have tried to pretend that I am an observer from another planet, increasingly convinced of the wisdom of the concept, impressed by the almost religious fervor of its advocates, but puzzled by its apparent lack of contagiousness among many health professions. What are some of the roadblocks that impede progress and what, if any, are some ways of surmounting or circumventing these roadblocks? Answers to these questions might lead the way to a better agenda for the coming decade.

To put first things first, the evidence seems to me overwhelming that organizing care on a thoughtful multidisciplinary community-focused basis makes good sense. Community oriented care programs seem to me to be the rational way to deliver the fruits of biomedical and behavioral scientific knowledge effectively to those who need them. No thoughtful person can argue with the logic of this approach. How can one believe that improve ments in health can occur without thorough epidemiologic knowledge of health problems that exist in a community or a society? How can preventive, rehabilitative, or curative services be fully effective if one knows little or nothing about the cultural, educational, economic, or psychological factors that can create barriers to care, isolate groups, and increase personal health risks for community inhabitants? No one in modern society can believe that a physician working in isolation, and simply treating those who come to him or her on a one-on-one basis can produce a healthy society.

If this be the case, why can I as an “outsider” ask the following questions:

- Why hasn't community oriented primary care swept like a tidal wave over the world and why have not all in medicine embraced the concept as an idea whose time has come?
- Why are most of our major medical schools continuing to turn out large numbers of specialists despite enormous evidence that what is needed is more generalists to provide community care services?
- Why have schools of public health, in the past such proud leaders of medicine and responsible for so many of the advances that we now enjoy, become relatively quiet institutions often ignored by the medical profession and the larger society?
- Why do departments of community medicine tend to be relatively weak forces in their academic institutions and why do they seem to have so little impact on medical education in general?
- Why are medical grand rounds in American medical schools—a teaching exercise that offers a reasonable window on what is and is not believed important by faculty—progressively abandoning patient oriented presentations, ignoring psychosocial and epidemiologic factors, and becoming largely lectures on recent advances in biomedical science?
- Why have so many developing countries with newly realized resources first opted to build very expensive tertiary care centers—often ignoring basic community services—as they attempt to develop a stronger health care system?
- Why have the mountains of literature on COPC written over the last decade had so little impact on how medicine is organized or taught or practiced in this country?

Although deliberately overstated, these and other unpleasant and difficult questions must be addressed. The overwhelming logic of developing COPC systems to create or maintain healthy people is unarguable. There must be some compelling nonhealth reasons for their failure to capture the hearts and minds of health professionals, or those who come for care, or the communities in which they live. There are such nonhealth reasons, and they bear summarizing.

First is the reward system as it is now structured in medicine. Current financing mechanisms do not encourage community oriented approaches to care, or personal physician/patient interactions of any depth. Our reimbursement system sends strong signals to physicians to subspecialize, to maintain high-technology practices, and to share responsibilities for patient care with as few others as possible. Practitioners of community medicine do not a cardiologist's income make. Use of high technologies results in far more income than using one's head or hands for the same time spent. This needs changing, and I think it can be done.

Second, which perhaps is a part of the first, is the prestige factor. Hospitals and those within them who use high technologies are the reapers of glamour and respect in our society. Both physicians and the public regard tertiary care institutions as the space centers where the astronauts pilot spaceships. Community physicians, on the other hand, particularly generalists, are viewed as those who drive the buses and subway trains. While they are of enormous importance in making the everyday world work, few medals are awarded for the task or for making it efficient, or affordable, or on time. Departments of community medicine are caught in the same bind. At present they are not where the apparent action is. In most of our major academic health centers, departments of community medicine are peripheral. It is rare that they have a well-organized defined population group that they are tending; residents and students seldom see the results of their efforts in human terms; and the major visible glories go to the departments of medicine, pediatrics, and surgery in the tertiary care hospitals, where most of the training of young health professionals is carried out.

Training physicians to be the captain of the ship in isolation from other health professions is a third factor that contributes to the problem for the community-based efforts. For physicians to be comfortable in organized communitywide programs that care for groups of people, they must enjoy cooperatively shared responsibilities. In times past, in a less educated society it may have made sense to put all of the responsibility and all the authority for health affairs in the hands of only one professional, but it makes less sense today. The activities in any modern intensive care unit, the most tertiary of tertiary care, are convincing evidence that the physician is not enough. This is even more true if one examines the needs of those with chronic disease who consume the bulk of medical care resources in the developed world today. But medical education has not kept pace with this reality. Most doctors do not feel comfortable in group endeavors or in working with nonphysicians in nonhierarchical relationships, and the land scape is littered with failed programs because of this fundamental problem of "physician mind set."

There are two other basic human problems that have become manifest. They affect both those who would organize, develop, and run COPC programs and those who would benefit from them. One has to do with the appropriate focus of community oriented programs of illness and disease prevention. Although these programs may be well accepted by us for our children or for others, they often create unease and sometimes resentment when focused on me and thee directly. The human animal is wonderfully contrary.

Notwithstanding our being against sin, most of us secretly admit that we either lack the interest or the character to change our life-style if that requires giving up pleasurable habits that are deleterious to our health. This is particularly true when such a change requires sacrifice now for health gains years later. Most of the programs that have vigorously promoted health education, risk prevention, and the like have been disappointing in their results. It is quite easy to educate adults about the hazards of certain kinds of misbehavior. It is incredibly difficult to change them. It is far easier to resent those who point out the error of our ways. We often try to kill the messenger—or at least belittle him. Those who preach righteousness may be respected, but they are not warmly received by most people in modern society. In short, the preventive element of community oriented programs tends not to be very popular.

The other human problem is the lack of appeal of aggregate vital statistics for most people. Such statistics are the basic tools of community oriented programs, but they lack immediacy and emotional impact. It has been said that vital statistics are the story of human lives with the tears washed away. Obviously this is the case, but the erasure of the human element—the translation of infant mortality or life expectancy into numbers on a page—loosens the grasp on public attention.

A community or a nation will willingly and instantly spend millions to rescue a trapped coal miner or the survivors of a downed plane or a sinking ship, but it is much harder to get that same community or nation to spend similar sums to reduce infant mortality rates.

Walsh McDermott liked to emphasize that, to be effective, community oriented programs had to attract individuals who have or can develop what he eloquently termed "statistical compassion." By this he meant that people had to gain real personal satisfaction from knowing they had put in place services that would improve the health and welfare of individuals they would never see or know personally. This takes both training and imagination. As with olives or oysters, a taste for vital statistics is an acquired one.

What can be done to overcome these obstacles to wider and swifter dissemination of community oriented primary care programs? A number of suggestions have emerged.

First, efforts to restructure the reward system for health professionals must be continued. If community oriented systems of care are to flourish, there will have to be changes in the way physicians are reimbursed for their services. Although favorable reimbursement for high-technology services has served society well by encouraging technical medical programs, it seems time to swing the pendulum back toward the center. Making financial incentives neutral with regard to the use of technology would, I believe, encourage more physicians to consider how their time and effort might have the greatest effectiveness in reducing human suffering. I use the term “neutral” with purpose. I am not suggesting that neutralization of rewards for use of technology be used as a hidden strategy to reduce physician income. That would neither materially affect the costs of medical care nor promote the change in doctor mind set that I would hope could be encouraged. But allowing physicians to choose the kind of practice style that seems most appealing without financial penalties would, I believe, promote the community oriented cause.

Second, there should be continued exploration of ways in which young people who have well-developed social skills and interests can better compete with those who have high science skills for entry into medical school. I do not wish to be misinterpreted here. We need well-trained, scientifically oriented physicians in the medical profession, not merely social do-gooders. But broader interests in human welfare and the ability to work democratically with others do characterize some of our best physicians, and we need more of them.

The third suggestion both relates to and bears on the first two. The skills and the prestige of those who would organize, manage, and work in community oriented care programs should continue to be upgraded. Here the private sector can be, and I believe has been, helpful. Examples of such private efforts include the Robert Wood Johnson Clinical Scholars, Nurse Faculty Fellows in Primary Care, Health Policy Fellows, and Family Practice Faculty Programs; the Kaiser Family Foundation and the Robert Wood Johnson Foundation support of primary care physician training programs; the Milbank support of epidemiologic training for established academic internists and the Kellogg support of departments of community medicine. All of these programs have attracted top-flight people. These young leaders are beginning to achieve positions of influence and are adding distinction and more hard science to broader fields of medicine of which community medicine is a part.

Fourth, constructive use should be made of what are clearly more difficult times. For good or bad, we are now entering a period in which our methods for delivering health and medical care are under intense scrutiny. The overriding view of one and all is that medical care costs too much. The philosophical importance of the COPC concept during a period of diminishing resources is not to be underestimated. It can provide the opportunity to streamline the system. COPC can assist by helping communities think more carefully about how best to organize care, promote disease prevention, and encourage more discriminating use of costly medical technologies. The increasing number of physicians means that in the United States access to medical care services is not the problem that it was a decade ago. This, coupled with the enormous successes in controlling the major microbial diseases of the past and the steady reduction in deaths due to a wide variety of formerly lethal diseases, now affords the Western world the luxury of expanding its areas of concern beyond simply preserving or extending life. Rich and poor alike now have a commonality in the problems of illness that trouble them. We now can focus more of our efforts on helping individuals to use their full capacities in daily living.

This leads to my last point and to what, in my judgment, is the most powerful contribution those who would advance community oriented primary care services could make during the present decade. Stated simply, develop a more vibrant and compelling data base with which to make a case for COPC and train a small cadre of people to do it well.

The kinds of statistics currently used to track the progress of the personal health care system do not monitor with any sensitivity the changes that are reflected by most of what is going on in COPC. Death rates as well as other morbidity data and other sets of current statistics simply do not measure the impact of what health professionals do, or the potential capabilities of community oriented health care systems.

Let me use a simple example to expand the point. Thanks to modern medicine many individuals with serious arthritis can now be helped to remain sufficiently pain free and mobile and to lead independent productive lives. It is this kind of activity that is the major thrust of community oriented programs. But nowhere on the scorecard does this important gift to suffering people or the health professional's role in making this freedom possible come to light. Thus, it sems to me overwhelmingly evident that those who believe in the value of community oriented care must replace the current gross statistics with new and sensitive yardsticks that more accurately reflect what such programs can do to restore people to fuller functioning.

Again, using arthritis as an illustration of the kind of scorecard I would like to see developed, it represents a group of diseases that rarely kill but has a fairly high incidence. In the United States, more than 18 million are afflicted. Almost 14 million of them indicate they are bothered some or a great deal by their disease. But of most significance, more than 3 million of these arthritics, or about 18 percent, cannot function satisfactorily because of pain or limitation of activity.

Today a great deal of biomedical research and most of the efforts in major academic centers are appropriately aimed at unraveling the causes of these joint problems with the hope of eliminating them. This is clearly the goal of the future and it deserves major support. But, until that happy day, what doctors want to be able to do better today is to further reduce the disability rate. They wish to better identify those most at risk of crippling and concentrate their efforts on them. They would like to drop the crippling from 18 percent to 4 percent. They would like to know whether some interventions do better at less cost. Society would like to know which health professionals working in what settings are most effective in reducing disability rates. The value of COPC needs to be articulated and documented in problem areas such as this. If this kind of information could be developed—and it can and is being done by community oriented health professionals—another kind of box score could be recorded.

This seems to be the kind of scorecard against which the personal health care system should be measured. I would be quite surprised if COPC programs could not deliver the data with which to develop that scorecard. Who else can better record the percentage of patients in a community with a particular disease that are really at hazard of developing functional limitations because of it? Who is better equipped to tell us how these individuals can best be identified? Who can better collect the data which will show what interventions can best prevent limitations? Clearly it is this kind of informational background against which the effectiveness of medical care should be measured. Such a data base would have enormous payoffs and would enable physicians, other health professionals, and those who seek care to judge how our personal health care system really works best.

Some are now beginning to try to address these kinds of issues, but I believe the process should be pursued with even greater intensity. Doctors are a hard-nosed, pragmatic group. They do not respond to preaching or exhortation or anecdote. But when given evidence that a particular treatment or way of practice will improve the lot of their patients, they are generally quick to respond.

These then are the areas that I believe deserve attention if community oriented concepts of care are to be more swiftly and widely accepted. Developing a better scientific data base to show what community-responsive practice can do to improve human welfare is a most important first step. On the national and international scene, medicine must get a clearer idea about what the ingredients—both human and technical—assembled in what way can most effectively help people to maintain maximum human function, prevent its breakdown, and/or swiftly restore it. There also need to be ways of taking these statistics and putting them in terms that have real emotional meaning for physicians and other health professionals responsible for one-on-one care, as well as for the average man on the street.

I am convinced that physicians and decision makers armed with such information can make wiser determinations about how best to allocate precious health and medical care resources. I believe community oriented approaches to the delivery of care will be the winners. My economist colleagues might put other more financially oriented approaches first, but my physician background moves me to put this suggestion as number one, while agreeing that both avenues should be pursued simultaneously.

We have made great strides in the past decade. We have more doctors, and more are opting for primary care careers. Many more attractive residency slots are available to them. There are more faculty who espouse community oriented approaches to care, there is more time in the curriculum for such concepts, and epidemiology has become an increasingly recognized and respected tool of medical science.

To close on a philosophical note, community oriented health professionals are up against yet one other problem not of their making. It is a cultural belief that runs deep in our American heritage. I am coming slowly to the view that in the United States we may ask more of or place more responsibilities for health in the hands of individuals than perhaps we should. It is rarely realized that this is not the case in primitive societies or in nations that have more nationally or paternalistically oriented health care systems. Americans deeply distrust and dislike paternalism or ground rules of any kind that threaten encroachment of individual rights. In our culture we are slow to seek out those unable to handle personal responsibilities for their health effectively and are often inclined to feel that they are reaping their just deserts when they get into trouble. Thus we are often inclined to view with suspicion any who would appear to meddle with troubled families or their children even when it appears in the best interest of those families to do so.

But in a nation so large, so diverse, and so complex, if we are to deal with the health and medical problems of the poor or the culturally isolated or alienated who live in our communities, locally designed community oriented health care programs can perhaps find ways that are less intrusive than any centralized public system might be. In doing so, they can be a potential healing force with effects extending well beyond the delivery of health care.

PART II

PRACTICAL APPLICATIONS

This section contains summaries of case report presentations made to the various workshop groups. The first 10 cases describe COPC service delivery programs; the last 6 focus on educational programs.

Promoting COPC through a Rural Health Care Network: Marshfield Clinic

David L. Draves

In the early 1970s portions of 44 of Wisconsin's 72 counties were designated physician shortage areas according to criteria established by DHEW. To compound this problem, nearly 50 percent of Wisconsin's primary care physician were 55 years old and older, more than one-third were 60 years old and older, and approximately 11 percent were 70 years old and older. In response to problems of physicians shortage and/or maldistribution, the federal government had established the National Health Service Corps (NHSC), however, the retention for NHSC physicians in Wisconsin and throughout the nation was less than 30 percent. The Marshfield Medical Foundation, in the spring of 1976, applied for and received a Rural Health Initiative Grant. The purpose of the project was to develop a rural health network, a decentralized system in which first-rate primary care would be available locally and then integrated into a regional system of backup, secondary, and tertiary care.

Development of this network included planning, development, and operation of a rural health care delivery system that provides linkages to communities, to existing medical institutions, and to physicians seeking those elements of a medical resource center most appropriate to meet their needs. The program offered diagnostic and technological services, consultation services for medical and administrative problems, and continuing educational programs for physicians in rural practices.

Computerized services, telecommunication, and transportation systems were instrumental in the development of the network. An interfacing of these Marshfield Clinic systems has resulted in “one-stop shopping center” availability for a variety of diagnostic services that are currently being provided to 217 different clinics and hospitals throughout northern and central Wisconsin. This network of suport services provided the framework for the eventual development of six Marshfield Clinic primary care satellite centers. Each of these was established in response to requests from communities located in counties designated medically underserved and/or critical manpower shortage areas. The population of these communities varies from 1,000 to 3,500, and the distance from Marshfield ranges from 10 to 100 miles. All these communities had physicians at one time, but, in spite of considerable effort, they were unable in recent years to attract and/or retain physicians.

Marshfield Clinics satellite development was based on the premise that an established group practice located in or near medical manpower shortage areas could provide professional, technical, and management support critical to recruitment and retention of physicians. The model selected is analogous to medical departments in Marshfield. Satellite physicians have the opportunity to become full members of the corporation and are hired under the same basis as all other clinic physicians. Marshfield Clinic “regional centers” or satellites are designed to be “part” of the greater whole and not separate organizations to be operated as different entities, even though separated geographically from the main clinic.

Factors considered in evaluating potential sites for satellite centers include existing health care manpower and facilities, the economic profile of the community, demographic factors, financial considerations, satellite acceptance, and HMO expansion potential. From the perspective of the physician considering practice in a rural area the satellite concept is attractive because this linkage with combined resources can more effectively address problems associated with rural health care practice. Those problems include coverage, absence of consultation, availability of trained administrative and technical support personnel, economic constraints, opposition by existing providers, professional isolation, and quality control.

Marshfield incorporates a variety of systems and services to support its satellite program and address those problems cited as deterrents to developing a rural health care practice. Coverage is best handled where possible by sufficient community-based staff. Marshfield-based physicians do provide scheduled on-site coverage where necessary. Physicians from Marshfield rotate regularly to the satellite in Strafford just 10 miles away. In Greenwood, located 35 miles from Marshfield, the community is not large enough to support more than two physicians. In this case, a telephone call diverter is employed to enable coverage every third weekend from Marshfield. The other satellites have three or more community-based physicians. Ladysmith now has nine physicians, including four family practitioners, three internists, a pediatrician, and a general surgeon. Four-digit direct-dial telephone access between all centers facilitates medical and management consultation. The medical records system is “on-line” with the center in Marshfield. The usual complement of on-site support staff includes medical assistants, nurses, and lab and x-ray technicians, as well as medical record, steno, receptionist, business management, and patient education personnel. All patient billing is done centrally in Marshfield. Marshfield's on-site physician consultation program brings staff specialists to satellites on a monthly or bimonthly basis. Cardiologists, orthopedic surgeons, neurologists, psychiatrists, dermatologists, urologists, rheumatologists, and obstetricians participate in this program. Continuing medical education opportunities include individualized teaching rounds conducted in Marshfield, Category I accredited conferences held at regularly scheduled times at the satellites, cooperative workshops and seminars, and a regional video network. The same quality-control programs used in Marshfield are incorporated as an integral part of the satellite program.

Each satellite has its own on-site medical chairman. In Marshfield an Extramural Practice Committee (EMPC), consisting of medical and administrative staff, meets once a week to address issues relating to satellite centers and regional support services. Physicians selected from this committee provide a liaison to each satellite. These physicians meet on-site with satellite physicians on a monthly basis. Also, a dinner meeting is conducted monthly with satellite physicians and EMPC members in Marshfield. This is held for convenience on the same day as the Clinic Board of Directors meeting, a meeting that all Marshfield Clinic physicians are asked to attend.

Dr. Boyd Groth, Marshfield Clinic's first satellite-based physician, has expressed his thoughts about the system as follows, “I know that my problems are someone elses problems, too. That community attitude is really important. For this kind of a system to work, you need a real sense of commitment—not just ‘testing the waters'—and you need to feel that the institution has a real sense of responsibility for rural health care.” Also, Dr. Groth says, “You need someone in administration with a drive and interest to make it go, someone for whom it is not a sideline. Remember, what gets doctors interested in being in a satellite in the first place is freedom from administrative problems.”

Nineteen board-certified or board-eligible physicians have thus far been recruited for Marshfield satellites. Linkage systems and communications developed between Marshfield Clinic and its satellites provide mechanisms to facilitate and expedite access to the level of care (primary, secondary, or tertiary) most appropriate to meet patients' needs. Expansion of the Marshfield prepaid health plan into satellite areas offers an attractive option for patients to finance their health care. Patient questionnaires, an incident reporting program, and regularly scheduled meetings with hospital boards and update reports to service clubs in satellite communities followed by question and answer sessions are conducted as part of an ongoing effort to maintain a feel for the pulse of patient response to services being provided.

A high standard of excellence in quality of care is perhaps the single most important factor to ensure success in satellite development. It is imperative to success, however, that the financial implications of providing that care be understood. The rural community satellite concept involves three major constituencies: the parent group or established group practice, the satellite group, and the rural community itself. The space constraints of this summary report make it impossible to adequately describe the peculiar set of motivations of each constituent as it relates to the involvement of Marshfield's six satellites, much less the financial data relative to each practice. Marshfield's experience, however, has been that satellite requirements the first year of a three-physician practice include capital expenses (building and equipment) of approximately $400,000, developmental expenses (personnel time and travel, and physicians recruitment) of approximately $84,000, and operational expenses and funding of accounts receivable of approximately $150,000; this represents a total of $634,000 for first-year start-up costs.

The motivation for satellite development by any of the three identified rural community satellite constituencies has to be tempered by these figures. Marshfield Clinic's operational objective for its satellite centers is to break even on a direct-cost basis within a 3-year period. Patient and ancillary services referrals from the satellites help generate revenue to offset indirect expenses and facilitate continued development. Communication, cooperation, and understanding on the part of all three constituencies regarding the financial commitment necessary to establish a rural medical practice is extremely important to facilitate the development of satellite centers. Positive indicators and areas of consideration are identified and reviewed for each satellite on a monthly basis by Marshfield Clinic administrative staff. Strategies are developed, where appropriate, to address problem areas.

The familiar rural complaint of physician shortage is often heard loudest and most frequently from the smaller towns seeking the return of country doctors they once had. The economic or ethical validity unfortunately is often little understood. The evidence calls for a multifaceted solution with improved cooperation and understanding on the part of both consumer and provider. Communities that want to attract physicians would do well to understand the professional and economic environments needed to support physicians. Marshfield Clinic's experience has reinforced an initial premise that local leadership, with a transcendent sense of community responsibility, creative intelligence, and personal effectiveness, is critical to establishment and maintenance of successful rural medical practices. Experience has also demonstrated that the survival of these practices is becoming increasingly dependent upon the degree to which linkage can be developed between providers.

COPC in the Texas Valley

Stanley I. Fisch

Su Clinica Familiar (SCF) is a federally funded community health center located in a rural, medically underserved area on the Texas-Mexico border. Now in its eleventh year of operation, SCF provides comprehensive primary care services to its predominantly indigent patient population. Medical care providers, including physicians, nurse midwives, nurse practitioners, and physician assistants, are organized in health teams that relate to outreach, social, and nutrition services. Taking special note of the demographic characteristics of its population and their health care needs, SCF has emphasized and been innovative in developing maternal-child health services and outreach, counseling, and health services for adolescents.

The elements of SCF's program and organizational design that have contributed to its success include:

1. The integration of primary medical services with social, nutrition, and outreach services.
2. The fostering of a “coalition of commitment” among community groups, providers, patients, and funding sources, all in fundamental agreement with SCF's goal of providing acceptable, accessible, and high-quality primary health services to the people of our two-county service area.
3. The development of a “cultural cognizance” in the program, making it more sensitive to the needs, expectations, preferences, and concerns of our patient population.
4. Specific integration of SCF's physicians into the medical community by establishing after-hours coverage and gaining hospital staff membership,

thus significantly reducing our physicians' isolation from the larger medical community and at the same time increasing SCF's credibility.

SCF's problems and struggles are not unique; many other community oriented programs experience similar challenges, which include:

1. Rapid, uncontrolled growth in the number of patients to be served.
2. Increased expectations from funding sources and other support groups.
3. Sorting out needs and wants of patients and deciding which to address and then accounting for those decisions to the community.
4. Balancing providers' needs and patients' demands in a system that is not provider-controlled or-dominated.
5. Delineating governance and management—defining, balancing, and integrating into a collaborative whole the prerogatives, responsibilities, and needs of board, administration, and providers.
6. Defining “community” when there are at least four communities to which a health care organization variously orients itself: patients and their families, providers outside the organization (the “medical community”), the supporting institutions such as the Bureau of Community Health Services, and the organization's own providers.

A number of general lessons can be derived from the SCF experience. First, stability, competence, collective consciousness, and credibility of a community oriented practice depend significantly upon its ability to retain providers and key managers for long terms. Those community oriented practices organized as community health centers have particular difficulties in securing the full support and commitment of their own providers, whose needs are often not readily accommodated in a system where providers are not dominant, where they have little authority to shape the institutional environment of patient care, and where they tend to be isolated from their professional peers in the larger community outside the practice.

Secondly, a community oriented practice needs internal integrity. It must be patient-oriented, meaning that, as a guiding principle, the patients' needs come first. It must be soundly managed and should strive to function as would a healthy community, with open communication and collaboration among all levels of the organization. There must be appropriate delegation of responsibility and authority to achieve optimal division of labor, performance and productivity, and accountability within a supportive and therapeutic environment.

A third lesson is that community oriented practice needs a research component to bring it in touch with the “community” in all its ramifications and forms. Depending upon the practice's information needs and the par ticular community to be studied, such tools as demographic analysis, epidemiologic measures, and anthropological observations may all serve to better position the practice in its social environment so that it may become more responsive and effective in carrying out its mission.

Finally, providers and managers must be well prepared for community oriented practice. During the formal training process, through didactic exercises, experiences with role models, and apprenticeships, providers and managers must get solid clinical, organizational/managerial, interactive, and survival skills. And, perhaps more importantly over the long term, a support network and/or organization must develop to specifically and continuously support the work of community oriented practices. Such a network must husband the development of the discipline of community oriented primary care by stimulating and publishing the results of community research and practice innovation.

Elements of COPC in the UMWA Health and Retirement Funds Program

George S. Goldstein

The United Mine Workers of America (UMWA) funds program was clearly not organized on the principles of COPC. Nevertheless, from the beginning, the program was based on the kinds of community (that is, consumer or member) oriented social service objectives that are essential for COPC.

In 1946–1950, when the program was first established, the UMWA leadership decided not to buy care for its members via the traditional health insurance mechanisms on the market as most other unions did at that time, but instead they built their own program based on the social needs of the defined population.

The genesis of the program is to be found in the exceedingly poor health conditions extant in large areas of the industry, in the 1930s and 1940s, that is in the Appalachian states. These conditions led in the 1946 and 1947 labor/management contracts to the establishment of a Welfare and Retirement Fund (in 1974 renamed the Health and Retirement Funds) fed by a 5¢ (10¢ in 1947) royalty per ton of coal produced. This amount increased considerably in later years. These contracts established a financing mechanism, but did not provide guidelines for the nature of the medical program. Instead, the trustees (a union-management-neutral triumvirate responsible for running the program) were left to determine its nature. Aiming at meeting the needs of the beneficiaries, they adopted the broad goals of comprehensive care, accessibility, quality assurance, and cost control.

The Funds leadership discovered early that to reach these goals it could not depend on the established, market-based delivery mechanisms and, with its own staff of experts, developed its own set of delivery mechanisms.

The basic member service orientation meant building the program on the needs of the members, not the offerings of the traditional market-based system. This was carried out by arranging for delivery of and payment for services as much as possible on "retainer" (or fee-for-time and cost-reimbursement) concepts, rather than market mechanisms of purchased insurance coverage and fee-for-service payment. The goal of comprehensive coverage, as the program was implemented over time, came to include: most ambulatory care services, hospitalization, drugs (for expensive, long-term illness), and an emphasis on prevention, rehabilitation, and outreach and ombudsman functions.

The goals of accessibility, quality assurance, and cost control were developed by arranging for services under what amounted to two different delivery mechanisms. Where the resources of the traditional, existing market system were used—which applied to a majority of beneficiaries—the Funds established a structure of quality and cost controls, such as participating lists, prior authorization, restriction of payment to properly qualified providers, and retainer payments. Where the concentration of beneficiaries allowed and/or conditions of inadequate medical resources necessitated, the Funds established an alternative delivery system of nonprofit hospitals and clinics with full-time, salaried, group practice staffs. Most of these clinics and hospitals were in Pennsylvania, West Virginia, Ohio, Virginia, Kentucky, Tennessee, and Albama. These group practice clinic organizations varied widely in size, type of practice, type of policy control, and the extent of social service orientation. In this way COPC-type programs in actual fact developed.

This was, broadly, the nature of the UMWA funds delivery system through the mid 1970s. The 1978 labor/management contract, however, turned the provision of services for the bulk of the beneficiaries over to the traditional fee-for-service market, in the form of health insurance industry contracts.

SPECIFIC ELEMENTS OF COPC IN THE UMWA PROGRAM

Although not organized specifically on COPC principles, some elements of COPC did develop in the Funds program. These elements are seen more clearly in the program if the "defined population" in the definition of COPC is interpreted to include a single industry's workers and their families, scattered over many communities, as opposed to one geographically contiguous community. Two specific examples of major program activities of the Funds appear to fit the definition of COPC well. The "Black Lung" programs developed to deal with pneumoconiosis provide the clearest example. These programs involved a combination of activities by the union, the Funds health program, and governmental agencies on federal, state, and local levels. Included were: much epidemiologic study; diagnosis and treatment of individual miners within programs involving family, community, and educational activity; and social intervention via collective bargaining and legislation, to promote education, treatment, compensation, and preventive measures in the coal industry production methods. The second major area was the strong rehabilitation efforts of the Funds, particularly with reference to one of the most prevalent occupational hazards of the coal industry, namely, orthopedic injuries resulting from rock falls.

Several other elements of the Funds' program activities, while they fit the definition of COPC much less clearly because crucial elements of COPC were lacking, nevertheless were illustrative of COPC concepts. These included:

1. Quality assurance efforts and mechanisms.
2. Miscellaneous efforts in specific local communities in cooperation with other community agencies, in such areas as high blood pressure detection and treatment, family planning, mental health, and the health impact of water and housing conditions.
3. Outreach programs designed to pursue optimum utilization of both Funds and community services.
4. A drug program, using centralized mail-out sources of supply, patient profiles, and a formulary for quality and cost-control purposes.

SOME LESSONS FOR COPC

Although the history of the UMWA program exhibits some significant successes in developing COPC-type elements, this same history does not encourage anticipation of major further COPC development in the United States without some basic changes in national priorities. The Funds experience seems to be that the social service orientation necessary for COPC cannot be sustained in one industry by itself, in a competitive market economy.

Instead, in the coal industry, after 25 years the employers developed a perception that the social service based Funds were neither in their interest nor cost-effective. Whether the Funds program was, in fact, more or less expensive than health insurance-type programs in other industries (and for what reasons) remains a question for debate between the Funds and the employers. They were no longer willing to provide the financial support. The 1978 union/management contract ended the social service orientation established in 1946–1950 and replaced an organized, industrywide, “community oriented” system of delivery of care with a fragmented system based on the competitive cost goals of the market. There is little evidence that this system, on its own, will pay much attention to COPC-type concepts.

Even within the earlier social service framework, economics and traditional attitudes prevented significant development of COPC. Given limited resources, there was never agreement among the leadership on the propriety of COPC-type activities that, while they may reduce costs in the long run, clearly, in the short run, mostly increase costs. Attitudes in the Funds program leadership illustrated generic obstacles to COPC. Business-minded administrators concerned about costs looked unfavorably on COPC-type programs; most medical administrators and physicians reflected the prejudices of the medical training system, whose lexicon excludes COPC concepts. Further, in more recent years, union interest in social service issues was lost in the pressures of internal, political, and external economic problems.

The outlook for COPC in the United States in the near term is poor. In light of diminishing levels of federal support of organized primary health care services, while it is technically true that the potential of COPC is not limited to publicly sponsored health centers, all organizational forms of practice—including hospitals, academic health science centers, private group practices, etc.—could well concern themselves with a community focus; nevertheless, the UMWA Funds history and the history of the U.S. delivery system generally suggest the private sector will not provide the large necessary funding.

The traditional system of health care delivery in the United States has exhibited little predilection to establish the kinds of organized programs of health promotion and prevention that are the necessary social framework for COPC-type developments in the major necessary areas of work, namely environmental, nutritional, and life-style. In fact, it is arguable that a system based on the competitive cost constraints of the market will tend in the opposite direction.

Certain developments of recent decades, which seemed to offer hope of reversing the traditional orientation, e.g., greater organization generally of financing and delivery of health care; programs like the UMWA, a few other unions, a few co-ops, and the OEO; greater federal involvement in health care program development; a major movement toward some kind of national health program; and the growth of nonprofit prepaid group practice and HMO generally, all are now themselves facing reversal, with market orientation once again in the ascendancy. Prepaid group practice, and later HMO, seemed a particularly hopeful development for COPC, but with the recent need for competing in the market, COPC may well get lost there too.

Based on my experiences with the coal miners' medical care delivery program, I cannot be optimistic about the future of COPC in the United States, short of a major shift in the basic premises of the U.S. health care delivery system, away from the market and in the direction of the kind of social service, social democratic orientation characteristic of those countries where COPC has been most successful. Under these circumstances, nevertheless, it remains important to try to build COPC programs of whatever scope possible with the limited resources that can be scrounged up, in order to develop the concepts and to gather experience for better days. From a practical point of view, what we need to do is to use the concepts of “pure COPC” as a set of long-term goals or objectives, while trying, in a practical world of real people and real communities, to go as far as a given program can toward these goals. But, I believe we can expect no major impact on health care in the United States until a national effort brings about a national program based on different premises and priorities.

COPC and a State Health Department: West Virginia's Experience

L. Clark Hansbarger

The West Virginia Department of Health has become a strong advocate of what we are today calling community oriented primary care (COPC). The department has been influenced to move in this direction by a variety of internal and external sources. Included in these sources are the two most recent directors (of which I am one), the community “wants,” community health needs, federal community health programs, United Mine Workers of America-supported clinics, community boards of directors, the state legislature, and Governor John D. Rockefeller IV.

One major result of these influences was the law passed by the state legislature in 1977 that reorganized the departments of Mental Health, Hospitals and Public Health into a new State Department of Health. The purpose of the law is “to develop and implement a coordinated and comprehensive continuum of health and mental health services to meet current and future needs at reasonable costs; to promote the delivery of preventive care by emphasis on primary care and community-based services; to achieve equal access to all types of quality care for all citizens of the State; to encourage the active participation of the citizens of this State in matters relating to the delivery of health and mental health services….” With this visionary statement, the state legislature provided the State Department of Health with a mandate for its emphasis on COPC. This set of inputs, combined with the knowledge, dedication, and values that each employee brings to the State Health Department, have resulted in an identifiable set of values and management norms that this administration intends to pursue. They are:

1. Health services should be comprehensive, coordinated, and integrated.
2. The least restrictive mode of care is the best. This norm is especially applied to developmental disabilities and geriatric care, but covers the continuum of health services delivered and funded by the department.
3. Health care services should be community-based, and are best planned, organized, and delivered at the community level.
4. Health services should be responsive to epidemiologically defined community needs.
5. Community health services should emphasize prevention, wellness, and the reduction of the risk factors that are linked to the three major killers—cancer, heart diseases, and accidents.
6. The process used in helping communities and medical practices become more responsive to broader health needs should be an educative/mediative process, not a coercive one.

The continuing role of the State Health Department is not so much to actually provide COPC services as it is to create a positive climate conducive to the provision of those services. Through direct communication to providers and consumers we affect the knowledge, attitudes, values, and perceptions of both providers and health care consumers. Our work with liaison groups from various health care sectors, public health education for consumers, and our commitment to grass roots health planning help maintain open channels of communication and help establish the department's values and operating norms in the public mind.

Through training and community organization, the State Health Department affects availability of resources, accessibility, referrals, and skills. In this regard, West Virginia has recently demonstrated its commitment to funding community-based health care programs by the state legislature's providing more than $1 million in new matching funds for the Primary Care Block Grant, which it expects to assume in October 1982. Statewide training programs, technical assistance programs, and conferences are also important activities in affecting these factors.

The department also promotes COPC by affecting the attitudes and behavior of health personnel and employers. The importance of attitudes and behavior of State Health Department staffs cannot be overemphasized, and the formal and informal organizational structure can and does influence those attitudes.

In looking for behavioral outcomes for the department's activities in COPC we may assess utilization, preventive actions, consumptive patterns, compliance, and self-care within the dimensions of earliness, frequency, quality, range, and persistence. Defining the standards against which to measure these indicators presents another challenge, but changes or exceptions from established patterns could be easily noted.

The outcome of these behaviors is, hopefully, an improvement in the health problems facing our communities. Some of these problems are reflected in our current statistical reporting systems, and these systems could be refined to indicate morbidity, mortality, fertility, and disability within the dimensions of incidence, prevalence, distribution, intensity, and duration. Improvement in these areas, not just statistically but in the everyday lives of people, makes for an improvement in the “quality of life.” It is this translation of health services into quality of life terms that is our most important and perhaps difficult task.

In the future the West Virginia Department of Health hopes to hold the line on the advances we have made so far. That in itself is a fairly large order in these times of economic retrenchment. We will try to improve and strengthen the incentives offered to providers who have practiced COPC and support their efforts in practical ways. We can also offer high-quality technical assistance in the epidemiology of community health problems that public and private health providers observe daily. By providing relevant support and encouragement of COPC, we hope to make COPC the standard of care for West Virginia.

Columbia University-Harlem Hospital Primary Care Network

Margaret C. Heagarty

Central Harlem is one of the most economically depressed communities in New York City. In 1978 about 30 percent of the population, predominantly black and Hispanic, had incomes below federal poverty standards and about 30 percent were on some form of public assistance. Twenty percent of the population was unemployed. An estimated 60 percent of the community's adolescents are unemployed. As might be expected, the mortality and morbidity rates in Harlem are also high. In 1975 the age-adjusted death rate in Central Harlem was the highest in the the United States.

Columbia University-Harlem Hospital Center, an 811-bed municipal hospital, is the largest health facility within this country. As the major provider of health services the hospital embarked upon a program to deliver a decentralized yet coordinated system of primary health care services within the community.

The planning for the program began in the spring of 1978, when an article in the *New York Times* concerning the health status of the population of Central Harlem generated considerable local and federal government interest. The local congressman established a task force to investigate the causes of these morbidity and mortality rates, and the then-secretary of Health, Education, and Welfare, Joseph Califano, established a Harlem Health Task Force to investigate the causes of and remedies for this problem. Using this manifest political concern, the administration and professional staff of the hospital and the administration of the New York City Health and Hospitals Corporation submitted a grant under the federal

Urban Health Initiative Program to establish several small primary care programs within the community.

In the fall of 1979 the Urban Health Initiative grant was awarded to establish a primary care network administered by the Harlem Hospital Center. By summer 1980 three sites for these programs had been identified, and physicians, all members of the National Health Service Corps, were recruited to work in these clinics.

The first clinic, opened in September 1980 within a moderate-sized housing project, is staffed by a full-time pediatrician, a half-time obstetrician-gynecologist, and a full-time and half-time internist. The second clinic opened in an empty school annex located within a densely populated housing project in November 1980. It is staffed by two pediatricians, two internists, and one full-time obstetrician-gynecologist. The third clinic, which opened in April 1981, is housed in an empty school annex and is staffed by a full-time pediatrician, a full-time internist, a half-time internist, and a part-time obstetrician-gynecologist. A fourth small clinic is scheduled to open in July 1982.

To develop a new primary care program in a disadvantaged urban community during an economic recession and during a general government retrenchment in its approach to social policy has required a pragmatic if not opportunistic approach to planning and implementation. The experience in the development of this project suggests that in the contemporary climate any innovation in the health care delivery system will need not only a conceptual basis but also extraordinary flexibility, imagination, and persistence.

COPC in a Hospital-Affiliated Health Center

Harvey A. Holzberg

The catchment area of the Sunset Park Family Health Center (SPFHC) of Lutheran Medical Center (LMC) includes a neighborhood of approximately 100,000 people, predominantly Puerto Rican, medically underserved, living in deteriorated housing and receiving inferior environmental services when compared to more affluent neighborhoods within and outside New York City.

Prior to 1967 and the beginning of the SPFHC, LMC was a 300-bed community hospital in a deteriorated physical plant suffering from a poor financial position, with little hope for the future. LMC was a teaching hospital, however, and had an excellent, if traditional, attending medical staff and ran a small Emergency Room (ER) and Out Patient Department (OPD). It was the tenuous fiscal position of LMC that allowed for an atmosphere of risk-taking that might not have been as available in a more stable institution.

Efforts toward community oriented primary care (COPC) really began in 1966, with an acceptance of the ER's role as the primary care provider for the residents of Sunset Park, who had little access to more traditional delivery systems because of economic restraints and scarcity of providers. In 1966, the ER operated as both an Emergency Service Department and an “unscheduled general practice unit.” It was staffed with salaried attending physicians, and the leading general practitioner in the area was employed as director. This individual ultimately developed the first family practice residency training program in New York City.

The SPFHC began in 1977 as an Office of Economic Opportunity funded neighborhood health center with a Community Board setting policy and atmosphere. The history of the Community Board's development and the relationship between the board and the medical center and health center administration are not the particular subject of this case study. Generally it followed the ups and downs typical of most such programs until the more recent past. For about the past 5 years there has been a sharing of goals and strengthening of credibility, trust, and friendship among board and staff leadership. The Community Board today is a model of stability and is quite knowledgeable in the complexities of health care delivery.

Another example of the COPC approach is the operating philosophy of both LMC and the SPFHC. The medical center has, since 1967, defined health to include problems of environment, housing sanitation, street lights, education, zoning, etc. LMC considers itself part of the neighborhood it serves and continues to offer all its resources (grant writers, engineers, access to foundation and political offices, etc.) to all legitimate community groups.

The goals of the SPFHC remain consistent since 1967, even in the face of fluctuating resources:

1. To provide family centered ambulatory care to the registered population and to ensure that the care is comprehensive, continuous, and of high quality.
2. To provide specialty and support services that are coordinated with and augment the primary care component.
3. To fuse preventive and therapeutic services in an atmosphere of dignity.
4. To create an interest in, and an opportunity for, employment of community residents in health-related careers.
5. To implement the concept of maximum feasible community participation.

Both LMC and the SPFHC have flourished in this atmosphere in spite of cost containment, waning resources, increasing regulation, and the general atmosphere of “shrinkage” that has permeated the health industry for the past several years.

LMC moved into a new physical plant in 1977, and true to its philosophy it is now located in the most deteriorated part of Sunset Park in a building that was totally renovated within an abandoned 500,000-square-foot factory. It is now a 532-bed, primary care hospital with a 30,000-square-foot community health center located in its core. The development of this unique plant and the combined efforts of staff and community to bring it to fruition are obviously quite interesting and have been the subject of a number of articles, but the limits of time restrict further discussion in this case study.

The SPFHC currently has almost 40,000 registered patients, 185,000 physician and dentist visits, more than 300 employees, and a budget approaching $12 million. Support for the funding of this program now comes from third-party reimbursement, patient fees, a large Health and Human Services Section 330 grant, and an integrated network of some 20 smaller federal, state, local, and private foundation grants. These grants have been integrated in a manner that establishes one coordinated health delivery system where neither the patient nor employee has any knowledge of which grant is paying for the specific care being received or rendered at any point in the system.

The LMC teaching programs have been vastly improved in the SPFHC setting. The SPFHC evaluates residents and exposes them to an organized primary care setting. Recruitment of SPFHC physicians is almost exclusively from graduating residents, and this has strengthened the medical staff of the medical and health centers. Cross membership has developed between the LMC and SPFHC boards of directors, and this, too, has broadened and strengthened both groups.

The COPC principle that has probably received the least attention thus far is the use of epidemiologic data for planning purposes. The two most often used tools are the BCRR and New York City Health Department statistics. The BCRR data too often, however, are used by Health and Human Services for program evaluation and too often become an end in themselves. The goal becomes one of meeting the standards set. The New York City Health Department data are used after the fact as a tool to measure success against rather than as a planning tool around which to develop future programs of concentration.

It is interesting to note, however, that in spite of the obvious inner-city problems in Sunset Park, recent Health Department statistics indicate a lower infant mortality in Sunset Park when compared with New York City (14.8 per 1,000 live births, and 16.9 per 1,000 live births, respectively, in 1977). Other mortality and morbidity data also strongly indicate the positive impact of the SPFHC. The fact is, though, that if the staff of the program concentrate only a little on epidemiologic data, the Community Board concentrates on it not at all. They review the BCRR to be certain the program meets the standards and are simply not presented with other health status indicators. A more epidemiologic approach could be taken using medical students, public health students, and others. Although the emphasis may be somewhat askew, the forcing of data gathering by the Bureau of Community Health Services is at least a beginning and in some respects a pioneering approach.

It seems apparent that while the program at SPFHC had most of the COPC facets, the epidemiologic approach could be cost-effective and cost-efficient.

Denver Health and Hospitals Experience

J. L. Kurowski

The city and county of Denver, with a resident population of 500,000 (the exact count is in dispute and will be settled in court), represents the core of the Denver metropolitan area, which has a total population of 1.6 million. The daytime population soars to about 800,000. Like most core cities, Denver is facing a multitude of problems, though these may not be of the magnitude of those facing the eastern cities. Denver's geopolitical boundaries have been frozen by actions of the state. It appears the state action was a reaction to the federal initiatives, particularly in school desegregation. Thus, a federal action intended to bring people together had the unintended consequence of separating them in new ways. Thus, with limited growth and a limited tax base, the city and county finds itself increasingly at the mercy of the federal and state policies. Nowhere is this more true than in the area of health services delivery. In the 1970s, federal policy shifted incrementally from a focus on increasing access, improving quality, and removing financial barriers to a focus on restraining the increases in cost of service. In 1981, it appears the direction of federal policy is reversing with the impending implementation of a procompetition, deregulatory approach. The effect will be to shift the focus of financial responsibility from the federal government to the state and local government, the employer, the insurer, the providers, the family, and the individual. The impact of this health policy change on Denver General Hospital is best viewed in the context of Denver's Health and Hospitals system.

The mission of the Department of Health and Hospitals is three-fold: (1) to provide health services to the medically indigent; (2) to provide emergency health care to anyone in the city and county of Denver, regardless of residence; and (3) to provide general public health services for the protection of the public, including disease control, regulation of institutions, vital statistics, etc. The Denver system has been evaluated by national experts and has been repeatedly honored for its innovative design. The system is unique; it combines a public general hospital, emergency medical services (including ambulance and paramedic services), a decentralized community health center program, a component of the community mental health center program, and a home care system under dual public/private governance. In addition, the Denver system includes the public health protective services of disease control, coroner's office, and environmental health.

This complex system has evolved in response to community needs and to gaps in the community health services. The policy directions of the federal and state governments, through program initiatives, have been followed by the city and by the agency. An extensive development of ambulatory services has enabled Denver to substantially reduce the infant mortality rate, in addition to reducing total costs by minimizing our patients' hospital utilization. Thus, the overall goal is to help people to live increasingly independent lives and to safeguard the public's health through the provision of effective and efficient health services.

The system functions both as an agency of Denver city and county government in concert with other local government services and as a provider of health services in concert with other local health services providers. A classic example of coordination of essential governmental services is the city and county's Emergency Response System through the 911 line. In order to be effective, this service has been established as a closely integrated system between the Department of Public Safety, i.e., fire and police, and the emergency medical services of health and hospitals. Thus, local government can maximize its citizen protection by having health services response for the victims of crimes, accidents, and fires.

As a provider of health services, the Denver health and hospitals system complements the work of the voluntary nonprofit, the university, and the private hospitals by serving primarily the medically indigent, and those who are a danger to the public health by virtue of a medical problem such as tuberculosis. As a result of Denver health and hospitals attending to these community needs, the community is better protected and the community's health professionals and hospitals are able to serve the majority on the broader community's health care needs. This relieves those institutions of significant costs that, in the absence of the Denver health and hospital system, would be passed on to them, to their patients, and to the health insurance system. In addition, there are fewer people on the streets of the

Denver metropolitan area who suffer from far advanced disease conditions than is evident in most cities. The system has been responsive and effective. This is not to say that Denver health and hospitals cannot be improved, and we are constantly searching for ways to increase both effectiveness and efficiency. The health and hospitals system has developed under the leadership of Mayor McNichols, the Board of Health and Hospitals, and many leaders in the community and in the health and hospitals agency. In the course of this development, many services have been initiated under the direction of and funding by federal and state government. However, there has been a significant change in the source of funds.

In demonstrating the local government commitment, I will review the revenue source data for fiscal years 1976 and 1980. There is a consistent trend occurring over these years, shifting the financial burden from the federal and state governments to the city and and county. The expenditure of these resources demonstrates the mayor's recognition of the importance of health service a component of effective local government. Most notable over the 4 years is the increase in the city's contribution from $7.4 million to $22.1 million, an increase of 198.6 percent. This combined with the fact that the Denver charter wisely prohibits deficit spending forced the mayor and the city to give attention to the growing problem of mandated services, costs and revenues, and medical priorities for services. Through a study designed to look into these matters, a $10 million reduction from the projected 1982 budget of $92 million was found to be unavoidable, and the areas for service reduction were established. Ambulatory care services felt the brunt of the impact of the reductions. This occurred because these services are less well reimbursed and because the services are of a less immediately life-threatening nature. It may be argued that some specialized outreach services should have been maintained. However, because specialized outreach services were not mandated and are less well reimbursed than the treatment services, reducing treatment services would have only led to greater revenue loss and therefore forced reductions in even more service. In addition, outreach services most often increase utilization of treatment services, which would have been reduced further and could not have withstood additional demand and maintain quality of service.

There is another dimension of the problem that must be considered, i.e., the standards for the quality of care. If services become compromised to the extent that there are reasonable questions of the system's capacity to provide quality services, services must be eliminated rather than continued at a substandard level, for, if we provide care below community standards, the risks and costs of professional liability for the city and county would be considerable.

The city and county of Denver and the Department of Health and Hos pitals are caught in a dilemma between the mandate for community oriented service and the mandate for fiscal responsibility. The city and county governments do not have the tax base to maintain the level of health care services originally planned. It should be clear that the decisions being made are, in fact, rationing health services, and the pattern of financing these services will have significant influence on public protection, public health, and personal health and in general the degree to which Denver can provide community oriented primary care.

Partnership for Health: The Family Nurse Practitioner/Family Physician Team

Mary O'Hara Devereaux

Community oriented primary care (COPC) suggests a broad, comprehensive care package to communities, families, and individuals that demands more than a strictly medical problem-solving approach. A look at the current approaches to primary care in the United States with their narrow focus, physician dependency, predominance of low-risk cases, illness orientation, valuable management quality, and sense of competition with other care-givers in the community points to the need for new organizational models if true COPC is to exist. The elements of a new organizational model for COPC are listed in Table 1.

Implicit in this list is the need for a system rather than an isolated, individualized, traditional approach. Such a regional, experimental system of COPC has been developed by the Foundation for Comprehensive Health Services in California. The foundation is a public, nonprofit organization with a broad-based and experienced Board of Directors who provide professional leadership. Community advisory groups are available to the practices within the organized delivery system. The administration of the system is both centralized and decentralized, with a professional staff that travels to the practices to provide on-site training and expertise. The foundation provides not only direct service, but is also involved in research, education, and consultative services.

The foundation systems have a broad focus that is community and patient oriented to provide services in the wellness/illness continuum. Although the foundation strives for permanent provider employees, the system and each site is not dependent on a particular physician. This system allows the flexibility to experiment with different programs, provider mix, and relationships with other community services. These programs are initially supported with excess dollars generated in the system and reinvested in primary care rather than invested in an institution of secondary or tertiary care technology. This primary care focus and investment program strengthens the primary care base and improves patient health care. Central to success is humanistic but sound management. This model is not proposed as a universal solution to problems of medical care or organization, but it does offer some workable solutions to the delivery of COPC.

Within the foundation's organized system of COPC, a critical decision surfaced—who and what kinds of providers will staff such a program. After preliminary research, the family practice team was chosen (a family physician and a family nurse practitioner) as the most effective, efficient model. Through case studies of foundation practices, followed by a large-scale study of 230 practices throughout California, certain conclusions emerged regarding the best team model and the advantages of the family practice team model versus the physician-only model. The family physician/family nurse practitioner team has the ability to deliver a broad spectrum of COPC. The most effective and efficient relationship for the team is a collaborative approach that transcends and is significantly different from the traditional doctor/nurse relationship. The elements of a successful, collaborative practice resulting in a broad spectrum of COPC are listed in Table 2.

The collaborative practice model allows each practice the freedom to increase the amount of services, broaden the scope of services rendered,

TABLE 1 Essentials of New Organizational Models in Community Oriented Primary Care

Nonprofit corporation
Broad focus: Patient and community oriented primary illness/wellness continuum
Not dependent on a particular physician
Team approach
Humanistic, with sound management
Noninstitutional base
Decentralized system
Medical and nonmedical linkages
Flexibility for experimentation
Strong professional leadership and administration
Reinvest health dollars in primary care
Pluralistic funding

Source: Andrus, L.H., and Voelm, G. An Approach to the Organization of Primary Care. Article in Primary Care at the Crossroads. Special issue of *Family and Community Health, The Journal of Health Promotion and Maintenance,* Vol. 3, No. 2, August 1980.

and develop home care and community health programs. The professional advantages to the physician in team practice include: having someone with whom to share difficult patients; increased physician time for more serious patient problems; and more time for acute hospital, emergency, and obstetrical care. The addition of a family nurse practitioner to a practice is critical to the expanded practice style necessary for true COPC (see Table 3).

TABLE 2 Elements of Family Physician-Family Nurse Practitioner Co-Practice Model

Common group of patients
Intentionally share clinical care for patients
Consult with each other
Shared decision making about practice's clinical activities
Shared decision making about practice's administrative activities
See themselves as colleagues
See themselves and the practice as interdependent unit
Mutual accountability

Source: O'Hara Devereaux, M., Andrus, L.H., Quilter-Dervin, P., and Dervin, J.V. *Co-Practice: Family Nurse Practitioner-Family Physician: Comprehensive Health Services Model for the Future.* (In press)

The study of practice activities indicates that family practice teams with family nurse practitioners, as compared to family physicians practicing without family nurse practitioners, have incorporated many more expanded activities. This was true for rural, urban, private, and public settings. These findings suggest the ability of the family practice team to exhibit more promise for delivery of COPC in a variety of communities. Although study

TABLE 3 Comparison of Family Physicians Working With Family Nurse Practitioners Versus Family Physicians Working Without a Family Nurse Practitioner

Practice/Community Activities
Increased preventive health services
Increased home visits
Increased elder care activities
Increased prenatal classes
Increased group education classes
Increased community health programs
Increased CPR training

Source: O'Hara Devereaux, M., Andrus, L.H., Quilter-Dervin, P., and Dervin, J.V. *Co-Practice: Family Nurse Practitioner-Family Physician: Comprehensive Health Services Model for the Future.* (In press) of team practice is in its early developmental stages, results such as these are positive and more intensive study of these types of practices is warranted.

Implementing the Foundation for Comprehensive Health Services' model of COPC and the institution of the family practice team as the nucleus of providers was not without problems. Table 4 lists some of the system problems a public, nonprofit organization such as this has faced.

Other major problems exist in the development of the foundation's system, particularly those that result from the education of health care professionals. This is because there has been a divorce between service and education that results in little articulation between the two. Curriculum overemphasizes disease in training health professionals, and the ability to conceptualize and apply COPC care is lacking in almost all categories of primary care providers. There is a lack of interdisciplinary education in primary care that continues to promote the physician-only model and the physician-entrepreneurial model. Physicians continue to have inappropriate socialization for COPC and team practice and develop a competitive and isolated style of delivering care. Additionally, the role of the epidemiologist and public health professional is not understood by the traditional service providers, such as doctors and nurses. The Foundation for Comprehensive Health Services has found it necessary to provide intensive and ongoing orientation and training in family practice team operations and COPC to move toward its goal of comprehensive care. Education programs in the future need to decentralize into communities to develop clinicians and administrators who have a knowledge base that will be applicable to the needs of COPC. For professionals to learn to work together, interdisciplinary curricula are needed in the major professions to replace the single discipline approach to care of patients. Epidemiology and community health need to be integrated into clinical curricula so that primary care providers learn to relate to health in the larger context.

TABLE 4 Problems of New Models of Community Oriented Primary Care

Difficulties in financial viability of clinics in underserved areas
Low reimbursement for primary care and nonillness care
Public view community clinic = Free clinic/welfare clinic
Nonprofit = Okay to show a loss (expected)
Variable physician satisfaction and productivity
Difficult physician recruitment and retention
Local medical communities often *not* supportive
Physician resistance to systematization
Nonprofit status results in high public scrutiny (high administrative costs)
Orchestrating multiple funding

The current educational realities have resulted in isolated community clinics and primary care practices, since these are the models that providers learn about in training. These models are not viable in this day and age. Primary care organizations and providers are not equipped personally or organizationally to compete with existing institutional bases moving toward noncommunity-oriented primary care programs. If COPC is truly to survive, we need noninstitutional-based systems that offer the consumer a different model of care and that can successfully compete with the dominating institutional-based service model. There is no evidence that isolated community clinics and practices are going to be able to effectively meet and develop alternative models to the continuing trend toward institutionalization. There is little evidence that institutional-based systems offer true COPC, but rather they develop primary care—or a likeness—as one aspect of their secondary and tertiary programs within the medical model.

A public, nonprofit, noninstitutional-based delivery system can bring COPC to varied communities, offering a broader scope of service than the traditional isolated practices. A system such as the Foundation for Comprehensive Health Services' system can succeed through rational central management, economy of scale, and fiscally viable services, while retaining the ability to individualize services and programs in each area.

The importance of the family practice team to the success of the model, both in terms of economic viability and scope of services, makes it an essential ingredient. The development of a collaborative style of practice between a family physician and a family nurse practitioner is essential if both these variables are to be positive. The system and the team, with a community rather than an institutional base, promise to be a winning combination and the basis of a strong COPC system for the United States.

The Patient Advisory Council Concept

Milton H. Seifert, Jr.

The Patient Advisory Council (PAC) has been in operation for 8 years in the private, fee-for-service medical practice of Milton H. Seifert, Jr., M.D. Members pay $5 per family per year, and the practice contributes some support for medical activities such as the Annual Health Education Forum. Other than this, there has been no external funding for the council. The purpose of the PAC is to achieve health care delivery that is competent, caring, and appropriate to community needs. It functions to establish a good working relationship between the practice staff and the patient group.

Membership is open to all members of the practice, which number 4,000 people. There are four meetings annually of the full council, but working committees meet more frequently, and all meetings are open to anyone in the practice. The areas of council and practice cooperation are detailed in Table 1.

This Patient Advisory Council is a major factor in determining the conduct of the medical practice. Through a cooperative effort of the practice staff and the patient group, the services offered are better able to meet the goals of community oriented primary care as iterated by Drs. Kark and Abramson. This is discussed on an itemized basis below.

A Defined Population: The practice has counted its patients and determined who are regular patients and who are not. In this study, 75 percent of the total patients were found to be regular patients. This practice has served the same area for 52 years.

Availability and Accessibility: The practice provides 24-hour availability through an arrangement with two other practices in the building, as well as a 24-hour answering service. Council members provide increased accessibility by transporting patients to and from the office. Economic availability is provided by a self-discount program, a Family Therapy Fund, and an Annual Forgiveness Day. These programs are under the supervision of the Support Services Committee of the council.

TABLE 1 Areas of Council and Practice Cooperation

Council	Practice Staff
A. Organization	
1. Membership	Assistance of staff secretary
2. Treasury	
3. Meeting arrangement	
4. Recording secretary	Assistance of staff secretary
B. Accountability	
1. Policy development and assessment	Assistance of physician and whatever staff is appropriate, e.g., bookkeeper, nurse, service coordinator
2. Services improvement	Assistance of appropriate staff to acquire practice version of a patient complaint
3. Support service	Physician, accountant, practice manager, bookkeeper, and services coordinator attend all meetings of this committee
C. Patient services	
1. Talent bank registry	Referrals provided by staff
2. Health education forum	Staff assist in program development
3. Patient education	Staff assist in developing groups and educational formats, usually physicians and nursing staff
D. Liaison	Assistance of staff secretary
E. Research	Staff assistance in refining a research question and to aid in issues of human subject use

Epidemiology: Diagnostic data are collected on every patient and have been since 1974. Various samplings of these data have been done over the years. The data from these samplings have been compared with published data from other primary care practices, with the Physician Oriented Disease Surveillance Program of the Minnesota State Board of Health and also with the National Ambulatory Medical Care Survey. Our practice compares favorably to other primary care practices, except in the categories of mental health and living disorders, where it has a diagnostic rate of 16 percent, as compared to the usually recorded 3 to 5 percent. These data have been derived without the aid of a computer.

Programs to Deal With Health Problems: The practice has several programs to deal with the identified health problems of its patients. These include: the Well Child Care Program, Marriage Health Education, Parenting, Body Weight Management Program, Alcohol Education, Social Drinking, Intensive and Maintenance Chemical Dependency Treatment, and Education for Life Management Skills.

Community Involvement: Decision making is shared in all areas with members of the PAC. The practice is accountable to the community through its Policy Development and Assessment Committee, the Services Improvement Committee (grievances), and the Support Services Committee (fees, salaries, and practice management). There is also community involvement through health education and patient-to-patient services.

Clinical Skills: Patient services are delivered by a full-time family physician, a part-time adjunct physician, a health educator, a living problem counselor, and the usual supporting practice staff members. This provides a broad range of clinical skills, which is broadened even further by established relationships with various specialists and health resources within the community. Laboratory and x-ray facilities are available on site.

Comprehensive Care: Comprehensive care in our practice begins with the study of the diagnostic data. It has been enhanced by adding additional members to the provider staff, especially in the areas of health education and counseling. All problems are considered health problems whether they are physical, mental, emotional, or social.

Team Function: The practice staff has monthly meetings, and one permanent agenda item is “Interdependent Functioning.” In addition, the practice staff has developed an Interdependence Protocol. Members of the practice staff meet with the Support Services Committee of the PAC to explore problems and share decision making regarding practice management matters.

Outreach: The practice and the council cooperate in an Annual Health Education Forum. A prominent speaker or two are invited, and the audience participates. The council has a Talent Bank Registry, which collects and collates the skills of various people who are willing to share them with other patients. The Talent Bank Registry provides patient-to-patient services such as babysitting, homemaking, transportation, or physical therapy. The Liaison Committee of the council provides information about the council to interested consumers or providers. Finally, the practice attempts to identify those patients who are at greater health risk and has procedures to encourage follow-up on health problems that have already been identified.

Curative and Rehabilitation Services: There is an integration of the curative and rehabilitation services, especially through the Talent Bank Registry of the Patient Advisory Council. Members are available to provide support for persons with grief reaction, epilepsy, mental illness, chemical dependency, and others. Our program of continuity is designed to provide maintenance health services after the acute episode has been treated. Health maintenance and preventive medicine are stressed at the time of annual health examinations.

The Patient Advisory Council has played a significant role in this practice. At their suggestion the medical building was refinanced, which led to a 33 percent decrease in rent. With the help of council members, a new bookkeeping and billing system was installed. This and the development of improved methods of collecting past due accounts reduced the accounts, receivable of the practice by 30 percent. The council has also helped to improve inventory control and practice staff salaries.

The Services Improvement Committee (Grievances) has helped us to better understand the needs of people. It no doubt reduces the risk of committing malpractice, and this has been recognized by our professional liability insurance carrier, who has reduced our malpractice premium by 10 percent because of the participation of the Patient Advisory Council.

There are a number of experiences that could be described to illustrate the usefulness of the patient-to-patient services. Suffice to say that these people are providing services that are not available in any other way.

In general, the outcome of the health care system is made up of all the individual outcomes of each provider/patient relationship. The delivery of health care services for an individual originates in a single relationship. The better the relationship of provider and patient, the better will be the diagnostic effort and the better the diagnostic effort, the better the therapeutic effort. Thus, the better the relationship, the better the outcome. The Patient Advisory Council is simply an extension of that relationship at the community level. There is always some relationship between a practice staff and the patient group, but in our case that relationship has been formalized.

The Patient Advisory Council is a concept that provides local accountability and therefore local control of the health system. Since this is the level close to the actual services and their outcomes, the controls should remain appropriate. A local system under the influence of a Patient Advisory Council would be more responsive, more practical, more accountable, and more cost-effective. If the whole system were comprised of local systems such as this, the attributes mentioned would then accrue to the system as a whole.

The Application of COPC Principles in a Welsh Mining Village

Graham Watt

Glyncorrwg is a compact and isolated industrial village situated in the South Wales valleys. It is separated from the next village by 21/2 miles of road and from everywhere else by mountains. The last coal mine closed in 1970, and unemployment currently stands at 38 percent.

There are 2,050 patients (about 97 percent of the population) registered at the health center with a single general practitioner, Dr. Julian Tudor Hart, who has been in practice since 1962. Patient consultation rates and hospital admission rates are 60 percent above the national average. This is typical of general practice in the South Wales valleys, where overall mortality is 30 percent above average. This burden of ill health is a legacy from the industrial period.

In addition to coping with present illness, practice policy has been to develop an approach that anticipates ill health in the whole population served. There is also a busy research program. For the sake of brevity, these activities will be described in relation to a single clinical problem—the control of blood pressure.

THE BLOOD PRESSURE PROGRAM

Case-finding for high blood pressure began in 1968. At that time, before the results of the Veterans Administration Study were available, treatment of high blood pressure seemed the measure most likely to reduce the burden of morbidity and mortality from ischemic heart disease. Death rates from this condition in men aged 35–44 were 70 percent above the national average at that time.[1]

On reviewing the clinical notes, only half of the men aged 20–64 had had their blood pressure recorded during the previous 5 years. Rather than organize an intensive screening program, it was decided to collect the remaining blood pressures on a casual basis, as patients attended the health center during the next 12 months. When 10 percent were still outstanding, letters were sent out asking patients to attend the health center, and a third complied. The remainder had their blood pressure measured at home. Ascertainment of the male population was complete after 15 months; ascertainment of the female population took a similar period. The process was described in *Lancet,* [2] showing that ascertainment had been completed without adding significantly to the routine workload of the practice. The number of known hypertensives was increased from 15 to 38, and 32 were started on or continued treatment.

Only one man made a conditional refusal (that he would take part only if he became the sole nonrespondent); he had a diastolic pressure of 170 mm/Hg at the age of 44 without symptoms. His blood pressure had never been taken before, and he is alive today after 14 years of treatment for his hypertension.

Initial ascertainment is one problem; treatment and follow-up are quite another. The system we use is as follows. All patients have their blood pressure measured on the first occasion they consult after their twentieth birthday. A red sticker is then placed in their clinical notes indicating when the next measurement is due. For normotensives, it is not for another 5 years. For borderline hypertensives, it is not for another 12 months. Patients on treatment have a red sticker put on the outside of their notes indicating that their blood pressure is due to be measured every 3 months. Whenever a patient consults, the receptionist notes when the blood pressure is due, and, if so, arranges for the practice nurse to measure it before the patient sees the doctor. All measurements are taken with a random zero sphygmomanometer. Treatment is begun when the mean of three consecutive readings exceeds 105 mm Hg diastolic and/or 180 mm Hg systolic. Recently, patients have been trained to measure their blood pressure themselves at home for a 2-week period in order to increase the amount of data on which decisions to treat are based.

Initially all this work was incorporated into the normal practice routine, but since 1974 there has been a monthly evening hypertension clinic. About two-thirds of patients on treatment are reviewed at this clinic every 3 months, but a third are still seen at other times, indicating that for many patients hypertension is not their only medical problem.

The follow-up of treated hypertensives was reviewed initially using a simple card-box system, indicating which patients were due to be seen each month, and allowing rapid identification and outstanding pressures. More recently, the system has been computerized, and every blood pressure measurement taken at the health center or at home is recorded on a data sheet (along with other quantitative data, e.g., pulse, weight, number of cigarettes smoked, and peak flow rate). Every month the computer provides a printout indicating those patients whose pressures are outstanding in each of three categories—treated hypertensives, borderline hypertensives, and normotensives.

After 14 years the key question is, how effective has the blood pressure program been? We lack the numbers of patients and resources required to study this question in detail, but there are several indications that the program is working well. Figure 1 shows the number of patients aged 20–64 treated for diastolic hypertension between 1968 and 1982. It shows that 71 patients have been recruited to join the 32 who formed the treatment group in 1968. Of these 103 patients, 66 are alive, 34 dead, and 3 moved away. Diagnostic categories have not changed, and there is no evidence of an epidemic of high blood pressure in South Wales. We conclude that the steady enlargement of the treatment group is evidence that we are altering the natural history of high blood pressure in the Glyncorrwg population.

Table 1 contains data on the adequacy of blood pressure control in 80 patients who were on treatment on February 1, 1982 (this includes some patients treated for systolic and borderline diastolic hypertension). It shows that 69 percent of patients had a diastolic pressure less than 90 mm Hg, and 59 percent had a systolic pressure less than 160 mm Hg. These figures compare favorably with mean pretreatment pressures of 114 mm Hg diastolic and 191 mm Hg systolic. The proportion with diastolic pressures

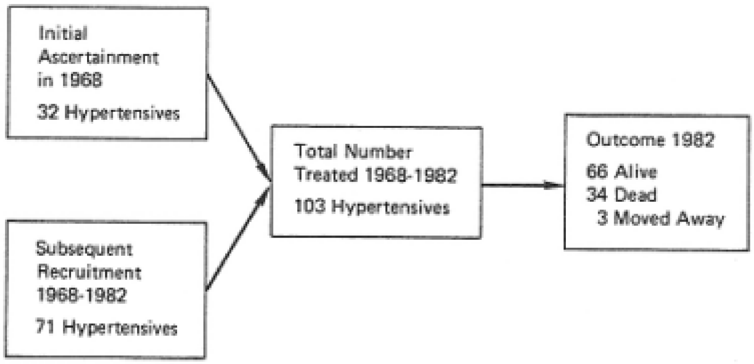

Figure 1 Number of patients treated for hypertension between 1968 and 1982, with diastolic pressures ≥105 mm Hg (40–60 years), ≥100 mm Hg (20–39 years).

less than 90 mm Hg also compares favorably with the figure of 38 percent reported in a recent study of hospital outpatients attending clinics of specialists with an interest in hypertension.[3]

TABLE 1 Control of Blood Pressure in 80 Patients as of February 1, 1982

Diastolic Pressure Level	Percent of Patients	Systolic Pressure Level	Percent of Patients
≥105 mm Hg	1	≥200 mm Hg	4
100–104 mm Hg	11	180–199 mm Hg	6
95–99 mm Hg	10	160–179 mm Hg	31
90–94 mm Hg	9	<160 mm Hg	59
<90 mm Hg	69		

Table 2 shows the extent to which targets for blood pressure review were met during the last 6 months of 1981. Patients are divided into three categories, according to their age and blood pressure level. Patients in Category 1 are on treatment and should be reviewed every 3 months. On average this target was met in 85 percent of cases. In practice this means that every month 10–12 patients have to be contacted and asked to attend the next hypertension clinic. This list involves a different set of patients every month, and, with an active policy of chasing outstanding pressures, follow-up of the treated group is kept virtually complete. Normotensives in Category 3 are meant to be reviewed every 5 years, and this target was met in approximately 90 percent of the cases. This result is in line with the observation that about 90 percent of the patients consult their general practitioner at least once during a 5-year period.

The borderline hypertensive group, or Category 2, is meant to be reviewed every year, but Table 2 shows that this target was met in less than 50 percent of cases. This poor performance is partly due to a lack of vigilance

TABLE 2 Review of Ascertainment as of January 1, 1982

	Blood Pressure Level			
Category	Age 40–64	Age 20–39	Planned Interval Between BP Readings	Percent of Patients With Up-To-Date BP Readings
1	≥180/105mm Hg	≥170/100mm Hg	3 months	85
2	≥150/90mm Hg	≥140/85mm Hg	1 year	45
3	<150/90mm Hg	<140/85mm Hg	5 years	90

by doctors, receptionists, and nurses, but it is also the case that patients do not consult often enough for us to reach this target by measuring blood pressure only on a casual basis. Achieving higher levels of ascertainment in this group would require more active follow-up. A policy of treatment in this group would generate even more work, possibly more than could be managed under this system. The question of whether to treat and how to treat patients in this blood pressure range is currently under review.

ANTICIPATORY CARE

This approach to the control of high blood pressure in a whole community illustrates the principles on which a program of anticipatory care can be based. The approach can also be applied to the immunization of babies, the care of pregnant women, screening for cervical cancer, child development, campaigns against smoking, and care of the elderly. Three other applications are the management of chronic disease; surveillance of long-term medication, including the contraceptive pill; and the collection of baseline clinical data in order to improve the quality of care.

In each there must be commonly agreed definitions of the data to be collected or the treatment to be administered and a planned system for the collection, recording, and review of this information. Central to such review is the calculation of rates in which the denominator is the population at risk, and the numerator is the number of people ascertained. These rates not only provide a measure of how well or badly the program is running, but by subtracting the numerator from the denominator, they provide lists of patients who have not been included. A central feature of any program of anticipatory care is the ability to produce and respond to lists of this kind.

The particular approach described here is only one way of organizing preventive care. The most noteworthy feature is its integration into the routine work of an ordinary general practice without the need for additional resources. Two-thirds of patients consult their general practitioner at least once a year, and 90 percent every 5 years. With simple methods of organization and marginal redeployment of staff, three contacts can be used to build up profiles of risk factors and other data relevant to preventive programs.

RESEARCH

Since 1978, the practice has been associated with the Epidemiology and Medical Care Unit of the British Medical Research Council. The parent unit provides additional resources for research and has commissioned a number of studies, mostly of a simple observational type, to which there have been very high response rates. For example, in a prospective study of the etiology of large bowel cancer, subjects were asked to provide two stool specimens that were then frozen, to be analyzed later on a case-control basis as cases of bowel cancer presented. Eighty-one percent of the adult population aged 45–74 took part in this study.

Our main current research study concerns the relationship between dietary sodium intake, arterial pressure, and a family history of high blood pressure. Using the blood pressure profile of the population described above, it is possible to define groups of offspring whose parents belong either both to the top or both to the bottom third of the distribution of arterial pressure in their age group. Since these groups differ in their risk of developing high blood pressure, but only by a small amount in their actual blood pressure levels, differences between them can be attributed to the cause and not the consequences of high blood pressure. By comparing sodium restriction in offspring with and without a family history of hypertension. Similar studies can also planned on patients with blood pressures in the diastolic range 90–104 mm Hg. Future plans are to incorporate dietary sodium restriction in the blood pressure program as a first-line measure in the treatment of mild hypertension.

The first of these studies is now complete. The field work involved the collection of seven consecutive 24-hour urine specimens from 115 free-living individuals aged 10–43. This figure represents a 90 percent response from the available offspring. The next stage will involve studies of dietary sodium restriction in offspring with and without a family history of hypertension. Similar studies can also planned on patients with blood pressures in the diastolic range 90–104 mm Hg. Future plans are to incorporate dietary sodium restriction in the blood pressure program as a first-line measure in the treatment of mild hypertension.

From within the structure of routine clinical work, it is posssible to develop a system of anticipatory care for the whole population. Within the setting of anticipatory care it is possible to develop a research program both dependent upon and complementary to the clinical work of the practice.

The work I have described can be seen as a natural sequence: beginning with the clinical problem of deaths in young men from ischemic heart diseases, leading to the development of a program for the control of blood pressure at a community level, using this blood pressure data to identify groups of offspring for etiological studies on hypertension, and applying research experience of dietary sodium restriction to the clinical care of patients. Primary prevention of high blood pressure by dietary intervention in families at high risk remains a future goal. This combination of clinical and epidemiologic practice within a single population is the hallmark of COPC.

The work described here was pioneered by Dr. Julian Tudor Hart. I am grateful to him for the experience of working in his practice.

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Training for COPC in the Netherlands and around the World

Jacobus M. Greep

THE MAASTRICHT PROGRAM

The training of basic doctors in the Netherlands should fulfill the requirements set forth in the academic statute. A basic doctor has 6 years training and is prepared for further specialty training in general practice (currently only 1 year), clinical specialty (4–6 years), and social medicine (4 years). In the Netherlands the students enter the universities straight after high school. The selection of medical students in the Netherlands is unique. After the high school national board, a weighted lottery is performed. Out of 6,000 interested high school graduates, 1,950 are placed in medical faculties. Only straight A students have a double chance in the lottery.

In 1970 the Dutch government decided to start a new medical faculty that was community oriented and emphasized primary health care. In order to achieve these goals, the educational system of this faculty had to be different. The traditional departmental system was abandoned in favor of a problem-oriented system. In 1974 an integrated innovative curriculum was initiated.

Educational Principles

At Maastricht the basic philosophy emphasizes a preference for orienting medical education to primary care. The consequence of this position had to be presented in the teaching program; the problems presented needed to be typical of primary health care. It had to give an answer to the problems of the health care system. Based on this philosophy the following educational principles were developed:

- problem-based orientation;
- independent learning;
- attitude development;
- evaluation;
- integration of theory and practice; and
- skills training.

These principles led the founding fathers to design the following requirements:

1. *The teaching program must relate to the knowledge and the interest of beginning students.* The curriculum should be in line with the expectations of the students. It is important to know what the students expect and what motivates them to start medicine. The first block of 6 weeks is therefore devoted to introduction and orientation. It offers the students and the faculty the opportunity to become acquainted with one another and with the program. Not only during the first weeks but throughout the whole program, the student's levels of knowledge and possible shifts in interest should regularly be made manifest, so that subsequent parts of the teaching program can be changed accordingly.
2. *The teaching program must constantly keep its final objective in sight.* It was assumed that the real practice of medicine is the strongest motivation for the student. The program must constantly keep in view the relevance of the training in medical care and make that apparent to the student. Contact with the practice of medicine has to be built in from the beginning. In the early stages of training, skills are practiced. For this purpose a skills laboratory was started and has been gradually expanded.
3. *The program must ensure that theoretical learning will be applied in practice.* No sharp distinction should be made between theory and practice. Whenever theory cannot be regularly applied in practice, there is the risk that the theory will be insufficient when the student requires it. The conviction that the knowledge acquired must be kept alive and that the requisite skills must be constantly practiced implies that the program includes the reinforcement of skills until they are routine and second nature. By being confronted with progressively more complex health problems, the student will gain a broader and more realistic awareness of his own contribution.
4. *The teaching program must provide for the progressive refinement of the students' overall knowledge.* This requirement implies that the program had to be organized concentrically, i.e., that particular areas reappear time and

again with progressively more detailed and more refined presentation of problems.

The Teaching Program

The principles included in the basic philosophy and the requirements that followed from them allowed us to indicate the general lines of development of the teaching program. Topics specific to a particular specialty—including the specialty of general practice—are included in the program. However, they are included only insofar as they are necessary for the training of a general physician who may later decide to specialize. The teaching program is oriented to the training of general physicians who fulfill the requirements set forth in the academic statute. The educational principles adopted and the requirements that flow from them, such as the emphasis on primary care, lead to a number of themes that run through the whole program. For the present, it is accepted that by the fifth and sixth year students must have acquired the following:

- practical experience in the solution of problems frequently encountered in primary care, problems not falling within the field of a specialist; and
- the ability to recognize unusual problems and to develop the most appropriate referral; students are not expected to have extensive knowledge of different specialties, but they should be able to make appropriate referrals of any health problem they encounter.

In the courses of the first 4 years of training, the teaching program adheres to the following themes:

1. *The problem-solving process is encountered in various phases.* Dealing with health problems should foster a problem-solving ability. Independent of the complexity of the problem, the student should be equipped to:

- formulate problems precisely in medical terms;
- formulate general hypotheses;
- test relevant parts of the problem; and
- formulate an adequate solution.
- 2. *The problem with which the student is confronted must be progressively more complex.* Even in the first year, students encounter complex health care problems, but the emphasis is on insight into what background knowledge is required. At the same time, students are confronted with simple problems, so that they have, by the end of the first year, some experience in inde

pendent problem solving. To this end, students are assigned limited responsibilities in real-life situations. For example, in their first year, students carry out laboratory techniques, apply dressings, become acquainted with instruments, and perform simple diagnostic procedures in the skills laboratory and occasionally in practice. In subsequent years, the emphasis shifts progressively to:

- acquiring an insight in health care problems and problem solutions that do not presuppose extensive background knowledge;
- possessing the background knowledge necessary for frequently occurring health problems;
- possessing the knowledge to solve common problems; and
- knowing what knowledge is necessary for infrequently encountered health problems.
- 3. *The teaching program progresses from the general to the specific.* In the Maastricht program the traditional progression from cell to tissue to organ is reversed where possible. This reversal will lead to the desirability of studying microstructure in the light of a health problem. Details of morphology, physiology, and biochemistry will be more readily acquired when their relevance to health problems has been demonstrated. The principal topics and main approaches to problems have been established in the first year, and the succeeding years are devoted to refining the students' knowledge of the integrative biomedical, clinical, and psychosocial sciences.
- 4. *The teaching program should begin with health problems and proceed to consideration of normal and abnormal functioning.* The starting point is health problems rather than the disciplines within medicine. This approach gives rise to distinguishing the following successive stages:

- orientation and introduction (year 1);
- normal function and phases of life (year 2);
- abnormal functioning (year 3); and
- making the best possible diagnostic and therapeutic decisions (year 4).

Structure of the Learning Program

The teaching program or curriculum at Maastricht is comprised of units of 6 weeks' duration. In this way, ongoing evaluation is facilitated. The themes are composed by making use of knowledge from various disciplines. The contribution of the different disciplines is organized around health care problems. Thus, the input of the disciplines to health care delivery can more easily be comprehended. The matrix system is used.

Student participation is achieved through tutorial groups. Groups of eight students meet at least twice a week with a staff member to discuss health care problems. In the remaining time the problems are distributed among the group members to prepare the necessary problem solving. As studies advance, progressively more realistic situations are introduced. Beginning with solution of health problems on paper, students then advance to practicing on models, and eventually they will be prepared to deal with actual patients. In the first year students will already acquire experience in dealing with uncomplicated problems of real patients.

All first-year students follow a common program. In the event that licensing examinations become required by law, such standardization is necessary. After the first year, options can be introduced into the program. Electives are increasingly part of the program after the second year.

The main principles of the curriculum are still in use after 8 years. It was possible to structure the organization in such a way that the chance to fulfill the requirements was high. Every study unit was prepared by a multidisciplinary project group called the planning group. Specialists in the same field were based in “capacity groups” (the former departments) in order to remain up to date in their specialty. In this way, it was hoped that the students would indeed get a broad view on medical problems and that “integrated teaching” would be achieved, using all the available capacity in each block.

Hospital Internships

The original arrangement for hospital internships is not yet feasible. The intention was to let the students follow a number of patients on their way through the various departments in the hospital (x-ray diagnosis, operating room, intensive care ward, revalidation, etc.) from one of two possible home bases: internal medicine or surgery. Further, the internships would be expressly for the student's learning process; the students would make only a very limited contribution to the hospital in terms of health care and administrative tasks.

The fifth and sixth years the student would use his capacity for self-directed learning and problem solving. The patient would be the focal point of his attention and he would solve the problems by making a problem list and solving these problems one by one; he would not be limited by departmental boundaries. Efficiency and costs aspects as well as psychosocial aspects of the patients' problems would be included. The student would use a problem-oriented medical record.

These arrangements have not yet been realized. The faculty board is of the opinion that this will not be the case for some years to come. It seems that the rigid hospital organization is difficult to combine with a less department-linked, free flow of interns through the hospital. Moreover, the faculty members admit that they had underestimated the degree of preparation the novel type of internships required from the medical and nursing staffs of the hospitals involved. For the time being, therefore, there is no alternative but to return to the more traditional system of internships. However, the problem-oriented medical record is in use, and efforts are being made to have the internships in general specialty areas and not in the subspecialist fields.

Evaluation

Evaluation is mandatory, especially in a new school with an innovative curriculum. A system was developed to evaluate the progress of the students through formative and summative evaluation and to evaluate the curriculum through block and program evaluation. As independent learning is one of our leading principles, formative evaluation, or self-assessment, is very important. The student should check that his/her progress is in line with the expected progress. In the beginning, it was thought that we could do without a summative evaluation, but by law it was necessary to develop some kind of an examination.

A system was designed in which the progress of the various years could be measured, a kind of theoretical/final M.D. exam with all medical topics involved. Each student has to write the same exam, and, of course, the fourth-year student scores better than the first-year student. The advantage of this system is that the student is less inclined to study just for the exam, because he doesn't know what set of questions to expect, since all medical topics are involved. Recently, a project was started to follow up our young doctors in order to trace possible areas in which their knowledge is lacking. A group of experts (External Review Committee) was asked to help and advise us and evaluate the total educational system. They did this with a lot of enthusiasm and have helped us tremendously.

Not only did we receive help from the External Review Committee, but also from the Network of Community Oriented Educational Institutions for Health Sciences, of which the faculty is the founding member.

THE NETWORK OF COMMUNITY ORIENTED EDUCATIONAL INSTITUTIONS FOR HEALTH SCIENCES

The World Health Organization (WHO) recognized that the innovators of such medical school curricula needed all the help they could get in reaching their goal. It decided to organize a meeting in Kingston, Jamaica, in 1979.

This meeting brought together key figures of 18 selected schools that departed from current or traditional educational forms, either by giving priority to community orientation or by using educational processes/methods through which students were engaged in problem solving. These 18 were obviously preparing their students to provide a more effective contribution of total health care, to have an understanding of the health needs in their community, and to work with the community as well as with individuals to promote health care delivery systems wherein the relation between the community and the health care system could be reestablished.

From this meeting emerged unanimous agreement that mutual benefits could be derived from founding and developing a network linking those schools already engaged in community oriented problem-based learning and other schools more or less committed to an innovative approach and showing willingness and ability to contribute to actual collaboration with participating institutions.

It was emphasized that the proposed network could become an important vehicle for the recognition of the need for change in educational programs that encourages closer linkage to health services and the political will to recommend such change. Thus the network came to be founded. It originally consisted of 18 founding members—those present at the Jamaica meeting. It was stressed, however, that the network should not become a formal association, nor that it should be seen as an exclusive club, but rather provisions should be made for all those with genuine interest and active commitment to join.

The members met again under the auspices of the Rockefeller Foundation in 1981 in Bellagio, Italy. The objectives of the meeting were to identify possible collaborative actions and to generate a plan of action. There was unanimous agreement that mutual benefits could be derived from the further development of the network by sharing information, resources, and endeavors to find solutions to common problems.

The main objectives of the network can be formulated as follows:

1. Strengthen institutions in the realization of community oriented problem-based programs and in the development of individuals to enhance staff capacity.
2. Develop appropriate technologies for implementing community oriented problem-based programs.
3. Promote community oriented problem-based learning so that other institutions could use such an approach. To give substance to these important principles, the network promoted actions by which participating institutions could make valuable input. More

specifically, the following activities were planned to be carried out concurrently:

1. Information exchange (ideas).
2. The establishment and development of five task forces.
3. Bilateral contacts (fellowships).
4. Exchange of staff and students.

CONCLUSIONS

The major question to be asked is: Are we succeeding in changing medical education for the better? No clearcut answer can be given as yet, because it takes some years to follow up the first group of Maastricht graduates. However, we hope we are going in the right direction. Emphasis on primary health care has not been outmoded yet. On the contrary, since health care costs are still increasing, the cry for cheaper health care has only become louder. Also the effects of the patient movement have become stronger in the sense that they want care closer to the people. The Dutch government is trying to find ways and means to control health care costs by new laws that try to establish a network of health care services that are more related and by closing hospitals. Control over the system will be on a regional level. As you well understand, it is not an easy road that leads to cooperation between institutions that have been completely independent and self-reliant before. But the golden days of everyone getting everything he or she wishes are something of the past. The network of community oriented institutions was established to help all the institutions to stay on this new road, and may we hope that the network will succeed in bringing together the new medical schools and in making them strong enough to row against the tide.

Can Area Health Education Centers Promote COPC? The Colorado Experience

Karen F. Hansen

This paper will provide a brief introduction to Area Health Education Centers (AHECs), in general, to the Colorado program, in particular, and to the question of whether AHECs can promote COPC. The concept of AHECs was first described by the Carnegie Commission on Higher Education in its special report *Higher Education and the Nation's Health: Policies for Medical and Dental Education,* published in October 1970. The commission examined the behavior of universities and the federal government prior to 1970 in attempting to correct the significant shortage of health professionals existing at that time and found that the rush to develop new academic health science centers was inappropriate given the extraordinary cost of these institutions. In addressing the health manpower situation at that time, the commission suggested that new health science centers may be appropriate in specific parts of the country; in other parts, however, institutions training health professionals should focus on the more adequate distribution of their resources within their states, without costly new construction and duplication. To this end, the commission recommended that academic health science centers develop AHECs in those regions of their states that were without the resources and services of academic health sciences centers. Specifically, the commission recommended the establishment of 126 AHECs by 1980 in nearly every state in the country.

In 1971, the Comprehensive Health Manpower Training Act was enacted, which included authorizing language for AHECs under the health manpower initiative awards section. Thus, in 1972, the federal government provided funds to 11 universities to develop the initial experience with

AHECs. Probably the national prototype has been developed at the University of North Carolina at Chapel Hill. Following 1972, no new AHEC programs were funded until 1977. Since then, 12 new awards have been made, the latest in 1979. Over this period, the federal government has contributed approximately $160 million dollars to this effort, with state contributions now totalling more than $300 million. There are currently 21 projects in 20 states.

A series of evaluation efforts focused on the AHEC programs have been conducted over a period of several years. These studies have included the 1978 report of the U.S. Government Accounting Office; the 1978 report of the U.S. House of Representatives, Appropriations Subcommittee on Health; the 1976 and 1979 reports of the Carnegie Council on Policy Studies in Higher Education; a 1980 report to the Congress by the Secretary of the Department of Health, Education, and Welfare; and the 1980 report of the Graduate Medical Education National Advisory Committee (GMENAC). These reports document a significant impact on the distribution of physicians in health manpower in the areas served by AHECs. This is particularly true of the 11 projects originally funded in 1972. The newer projects are too young at this writing to be able to demonstrate an impact on manpower distribution.

Individual examples of impact include that demonstrated in the original California project located in Fresno in the central San Joaquin Valley. Positive changes in the AHEC included substantial increases in numbers of physicians compared to declines in physician numbers in the non-AHEC regions. The AHEC showed a net gain of 152 physicians, an increase of more than 20 percent. The University of Illinois has demonstrated a 70 percent retention of family practice residents as a result of its AHEC activity. In addition, 40 percent of clinical training of all University of Illinois medical students is now located in community hospitals.

In North Carolina, medical student education is occurring on a regular basis in more than half of the state's 100 counties. In addition, the proportion of North Carolina medical school graduates choosing to practice in the state has increased dramatically since the beginning of the AHEC program. In 1960, only 30 percent of the state's medical school graduates eventually located in North Carolina; that number has now risen to more than 40 percent of the graduates since 1972. In 1980, two-thirds of the AHEC-trained primary care residents remained in the state to practice. Between 1973 and 1978, the improvement in North Carolina's physician-to-population ratio was 20 percent compared to 15 percent for the rest of the United States. North Carolina's rural counties have improved their physician-to-population ratios significantly more than other rural U.S. counties.

During the first 5 years of the AHEC program in North Dakota, the ratio of physicians per 100,000 population improved from 85.1 to 108.

The expectation is that with the continuing AHEC residency support, the ratio will continue to improve. South Carolina has demonstrated a doubling of minority physicians practicing in the state, from 39 in 1979 to 84 in 1980. During the AHEC project at Tufts University, 11 percent of undergraduate clinical education occurred in AHEC sites in Maine, including third-and fourth-year clerkships at two medical centers and fourth-year preceptorships at six rural sites. The follow-up on students participating in these programs indicates a significantly higher number locating practices in nonrural locations, especially in Maine. Four family practice residencies were developed or expanded in Maine where there were none prior to the AHEC. Seventy-eight percent of the graduates of the residency programs are locating their practices in the state, and 76 percent of those practices are in communities of 10,000 population from 14 to 102 in three hospitals served by the AHEC. In addition, there has been a decrease in the number of residents who are foreign medical graduates in the state.

Among the newer programs, Connecticut has provided a significant focus on urban and community health needs. A required primary care clerkship involving 70 senior medical students each year is served in urban health experiences in underserved inner cities. There is a significant focus in the expansion of the family medicine residency program on urban and community health issues and needs. Other newer projects with significant urban focuses include New Jersey, California, Massachusetts, eastern Virginia, Ohio, and Maryland.

In Colorado, our evaluation efforts also focus on changing manpower distribution patterns. The first residency graduates having had AHEC student rotations will complete their residencies this spring. The number is very small. However, one proxy measure of impact that we are using is a significant upturn in the number of Colorado graduates staying in the state for residency training. Since 1978, which was the first year of AHEC student rotations, the percentage of graduates remaining for residency training rose from 26 percent to more than 40 percent in 1981. A more immediate measure can be seen in the employment decisions of nursing graduates. The baccalaureate graduates of the University of Northern Colorado and the University of Colorado are choosing AHEC employment sites much more frequently than they did previously. In 1979, for example, 14 percent of graduates went to work in rural areas, and, in 1981, 26 percent chose rural employment. We also have a significant amount of data on graduating dentists indicating that a student with a rural background given rural educational rotation will choose a rural practice site almost 100 percent of the time.

In Colorado, the AHEC program began as a result of the arrival of the new chancellor of the Health Sciences Center, Dr. John W. Cowee, in

1976. In traveling throughout the state, he heard repeated complaints that the Health Sciences Center was not appropriately responsive to the needs of the state's practitioners and the health care of rural people. Building on some existing programs, the faculties of the schools of the Health Sciences Center in 1976 and 1977 developed position papers and other activities that formed the basis for an AHEC Proposal to the Department of Health and Human Services that was funded in 1977. The AHEC in this state, called the SEARCH program, is based on community boards of directors, which are locally incorporated and representative of the geographic region they serve. There are four area health education centers serving 53 of the state's 63 counties. As of 1982, all rural areas of the state are covered. AHEC activities do not occur in the metropolitan Denver area or in Colorado Springs. The activities of the program include an increase in the number of student rotations from UCHSC and other participating schools in medicine, dentistry, nursing, pharmacy, and allied health from 240 in 1978–1979 to more than 500 in 1981–1982. In addition, all of the state's baccalaureate-level nursing education programs are involved in AHEC activities in their particular regions.

The educational benefits that accrue to students from AHEC rotations include a more realistic view of primary care delivery than a tertiary care university system is able to provide; more personal attention from the preceptor and/or attending physician than the student has in a crowded university setting; and a more complete understanding of community health systems, including social services, than are evident at the university level. The student also sees more cost-effective health care at the local level. The community benefits as well from AHEC rotations. First, recruiting opportunities are enhanced for communities that are interested in attracting more health providers. This is a particular problem in rural Colorado, especially for nursing, although physician shortages and dental shortages remain as well in certain pockets of the state. A second community benefit is that the professional providers who already live in the area experience reduced professional isolation as a result of contact with students, faculty members from the university, and local continuing education offerings. Thirdly, increased professional stimulation and examination of health care attitudes and delivery occur as a result of student participation in community practices.

The principles of COPC are apparent in Colorado through the SEARCH/AHEC program in particular. The School of Medicine offers a first-year course, Introduction of Clinical Medicine, which is coordinated by the Department of Preventive Medicine. This course includes a family and a community focus including epidemiology. There is an elective 1-week rotation in an AHEC community as part of this course, in which the student is expected to perform a community diagnosis, becoming aware of the preceptor's practice as well as the health care and social services delivery systems that exist in that community. In the sophomore year, students are encouraged to participate in the Student Health Program, which is jointly funded and operated by the Colorado Health Department, the Colorado Migrant Council, and UCHSC. Students work with individual preceptors providing health care to migrant farm workers and their families in various areas of the state. This care is provided in private offices, schools, and health clinics. There is a brief curriculum that is presented to students focusing on the particular health problems of migrant farm workers, including the cultural and language barriers that frequently prevent adequate health care from being delivered. Junior medical students have multiple opportunities to receive their required clerkships (medicine, pediatrics, psychiatry, obstetrics-gynecology, and surgery) in community hospitals in the AHECs. As part of the senior year, a primary care clerkship is required of all students, which includes a curriculum segment of preventive medicine and community oriented issues and is offered in the AHECs.

The School of Nursing also offers COPC experiences through its traditional community health nursing curriculum, undergraduate student AHEC rotations, and through a recently developed activity called Project GENESIS. The latter consists of community studies by students and faculty focusing on what individual community leaders and townspeople believe are their health needs. These students analyze the existing health care delivery system and include social services, education, and religious networks. A report is then prepared that is delivered to the community in a discussion session focusing on what should be done to implement individual recommendations.

Although the AHEC projects and health professions schools in this country can promote COPC, the real question is will they? To address this issue, the strengths and weaknesses of the COPC concept need to be examined. Strengths of this concept include the potential improvement of training to more adequately focus on real-world health problems, rather than the highly tertiary care issues that university faculty frequently study. Community oriented primary care training helps to assure the relevance of future practice to community health problems. However, the COPC concept itself is not well focused with an organized advocacy group. Community oriented primary care means different things to different people and seems less likely to be successfully advanced in the bastions of medical educations with their feudal power systems than if a well-developed single concept existed that could be advocated by a strong group. In addition, faculties currently seem to have little incentive to focus on COPC. Very few tangible rewards come as a result of dedication to primary care. Research support leading to pub lications, promotions, and tenure is focused in highly technical basic science and clinical areas.

A disincentive on the practice side is the fact that private practitioners do not care to pay for the epidemiology that is necessary to assure that their practices are community-based. Without the incentive to have that work done, it is not being done in a structured way. Experience in Colorado suggests that, even in practices that have a family medicine information system (FMIS), the data in fact have very little influence on the services offered. Physicians use the FMIS primarily for billing purposes; the effect on the practice of the clinical data could not be seen.

The arguments that COPC saves money appear not to be easily documentable. For example, the costs of doing an epidemiologic study in the community are not offset by savings to the same pocket. The unit providing the epidemiology does not in fact realize the savings in lives or time lost from work. The latter accrue to someone else—the employer or to the individual whose life is saved.

The future of the COPC concept seems likely to rise or fall on the issue of financing. If public financing for medical care is reoriented to support the principles of COPC more fully than the highly technical, tertiary, machine-oriented care that is provided for such things as heart transplant experimentation, kidney dialysis, etc., then COPC will grow and flourish. In the meantime, some focus needs to be brought to maintain the concept and continue its definition and advocacy in the various forums that help determine national health policy. It appears that the most likely source of immediate support for the continued development and propagation of COPC is to come, at least in the short term, from private funding sources.

Departments of Family Practice as Vehicles for Promoting COPC

Thomas M. Mettee and
Jack H. Medalie

Case Western Reserve University School of Medicine in Cleveland, Ohio, under Dean Joseph Wearn, made medical history in the 1950s and 1960s by radically revamping its entire curriculum. Among the many innovations introduced were:

- a strong *student orientation* with their participation in planning, precepting, and evaluation, as well as self-educational facilities and initiative;
- an *integrated curriculum;*
- interdisciplinary *subject committees;*
- *multidisciplinary labs;*
- beginning medical school with a live *human contact* (pregnant woman) rather than a cadaver; and
- 7 months of *electives* in the final year and a required *ambulatory clerkship.*

The view has been expressed that it was “the most significant development in medical education since the Flexner Report.” Many medical schools since the 1960s have adapted aspects of the curriculum, while McMaster University in Canada and the University of Limburg at Maastricht in the Netherlands have gone even further in their integration. The spirit of readiness to try new ideas at Case Western Reserve University continued, and in 1974, under Dean Frederick C. Robbins, the faculty voted to create a department and discipline of family medicine that would have status equal to other departments.

Today, the Department of Family Medicine (chairman, J. H. Medalie) consists of four clinical departments at university hospitals, the Cuyahoga County Hospital system, Fairview General Hospital, and Mount Sinai Hospital. Three of these hospitals have accredited residency training programs with 44 physicians in training. In addition, we have four Robert Wood Johnson fellows in training for an M.S. (family medicine) program. The department also has three divisions based at the School of Medicine. These are: research, education, and family/behavioral science. The department is heavily involved in education of medical students, residents, postgraduates, faculty, and continuing medical education.

The following illustrates the community orientation of the department. It provides a more detailed look at the activities of one of the clinical units, the Department of Family Practice at the Cuyahoga County Hospital system (director, T. M. Mettee).

The department and residency training program are currently in their sixth year of operation at Cleveland Metropolitan General/Highland View Hospital—the acute care/rehabilitative care hospital in the Cuyahoga County hospital system. The educational program derives much of its strength from its affiliation with Case Western Reserve University's Department of Family Medicine described above. Special strengths in epidemiology, research, education, family sociology, family psychiatry, and community medicine have made major contributions to our community orientation and faculty development.

A Health Resources Administration-sponsored training grant provided us with resources to establish a vital link with the Department of Medical Anthropology at Case Western Reserve University. This linkage put us in contact with J. Kevin Eckert, Ph.D., a medical anthropologist with a special interest in the urban elderly. Through his leadership a number of graduate students have carried out research in our target area, and we have hired one student, full-time, to coordinate and manage the activities of our community outreach project (to be described later). These affiliations with university-based departments are without a doubt the key to our community oriented approach to service and education. The current challenge is to distill and synthesize information, concepts, and methods from the disciplines represented by these affiliations, especially epidemiology and the behavioral sciences, in order to articulate practical approaches to community oriented primary care, which can be applied by the primary care practitioner, who usually functions without such university support.

At the undergraduate level, our department and Family Practice Center serve as a site for elective Medical Apprenticeship Program (MAP) students (first and second year), who work in a patient care tutorial one-half day per week for 6 weeks with a resident, fellow, or faculty physician to gain exposure to a community responsive practice. The center also serves as a site for the required ambulatory/primary care clerkship—a 2-month rotation for fourth-year students. Unique features of that clerkship are:

- an in-depth family case study that includes a home and neighborhood assessment; and
- a community project that is student-initiated and family physician/anthropologist faculty-supervised, requiring data collection and resource utilization in our target area community.

One student community project surveyed target area industries, mapping the location of those work places and identifying all those considered "high health hazard" regardless of work force size. This proved to be an enlightening exercise, as it identified most hazardous work places as small (less than 50 employees) businesses some of which were located in residential neighborhoods. It also identified a lead smelter next to a playground, a low-income housing area, and the confluence of two interstate highways. Our awareness that these geographically intermingled sites might have produced an endemic lead poisoning situation caused us to plot geographically all the lead levels performed by the health department screening program. Our suspicion was confirmed, and subsequent education and interaction with the health department has occurred. Whether there is a cause and effect relationship between these environmental lead sources (highways and smelter) and toxic lead levels in these children remains to be seen. The fact remains that a student-initiated community project was responsible for making the association.

Another undergraduate activity, sponsored and supported by the Medical School Department of Family Medicine, is the summer fellowship program. Over the past three summers, one student has spent July and August assisting in a data collection process focused on community diagnosis. Their work has led to a multivariate factor analysis of our target area, a better understanding of the needs of the Hispanic community, and a method for screening patients for occupational illness. Our practice center services are now trying to adapt and become more community-responsive based upon this work.

At the graduate level our Family Practice Residency Training Program focuses its recruitment on students with urban interests and community-responsive attitudes who are eager for community involvement and social change. Our practice center has identified a geographically bounded target area composed of 38 census tracts with a shortage of primary care health manpower. This provides us with a denominator population characterized as a multiethnic urban community of lower socioeconomic status. Our orientation program for new residents emphasizes community diagnosis, community resources, belief systems, explanatory models, home visits, industrial survey and work place visitation, and target area exploration.

A special feature of the department is a multidisciplinary study group of family physicians, residents, students, anthropologists, social workers, epidemiologists, sociologists, and family therapists—all engaged, to various degrees, in a community outreach project. One of the major goals of this activity has been the study of concepts of community diagnosis as an extension of individual and family diagnosis, i.e., viewing the community as a patient. We have reviewed community history and sought opinions from key informants, interest groups, political factions, local media, and individual citizens (including our own patients) in order to collect subjective data. Our community physical exam has been done on foot, in mini-buses, and in cars (often with a camera) to survey the geophysical environment and established community resources and institutions.

Census data, health department data, police records, and planning agency data were collected. With the use of census tract, geophysical, and lot line maps we have plotted much of this data in order to "see" our patient—the

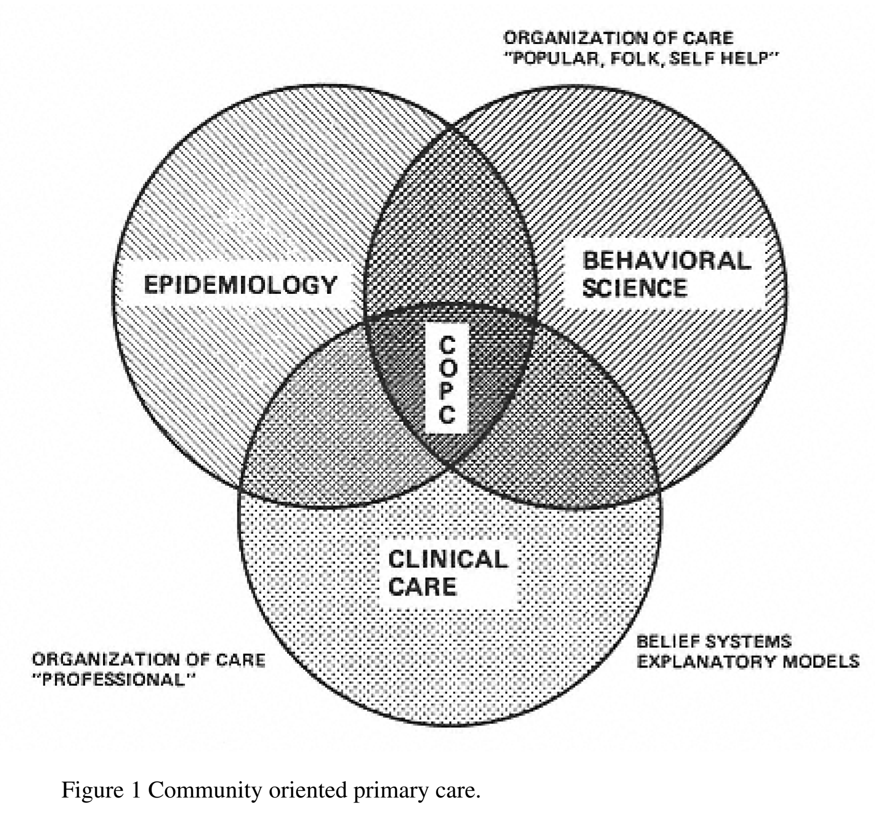

Figure 1 Community oriented primary care.

community—more clearly. Factor analysis has been a particularly helpful technique to reduce large quantities of information to a workable few without losing the power of our observations. Through this diagnostic process, we are developing a problem list and a small number of interventions or plans that we feel are "community-responsive." Another goal of this process is the development of a "community diagnostic tool kit" to be used by our residents in training and in their own communities after graduation. Hopefully, it can be adapted for use by any physician or health care worker committed to community oriented primary care. In conclusion, our group has developed a Venn diagram that captures for us the concept of COPC (see Figure 1).

New Mexico's Primary Care Curriculum

S. Scott Obenshain

Medical knowledge in the post-Flexnerian era has been expanding exponentially. However, as knowledge expanded and to assure that students be exposed to as much knowledge as possible, medical education has become more lecture-centered. This has led to increasing dependence on rote memorization as the means of learning. At the same time more and more of our medical graduates are entering specialty training.

New Mexico established its medical school in the early sixties both to provide its citizens opportunities for a medical education and as a means of getting physicians to underserved areas in the state. In 1970 New Mexico ranked forty-ninth in primary care physicians per capita, and the legislature was getting restless.

In 1975 Arthur Kaufman and I began talking about the problem of physician distribution both by specialty and geography. Based on Art's experience with clinical electives in the first 2 years, which had been demonstrated to improve students attitudes toward the basic sciences, we proposed a curriculum track designed to select and educate physicians who would locate in rural areas and be competent in providing primary care. With the aid of both a planning and an implementation grant from the W. K. Kellogg Foundation of Battle Creek, Michigan, we were able to start the Primary Care Curriculum in the fall of 1979.

After reviewing the intellectual process used by medical students in the traditional education programs and physicians in practice, and visiting a number of different medical schools, including McMaster in Ontario, Sophie Davis School of Biomedical Education at City University of New York, and the physician assistant programs at Duke and Bowman Gray, we decided to use educational methods that would mirror those techniques needed in practice. The methods chosen was a problem-based, learner-centered, small-group tutorial format. The learner in this format must approach the clinical patient problem, gather data, define problems, develop hypotheses as to the cause of the problem, formulate learning issues to assist in learning the science basic to medicine, study these issues and return to the group to further explore the problem, redefine the hypotheses, and then solve the problem.

The curriculum is organized into two years of small-group problem-based learning separated by a 6-month period of time in which the students participate for a minimum of 16 weeks in a rural primary care clerkship. This provides early primary care role modeling and is the students' first clinical experiences. It gives them a proper perspective on the health care system. In addition, the students are expected to continue the learning of the science basic to medicine during this clerkship using the patients seen as the problems from which to learn. Although the problem-based, learner-centered approach combined with the early role modeling is unique in the United States, the educational methods would be appropriate for the education of any practitioner.

Carl Rogers, in *Freedom to Learn,* noted that “placing the student in direct experiential confrontation with practical problems, social problems, ethical and philosophical problems, personal issues and research problems is one of the most effective modes of promoting learning.”

Alfred North Whitehead also observed, in *The Aims of Education,* that “your learning is useless to you till you have lost your textbooks, burnt your lecture notes and forgotten the minutiae which you learnt by heart for the examination. … The function of a university is to enable you to shed details in favor of principles.”

The Primary Care Curriculum, which accepted its first class of 10 students in August 1979, is a separate tract in the University of New Mexico School of Medicine. These students were first admitted to medical school as part of a class of 73 students. Once accepted, all students were asked to state their preference for either the problem-based or the conventional track. Those asking to be considered for the problem-based track were then reinterviewed with noncognitive areas being considered most intensively. These include geographic background, relevant community experience, socioeconomic group, ability to work in groups, and desire for rural practice. From these students the Primary Care Curriculum class was accepted. As noted, 10 students were selected for the first class, 15 for the second, and 20 for the third and subsequent years.

In addition to the problem-based, self-directed learning around problems the students do in the first year, they are also taught basic clinical skills necessary for acquiring a data base from patients. This includes history taking and physical examination skills, as well as elementary laboratory procedures, such as a blood smear, urinalysis, and basic cultures. With these the students are ready for their rural clerkship.

During the clerkship the students are expected to see patients under supervision and to define their own learning needs from these patients. To assist the students in understanding the patient's role as a member of a community, each student is expected to design and carry out a community project. The project is designed to assist the student in learning to apply skills in study design, patient education, epidemiology, and data collection. Projects to date have included study of horse-related injuries, both occupational and recreational; a longitudinal study of Navajo women with Class II dysplastic Papanicouau smear; attitudes of minority mothers with mentally retarded children; and a study of attitudes toward breast feeding in a predominately Hispanic community.

While the students are participating in their rural clerkships, faculty from the medical school visit the site regularly to assist the students and their preceptors in maintaining their learning. These visits may involve reviewing the students' learning issues and assisting in smoothing the preceptor-student interaction around learning, since for many preceptors this style of learning for medical students is a new experience.

For the first class of 10 students, 8 felt the experience strengthened their desire for a rural primary care practice, 1 was unsure, and 1 felt a rural specialty practice may be more to his liking. These feelings have tended to hold up through the third year, with 7 still planning careers in primary care medicine.

The Primary Care Curriculum is designed to select and educate physicians who will locate in a rural underserved area and be competent providing primary care. The methods employed were chosen to enhance the student's ability to solve patients' problems and to assist the student in learning how to learn so he will be a lifelong learner. The provision of appropriate role models early in the student's experience should assist the student in being able to chose such a career after having worked with a physician who had chosen rural primary care as his life work. By encouraging the students to look carefully at a community problem, it is hoped they will learn to apply those skills to their future practice, thereby practicing in a community oriented fashion.

The Beersheva Experience in COPC

Ascher Segall,
Carmi Margolis,and
Moshe Prywes

The School of Medicine of the Ben Gurion University of the Negev is located in Beersheva, the principal city in Israel's southernmost Negev region. Since its inception in 1974, one of its central commitments has been to improve the quality of health care in the region through an emphasis on physician training in community oriented primary care.

The goals for both the undergraduate and postgraduate programs of medical studies reflect this approach. At the undergraduate level it is anticipated that a significant proportion of students will be motivated to explore career pathways in primary care. In addition, irrespective of career choice, students will acquire sensitivity to the primary care dimension of medical practice in all its diversity, as well as basic general competencies in this domain. Goals for the postgraduate phase of physician training relate to the acquisition of more specific clinical, managerial, and epidemiologic competencies needed in the day-to-day operations of a community oriented primary care facility.

Within the Beersheva context community oriented primary care is taken to include:

- facilitating entry of the patient into the health care system;
- providing appropriate preventive and therapeutic health care services;
- integrating and ensuring continuity of care through the various phases of illness; and
- participating in outreach programs to serve the broader health needs of the population.

Central to the process of curriculum development in Beersheva is a specification of competencies needed by practitioners in Israel to function effectively in each of the four domains of primary care. These were developed through an analysis of physician performance. On the basis of the competencies identified, a set of educational objectives for undergraduate and postgraduate teaching in primary care was formulated. These competency-based objectives, as revised from time to time, provide a framework for determining course content, selecting methods of instruction, and designing student evaluation for all courses that relate to primary care.

Objectives for clinical teaching relate to the provision of comprehensive health care at successive stages in the natural history of disease within the resources and constraints of community-based ambulatory care facilities. The epidemiologic objectives are concerned with methods for quantitative assessment of community health problems and evaluation of the quality of health care. In the field management, educational objectives encompass those competencies needed in operating a community health clinic and in implementing public health measures.

The curriculum components that relate to ambulatory medicine, epidemiology, sociomedical sciences, and management are designed to facilitate student attainment of these objectives. Instruction in these areas is integrated both horizontally within each phase of the curriculum and vertically over successive phases. Just as clinical studies in ambulatory care commence in the first year and continue until graduation, so basic sciences such as epidemiology and medical sociology are not confined to the early years of study. This “spiral” approach stresses the ongoing utilization of knowledge from the basic sciences to solve clinical or public health problems encountered in community settings.

During the first 2 years of the 6-year undergraduate curriculum, teaching of primary care takes place in a wide range of ambulatory health facilities throughout the Negev region. These include hospital outpatient clinics, primary care settings, occupational health units, rehabilitation facilities, and public health stations. Through direct experience students learn elementary skills such as patient/physician communication and develop basic capabilities in public health such as conducting a community health survey. Concomitantly, through formal course work they acquire a knowledge base in clinical medicine, epidemiology, behavioral sciences, and management.

In the third and fourth years selected disease models of high prevalence in the Negev are considered in the perspective of their natural history. This refers to a temporal continuum in the evolution of disability resulting from the disease process. Points along the time axis can be identified at which intervention may prevent the onset of the pathogenetic process, reverse it, or decreasee its rate of progression, thus reducing personal and social disability.

It is postulated that a balanced study of all phases of the natural history of disease results in a more realistic perception of primary care than does the traditional focus on episodic periods of hospitalization. This perspective emphasizes the acquisition of competencies in disease prevention and patient rehabilitation, as well as in the provision of acute care. It underscores the responsibilities of the physician for participating in community health programs, in addition to providing personal health services, and provides a frame of reference for integrating clinic teaching with public health and management.

Clerkships in community clinics during the fifth and sixth years complete the undergraduate program in primary care. Building on skills acquired earlier, students increase their competencies in both the clinical and public health dimensions of practice in a community setting. They function under direct instructor supervision in the fifth year and begin to assume limited autonomy and independent responsibility in the sixth year. Selected aspects of primary care are also taught as part of the hospital-based clerkships. This is accomplished in specialty outpatient clinics and through student participation in community outreach programs conducted by hospital-based departments.

Continuity of training in primary care from undergraduate to postgraduate studies is a major concern of the medical school. The first class of medical students graduated in 1981. Two-thirds of the graduates have opted to participate in a Medical Graduates for Primary Care Program. This program affords graduates an opportunity to practice primary care for 1 year, whether or not they intend to continue on to a career in this field. It is analogous to a primary care internship bridging undergraduate and postgraduate training. The young practitioner functions at a level of professional autonomy that is significantly higher than during undergraduate studies. On the other hand, a highly supportive environment is maintained to facilitate transition from the student role to that of practitioner with independent responsibility.

To this end the full range of academic resources at the medical school are utilized. These include consultants in general practice and specialists who visit the community clinics regularly. Practice-related clinical problems are discussed at weekly sessions open to all participants in the program. Guidance in coping with administrative and managerial problems in the primary care clinics is also provided.

For those graduates with longer-term commitments to primary care, a set of residency programs is being developed. The first to be implemented is a family practice residency that is currently training family practitioners to staff community clinics in the region. Primary care tracks within the internal medicine and pediatrics residency programs are beginning to train pediatricians and internists to function as consultants and, in some cases, as primary care practitioners.

At the beginning of this presentation the goals of what has come to be known as the “Beersheva Experiment” were described; recruitment and training of physicians in primary care and acquisition by all physicians, irrespective of career choice, of basic attitudes and skills related to community oriented primary care. As increasing numbers of students complete successive stages of professional education in Beersheva, it will be possible to assess the extent to which these goals are met.

Will the high proportion of Beersheva graduates opting to explore possible careers in primary care be maintained beyond the first several classes? How many will remain in primary care? Does the distinctive curriculum in Beersheva make any difference in how graduates practice medicine? What is the impact of factors other than the educational experience such as personal characteristics, family considerations, and professional or economic incentives? Answers to these and other outcome questions await the results of a long-term systematic follow-up of Beersheva graduates.

In the interim there is ongoing process and short-term evaluation. This provides guidance in adapting the curriculum to changing needs while it continues to reflect the basic commitment of the Ben Gurion University of the Negev Medical School to community oriented primary care.

The Upper Peninsula Medical Education Program

Daniel S. Mazzuchi and
W. Donald Weston

The federal government, concerned about increasing the number of primary care physicians in rural areas, awarded a Bureau of Health Manpower Grant to Michigan State University's (MSU) College of Human Medicine. The purpose of this grant was to conduct a feasibility study and design a program for predoctoral education to be located in a module situated well away from the traditional science laboratories of the main campus. During this same period, the Michigan state legislature appropriated funds through the Upper Peninsula Areawide Comprehensive Health Planning Association to assist in the development of the program and the feasibility study using the Upper Peninsula as the target area.

In January of 1974, the Upper Peninsula Health Education Corporation (UPHEC) was formed to work with Michigan State University's College of Human Medicine to implement the Upper Peninsula Medical Education Program. Final authority and responsibility for all patient care activity conducted in the ambulatory care education centers ultimately devolved upon UPHEC, including the appointment of physicians to the medical staff, assurance of quality of patient care, and management of the patient care system.

The concept of a remote medical education module required imaginative approaches and astute political sensitivity. The curriculum, for instance, needed to accommodate the intent of the designers that the material for study would focus on topics germane to the practice of primary care. The learning environment needed to provide the kind of early clinical experience that would complement the curriculum. The admissions process needed to attract the kinds of students who would not only choose primary care, but who would also choose to practice it in a rural area, particularly within the Upper Peninsula. Finally, the region needed to welcome and support this medical education program recognizing the potential impact of improving health care in the Upper Peninsula.

During the 4 years of the federal contract (1972–1976), the College of Human Medicine Office of Medical Education Research and Development planned and developed a model curriculum that embodied community-based, humanistic, and general self-learning principles. In 1977, the UPHEC was awarded a 4-year grant by the W. K. Kellogg Foundation to expand the educational mission of the program and to develop a postgraduate experience in family medicine. As a result, the Family Practice Residency Program was written, accredited, and subsequently opened in July 1979.

In the first year of operation, the program attracted the interest of 10 potential candidates. In its third year, that number grew to 100, and this year we received over 180 written inquiries. Interest in the program comes from schools of medicine all over the United States, but principally attracts the interest of students who have either lived in or around the Upper Peninsula. The program is one of very few in the United States that is based in a community hospital distant from a major metropolitan area. This characteristic appears to be a major factor in the growing interest of students who seek to do their residency training with us.

The setting for the predoctoral program is a primary/ambulatory care center called the Bay de Noc Family Health Center located in Escanaba, Michigan, and housing both an educational center and health center. Preceptor/physicians coordinate on-site, medical education as well as the daily function of the Center's patient care activities. Coordinators in all fields of basic, behavioral, and clinical science are appointed by their respective departments on the East Lansing campus and are charged with appropriate departmental responsibility to assure the teaching mission of the College. The present U.P. curriculum is the result of the combined efforts of program administration, faculty, and students and their concern for a high-quality educational experience in keeping with the objectives of the program.

Currently our students receive their first 2 years of instruction on campus in East Lansing. Following completion of Part I National Boards, the students relocate in the Upper Peninsula, some 400 miles from the East Lansing campus, to complete their education. While many of the clerkships mirror those of more traditional curricula, there are a number of unique experiences designed to promote primary care and to increase student familiarity with the ambulatory care setting.

Multiple benefits are obtained from this community-based medical education program. Not only do medical students and resident physicians in training receive a more realistic look at the world of practice, but also the communities involved in their teaching develop higher standards of patient care and a more inquiring attitude into the problems facing both physican and patients. In addition, a host of direct medical services are provided by these medical learners under faculty supervision. As other regions in the state with a long-standing commitment to medical teaching have discovered, the very presence of a training program in the Upper Peninsula has made our region more attractive as a practice site and has enhanced our recruiting efforts greatly. At present, Michigan State University's College of Human Medicine, through its formal affiliation with the communities of Lansing, Kalamazoo, Flint, Saginaw, Grand Rapids, and the Upper Peninsula, has taken the lead among the medical schools of Michigan in promoting this community-based educational concept.

Until recently, public policy has been directed to the alleviation of physician shortages in this country, and substantial federal and state tax dollars were allocated to medical schools and health care institutions, resulting in significant increases in the number of practicing physicians. Current public policy related to health manpower indicates a trend toward declining federal support of medical schools and a reduction in the number of medical students and resident positions. There is, in addition, a shift in emphasis toward the favoring of medical education programs that seek to encourage the redistribution of physicians to areas of greatest need and the motivation of physicians toward career choices in primary care. Since the Upper Peninsula Medical Education Program was designed specifically to address the health care policy priorities of the early 1970s, it is interesting to note how closely the characteristics and results of this program mirror current trends in public health policy, especially in the following areas:

- promotion of primary care;
- promotion of family practice in medical school curricula; and
- development of admissions policies that encourage students to practice in areas of physician shortage.

The UPMEP has been visited by distinguished delegations of medical educators from every continent under the sponsorship of the World Health Organization. These academic teams have come to the Upper Peninsula to study the design of this unique form of medical education and its relationship to medical problems common to their countries. Through these visitations, we have come to realize that specialty and geographic maldistribution problems are common in all corners of the globe. A description of our program was published in a book of public health papers by the World Health Organization as one of 14 educational programs that have conducted im portant experimental activity in the field of multidisciplinary, community oriented, multiprofessional team teaching and the use of professional schools for the training of health personnel. The Upper Peninsula Medical Education Program participates in a worldwide network of community oriented medical education programs formed in 1979 for the purpose of sharing pertinent information regarding our collective successes and failures. (This network is described in some detail by Dr. Greep earlier in this report.)

PART III

WORKSHOP DISCUSSION SUMMARIES

The workshops provided the only setting for formal discussion of the theory and application of COPC. Summaries of these discussions by workshop moderators are presented in this section.

Workshop A

DeWitt C. Baldwin, Jr.

The initial impact of the two clinical case presentations made to our group was to bring about a somewhat discouraging awareness on the part of the workshop participants that neither bore a close resemblance to the clear, rather idealized model presented by Kark and Abramson. After some moments of self-critical discussion, the group came to the position that there probably is no single or best model of COPC and that each nation or system has to create its own version, based on its unique history and politics, as well as its needs and resources. Therefore, COPC should be considered a flexible concept, especially under the highly competitive conditions of the pluralistic system currently operative in the United States.

In thinking of how best to approach promotion and enhancement of the concept of COPC, a number of suggestions were forthcoming. First, it was felt that what is needed is to look for the essential ingredients within current efforts and to creatively enhance and expand them. Second, it was clear that a better determination and dissemination of data on the effectiveness of COPC are needed. The group indicated that such data exist, or are close to the surface, but that they need to be uncovered, assembled, and disseminated in order to convince decision makers and funding sources of the effectiveness of COPC. Third, there was an expressed need to exhort medical schools to produce more community oriented graduates through a variety of strategies involving changes in selection, curriculum design, and administrative policies. This was perceived both in terms of increasing the general level of awareness and knowledge about community oriented practice among future practitioners and in terms of increasing the critical mass of student advocates who can serve as a potent political force in the system.

A fourth suggestion was to encourage state and local health departments to place greater emphasis on their data-gathering and dissemination functions, which can be of direct assistance to COPC practitioners. Fifth, there was general recognition of the need to shift the general focus or perception of health planning agencies from a negative, regulatory stance toward a more positive information-gathering and dissemination function that can serve to educate decision makers.

Finally, advocates of COPC need to enter more effectively into the decision-making arena and become politically more sophisticated. The group felt there was a need to seek new alliances, to work more closely with (and hopefully to influence) financing sources and mechanisms—insurance systems, prepaid contracts, Medicaid, Medicare—to get them to provide greater incentives for community oriented models of practice. Potentially affected constituencies—the poor, the aging, children's groups, minorities, as well as providers, and the decision makers—need to be informed of the value of COPC. They are likely the best advocates of change in this area. Ultimately, COPC will succeed only if the community supports it and the consumer wants (will buy) it.

In conclusion, arising out of what might have but did not become a wake over the current political and economic climate, the group arrived at an upbeat, proactive stance. To quote one member, "The worst of times is the best of times —for those who are ready and willing to act."

Workshop B

Janice Robinson

There were five threads that ran through much of the discussion in our group over the past couple of days. First, there was general consensus among the group about the value of community oriented primary care (COPC). However, a good deal of discussion centered around defining what is actually meant by COPC.

A second thread was concern over lack of epidemiologic data for planning services delivery through COPC or, at least, the lack of full exploitation of the data that may already exist.

Thirdly, as has already been implied and in some cases explicitly stated in the major papers, participants in Workshop B expressed concern that the economic situation, which is difficult at best, in a very real way threatens those samples or models of COPC that already do exist, both in the services delivery arena and in the health education field.

A fourth theme that coursed through the discussion was the need for some real emphasis on the cognitive preparation for providers who will, in fact, work in COPC.

Finally, a fifth thread running through the discussion pertained to the frequent mention, in the presentations, of COPC as a cost-effective mechanism. This may be true, but it needs to be documented. The group felt strongly that a new discipline of COPC needs to be created.

A number of specific suggestions emerged from the discussion. In an effort to address the issue of documenting the cost-effectiveness of COPC, it was suggested that an arbitrary number of sites (perhaps 25), already possessing most of the COPC elements, be identified and an economic and epidemiologic evaluation be conducted using data that are already available. Half of these sites could be main stream and half could be from underserved areas. A broad range of geographic locations and practice models (solo, group, local health agencies, etc.) might be used. It would also be important to have multidisciplinary teams present at many of these sites. Use of the National Health Service Corps in this kind of effort was suggested.

Another suggestion was aimed at provider preparation. The group proposed that several centers (perhaps four to six) be identified to develop programs specifically geared to training health care providers in COPC. This training should be based at several levels. The group felt strongly that such training not be dominated by medical schools. All efforts at developing COPC need to be coordinated, and training centers need to have access to the already-existing COPC centers discussed above.

The workshop participants suggested that the concept of COPC be shared with the community. The sense was that if the people knew and agreed with the concept, COPC would have strong backing for funding proposals.

In summary, the workshop proved to be a valuable opportunity for all in attendance to discuss and explore the concept of COPC in various models. Although more questions were generated than answers provided, it provided a rekindling of excitement in the minds of many who have a strong dedication to the health care needs of our nation and who are interested in developing innovative ways of best meeting those needs for all people.

Workshop C

Patrick Mattingly

There were two specific points that participants in Workshop C wanted to bring forward and with them some action-oriented proposals. First, in the educational arena, the group felt that the most valuable thing to be done at this point is to make visible, to promote, and to support working COPC systems in health care delivery and education. This exposes health students to a professional role model that is different from the more technically oriented role model so dominant today. Efforts should be taken to avoid getting bogged down in the issues of resources or whether there are many or a few such examples. Some number—probably small given the present context—of major medical centers, currently engaged in some or all elements of COPC, should be identified and promoted in order that there be some such role models visible.

In an effort to promote COPC role models, members of Workshop C suggested that COPC advocates become involved more actively in residency review committees so flexibility and participation in community oriented experience can be built into the primary care residency guidelines in family practice, internal medicine, and pediatrics.

Again, by way of encouraging visibility of COPC the group suggested that, in addition to the detailed proceedings resulting from this conference, broad circulation be given to a synopsis of the principles, essential features, desirable characteristics, and objectives that have been enunciated. This publicity, if you will, should also include a brief synopsis of the most relevant studies that have been cited, particularly those that include data concerning the effectiveness of COPC. And one step beyond that, it was proposed that along with some baseline bibliography, generated by those of us assembled, an effort be made to create some form of literature guide on an ongoing basis, perhaps quarterly, that will give interested individuals reference to the literature in COPC.

The second point stressed by this group had to do with the question of providers and personnel involved in COPC. There needs to be a better appreciation of the large numbers of nonphysicians and multiple levels of health workers that are already involved in COPC in this country. Specifically, the group felt that there needs to be some assurance that, from the beginning, efforts at developing COPC by different health professionals (nurses, allied health professionals, physicians, epidemiologists, and others) be integrated rather than parallel.

In conclusion, the participants of Workshop C agreed that every effort, no matter how nascent or how unorthodox, attempting to promote what would generally be described as COPC should be encouraged and supported.

Workshop D

Lisbeth Schorr

Our workshop shared with the others a great concern that the energy from this excellent and very productive meeting not be dissipated, but be harnessed in the service of nurturing existing COPCs and encouraging their spread. It was felt that some mechanism—the precise attributes of which were not defined very clearly—should be supported or created or exploited or captured to perform a variety of functions.

First, such a mechanism should define systematically the objectives of COPC against which performance of COPCs generally and COPCs individually can be measured, particularly in relation to outcomes and effectiveness.

Secondly, this mechanism should facilitate communication and mutual assistance among existing COPCs, among nascent ones, between existing ones and nascent ones, between potential COPC providers who are now in training, and also among communities that might feel a need for a COPC model if they knew enough about the concept to want to utilize the approach.

Thirdly, this mechanism should help institutions training health professionals to develop curricula that are relevant to COPC or its components, especially by:

- providing health professions with greater skills in epidemiology and in management;
- encouraging joint training of a variety of health professionals; and
- helping health training institutions provide a more compelling and

> attractive role model of valued primary care providers, operating at a high level of skill, competence, and dedication.

This suggestion was made recognizing that changing medical education is not a sufficient, although probably a necessary, condition for achieving the kind of change that is needed.

Fourthly, the group agreed that this new and continuing mechanism might also explore the possibility of making inroads on some of the broader problems affecting the future of COPC, including the problem of modifying financial arrangements, to assure payment for a full range of health services and health professionals, and the financing of health profession education in ways that make primary care a more attractive option.

Lastly, this mechanism should provide technical assistance to operating COPCs in several very specific ways:

1. Provide expertise to help COPCs collect epidemiologic data about the occurrence, distribution, and determinants of health and disease in the community and to assess the efficacy of the interventions used.
2. Actually provide some of the epidemiologic information that may have been collected by another agency or group. (It was felt that some further sorting out was needed about the kinds of epidemiologic investigation that could be most appropriately done directly at the COPC level and what could come from a regional or perhaps even a national level.)
3. Help COPCs to deal with the discrepancy between how the community and providers perceive both needs and demands.
4. Help COPCs forge better links with other agencies and services.
5. Create a support system that will do more than the individual COPC can do so that the health providers working in COPC settings remain and work productively and happily over time. Such a support system can provide stimulus, sanction, and a sense of being part of an effort that has great significance in attempts to improve the health of the families and communities they serve.

Workshop E

Robert S. Lawrence

Among the participants in Workshop E there was general consensus that a narrow view of COPC (a strict Karkian interpretation) was not appropriate to the challenges of the United States. There are simply too many constraints governing the definition of service areas, the availability of surveillance data or the personnel to collect such data, the lack of coterminus boundaries for different categorical service programs in many cities and counties, and other features that vary from region to region. It was also agreed that encouraging nascent efforts at COPC is important. Even the most modest efforts to make a community diagnosis and intervention should be encouraged. There is a real value of the halo effect wherein a case-finding and treatment program tend to organize a practice or a health department in a direction that makes other COPC activities easier.

The group suggested that the curriculum of health professionals be expanded to sensitize students about several of the important themes in COPC. Among the more important ones are the distinction between community wants and community needs, the cultural and ethnic diversity of patient groups and the impact of this diversity on health behavior, the need to organize records to include basic epidemiologic data via color coding of charts or other techniques, and the teaching of policy analysis skills to help the health professional determine the scope of responsibility.

There was strong feeling that there should be a follow-up to the conference with the conferees forming a network of consultation and support, distributing phone numbers and references on papers describing their own COPC projects, etc. The suggestion was also made that descriptions of

COPC projects, not previously published in refereed journals, might be presented as brief case studies and published as working papers in COPC. These case studies would essentially be the “materials and methods” portion of a scientific paper.

There was general agreement among the participants that, for the full development of COPC in the United States, the basic reimbursement mechanism for paying for health care had to be completely changed.

Finally, in response to the question how to do COPC, the response was that there are really many ways and that the approach should be eclectic. Private practice should be adapted to COPC, new practice systems should be developed, nonpractice settings such as the industrial medicine services of large corporations should be encouraged to develop COPC, and the remnants of HSA planning activities should be utilized especially at the town, city, and county level to develop appropriate surveillance data for COPC.

Participants

Joseph Abramson, Chairman, Department of Social Medicine, Hadassah-Hebrew University Medical School, P.O. Box 1172, Jerusalem, Israel

Lavonia Allison, Director, North Carolina Manpower Development Program, University of North Carolina, 136 E. Rosemary Street, Chapel Hill, NC 27514

John Arrandondo, Chairman, Department of Family Medicine, Meharry Medical College, 1005 18th Avenue, North, Nashville, TN 37208

Dewitt Baldwin, Assistant Dean, Office of Rural Health, School of Medicine, University of Nevada, Reno, NV 89557

Leatrice H. Berman, Associate, Department of Community Health and Preventive Medicine, Northwestern Medical School, 303 E. Chicago Avenue, Chicago, IL 60611

Joseph Berry, Medical Director, Roanoke-Amaranth Community Health Group, P.O. Box 644, Jackson, NC 27845

William Bicknell, Director of Special Projects, Health Policy Institute, Boston University, 53 Bay State Road, Boston, MA 02215

Richard C. Bohrer, Associate Bureau Director, Office for Primary Care, Bureau of Community Health Services, Department of Health and Human Services, 5600 Fishers Lane, Rockville, MD 20057

Keith Bolden, The Chestnuts, Ebford-Near-Exeter, Devon, England

Jo Ivey Boufford, Vice-President for Medical Operations, New York City Health and Hospitals Corp., Room 507, 125 Worth Street, New York, NY 10013

Douglas Campos-Outcalt, 4941 61 Street, Sacramento, CA 95820

Gilberto Cardona, United States Public Health Services, Subregional Office, c/o Department of Health, P.O. Box 9342, San Turce, P.R.

Eileen Connor, Professional Associate, Institute of Medicine, National Academy of Sciences, 2101 Constitution Avenue, N.W., Washington, DC 20418

Karen Davis, Professor, School of Hygiene and Public Health, Division of Health Care Organization, Johns Hopkins University, 615 North Wolfe Street, Baltimore, MD 21205

Kurt Deuschle, Chairman, Department of Community Medicine, Fifth Avenue and 100th Street, New York, NY 10029

Mary O'hara Devereaux, Director of Research Institute, Foundation for Comprehensive Health Services, 1192 Gravenstein Hwy South, Sebastopol, CA 95472

Fred L. Diaz, Executive Director, Florida Community Health Center, Inc., 2749 Exchange Court, West Palm Beach, FL 33409

David Dixon, Medical Director, Rural Health Association, Professional Building, Route 24, Farmington, ME 04938

Margaret Dolan, Department of Family Practice, Cook County Hospital, 720 South Wolcott, Chicago, IL 60612

Daniel Doyle, Medical Director, New River Family Health Center, P.O. Box 337, Scarboro, WV 25917

David L. Draves, Associate Executive Director, Marshfield Clinic, 1000 North Oak Avenue, Marshfield, WI 54449

Carleton C. Evans, Veterans Administration, ACMD for Administration (13-G), 810 Vermont Avenue, N.W., Washington, DC 20420

Oliver Fein, Columbia Presbyterian Medical Center, Department of General Medicine, 622 W. 168th Street, Room 231, New York, NY 10032

James Felsen, Chief Medical Officer of Indian Health Services, Room 6A-55, 5600 Fishers Lane, Rockville, MD 20857

David Fenton, National Rural Primary Care Association, 8 Highwood Street, Waterville, ME 04901

Stanley Fisch, Clinic Manager, Su Clinica Familiar, 1214 Ed Carey Drive, Harlingen, TX 78550

Katherine Flores, 4881 E. Washington, Fresno, CA 93725

David Garr, Family Medicine Residency, Mercy Medical Center, 16th Avenue at Milwaukee Street, Denver, CO 80206

H. Jack Geiger, Professor of Community Medicine, Center for Biomedical Education, City College of New York, Room 916, 138th Street and Convent Avenue, New York, NY 10031

Jean B. George, Associate Program Officer, Institute of Medicine, National Academy of Sciences, 2101 Constitution Avenue, N.W., Washington, DC 20418

David Goldberg, Executive Director, New Mexico Resources, Inc., 52 Corp. N.E., P.O. Box 8735, Albuquerque, NM 87198

George Goldstein, Rural Route #1, Box 157, Kennedy Lane, Shadyside, OH 43967

Robert Graham, Administrator, Health Resources and Services Administration, Room 14-05, Parklawn Bldg., 5600 Fishers Lane, Rockville, MD 20057

J.M. Greep, Dean, Faculty of Medicine, Rijksuniversiteit Limburg, P.O. Box 6616, 5200 MD Maastricht, The Netherlands

Rodrigo Guerrero, Division de Salud, Universidad del Valle, Apartardo 2188, Cali, Colombia

Keith Haglund, The New Physician, P.O. Box 131, Chantilly, VA 22021

Clark Hansbarger, State Director of Health, State of West Virginia, 1800 Washington Street, E., Charleston WV 25305

Karen Hansen, Program Director, SEARCH, University of Colorado, Health Services Center, P.O. Box A 096, Denver, CO 80262

John Hatch, Associate Professor, School of Public Health, University of North Carolina, Chapel Hill, NC 27514

Robert Harmon, Deputy Director, Division of Public Health, Maricopa County, 1845 E. Roosevelt, Phoenix, AZ 85006

Margaret C. Heagarty, Director of Pediatrics, Harlem Hospital Center, 506 Lenox Avenue, New York, NY 10037

Fred Hege, Office of Rural Health Services, P.O. Box 12200, Raleigh, NC 27605

David K. Heydinger, Associate Dean for Academic and Clinical Affairs, School of Medicine, Marshall University, Huntington, WV 25701

Harvey Holzberg, Project Director, Sunset Park Family Health Center, c/o Lutheran Medical Center, 150 55th Street, Brooklyn, NY 11220

Robert Immitt, Family Practice Group, 252 S. 100 E., Tooele, UT 84074

Azora L. Irby, Administrative Secretary, Institute of Medicine, National Academy of Sciences, 2101 Constitution Avenue, N.W., Washington, DC 20418

Barbara Jackson, Chairman, State Health Coordinating Council, 304 W. Durst Street, Greenwood, SC

Raymond Jarris, 7130 Summit Avenue, East Seattle, WA 98102

Kathleen Jennison, President, American Medical Student Association, 14650 Lee Road, P.O. Box 131, Chantilly, VA 22021

Emory Johnson, 13826 Dowlais Drive, Rockville, MD 20853

Stephen Joseph, 2220 20th Street, N.W., Apartment #33, Washington, DC 20009

Martin Kantrowitz, Assistant Dean for Community Professional Education, University of New Mexico, P.O. Box 531, Albuquerque, NM 87131

David Kindig, Vice-Chancellor, Center for Health Sciences, University of Wisconsin, 1007 Warf Building, 610 Walnut Street, Madison, WI 53706

Lambert King, Medical Director, Montefiore Hospital and Medical Center, Rikers Island Health Services, 15-15 Hazen Street, East Elmhurst, NY 11370

Rosalyn King, Public Health Adviser, Office of Health, Bureau of Science and Technology, Agency for International Development, Washington, DC 20523

Richard Kozoll, Director, Checkerboard Area Health System, P.O. Box 638, Cuba, NM 87015

J. L. Kurowski, Manager, Department of Health and Hospitals, Mail Box No. 0278, City of Denver, Denver, CO 80204

Joyce C. Lashof, Dean, School of Public Health, University of California, 19 Earl Warren Hall, Berkeley, CA 94720

Robert S. Lawrence, Director, Department of Medicine, Cambridge Hospital, 1493 Cambridge Street, Cambridge, MA 02139

Joanne Lukomnik, Center for Biomedical Education, City College of New York, 138th Street and Covent Avenue, New York, NY 10031

Donald Madison, Associate Professor, School of Social Medicine, University of North Carolina, Box 3-Wing-D, 206-H, Chapel Hill, NC 27514

Daniel N. Masica, Medical Officer, Division of Medicine, Health Resources Administration, Department of Health and Human Services, 3700 East-West Highway, Room 322, Hyattsville, MD 20782

Patrick Mattingly, President, Wyman Park Health System, 3100 Wyman Park Drive, Baltimore, MD 21211

Hans O. Mauksch, Behavioral Sciences Section, Department of Family and Community Medicine, University of Missouri, Columbia, MO 65212

Jayne Mayers, National Health Service Corps, P.O. Box 13716, Philadelphia, PA 19101

Daniel Mazzuchi, Upper Peninsula Medical Education Corp., 540 W. Kaye Avenue, Marquette, MI 49855

Barton Mccann, National Health Service Corps, P.O. Box 1838, Presidential Building, 6525 Belcrest Road, Hyattsville, MD 20782

Michael Mcgeary, Associate Study Director, Institute of Medicine, National Academy of Sciences, 2101 Constitution Avenue, N.W., Washington, DC 20418

Jack H. Medalie, Professor and Chairman, Department of Family Medicine, Case Western Reserve University, 2119 Abington Road, Cleveland, OH 44106

Thomas Mettee, Director, Department of Family Practice, Cleveland Metropolitan General, 3395 Scranton Road, Cleveland, OH 44109

WAYNE MEYERS, Director, WAMI Medical Education, University of Alaska, 103 Arctic Health Research Building, 901 Koyukuk Avenue S., Fairbanks, AK 99701

C. ARDEN MILLER, Professor and Chairman, Department of Maternal and Child Health, School of Public Health, University of North Carolina, Rosenau Hall 201-H, Chapel Hill, NC 27514

CHARLES MILLER, Executive Officer, Institute of Medicine, National Academy of Sciences, 2101 Constitution Avenue, N.W., Washington, DC 20418

EMILY MILLER, 5606 Woodmont Street, Pittsburgh, PA 15216

ELENA O. NIGHTINGALE, Senior Program Officer, Institute of Medicine, National Academy of Sciences, 2101 Constitution Avenue, N.W., Washington, DC 20418

S. SCOTT OBENSHAIN, Assistant Dean of Undergraduate Medical Education, School of Medicine, University of New Mexico, P.O. Box 508, Albuquerque, NM 87131

DANIEL J. OSTERGAARD, Director, Division of Education, American Academy of Family Physicians, 1740 W. 92nd Street, Kansas City, MO 64114

JORGE OSUNA, Division of Comprehensive Health Services, Pan American Health Organization, 525 23rd Street, N.W., Washington, DC 20037

EDWARD S. PETERSEN, Director of Undergraduate Education, American Medical Association, 535 N. Dearborn Street, Chicago, IL 60610

NORA PIORE, Senior Program Consultant, The Commonwealth Fund, 1 E. 75th Street, New York, NY 10021

LEWIS POLLACK, Deputy Commissioner for Community Health Services, Department of Health and Hospitals, 818 Harrison Avenue, Administration Room 403, Boston, MA 02118

LUANA REYES, Director, Division of Program Formulation, Indian Health Service, Room 6-A-14, 5600 Fishers Lane, Rockville, MD 20857

CRAIG ROBINSON, Administrator, New River Family Health Center, P.O. Box 337, Scarboro, WV 25917

JANICE ROBINSON, Executive Director, National Association of Community Health Centers, 1625 I Street, N.W., Washington, DC 20006

FREDERICK C. ROBBINS, President, Institute of Medicine, National Academy of Sciences, 2101 Constitution Avenue, N.W., Washington, DC 20418

TONY ROBBINS, Professional Staff Member, Energy and Commerce Committee, 3125 Rayburn House Office Building, Washington, DC 20525

DAVID ROGERS, President, The Robert Wood Johnson Foundation, P.O. Box 2316, Princeton, NJ 08540

STEVEN ROTHSTEIN, General Manager, Citizen Energy Corp., 122 Bowdoin Street, Suite 36, Boston, MA 02108

HARRISON SADLER, Acting Director, Health and Medical Sciences Program, University of California, Berkeley, CA 94720

DAVID SATCHER, Chairman, Department of Community Medicine and Family Practice, School of Medicine, Morehouse College, 830 Westview Drive, S.E., Atlanta, GA 30314

LISBETH SCHORR, 3113 Woodley Road, N.W., Washington, DC 20008

F. DOUGLAS SCUTCHFIELD, Director, Graduate School of Public Health, San Diego State University, San Diego, CA 92182

MILTON SEIFERT, 675 Water Street, Excelsior, MN 55331

ASCHER SEGALL, Associate Dean for Curriculum Development, Faculty of Health Services, Ben Gurion University of the Negev, and Director, Center for Educational Development in Health, Boston University, 53 Bay State Road, Boston, MA 02115

GEORGE W. SHANNON, Director of Medicine, University of Tennessee Family Medicine Center, Jackson, TN 38301

CECIL SHEPS, Taylor Grandy Distinguished Professor of Social Medicine, Health Services Resource Center, University of North Carolina, Chase Hall 132 A, Chapel Hill, NC 27514

JAMES SHEPPERD, Chief of Health and Nutrition Division, African Bureau, Agency for International Development, Washington, DC

RICHARD SHOEMAKER, Assistant Director, Department of Social Security, AFL-CIO, 815 16th Street, N.W., Washington, DC 20006

PATRICIA SHONUBI, Coordinator, Urban Focus Program, Residency Program in Social Medicine, Montefiore Hospital and Medical Center, 3412 Bainbridge Avenue, Bronx, NY 10467

AARON SHIRLEY, Project Director, Jackson-Hinds Comprehensive Health Center, P.O. Box 3437, Jackson, MS 39207

GEORGE A. SILVER, Professor of Public Health, School of Medicine, Yale University, P.O. Box 3333, New Haven, CT 06510

NAOMI SILVERSTONE, University of Utah Medical Center, 50 North Medical Drive, Building 525, Room 1250, Salt Lake City, UT 84132

RICHARD SMITH, Director, Health Manpower Development Staff, University of Hawaii, School of Medicine, 1833 Kalakaua Avenue, Suite 700, Honolulu, HI 96815

MARY SPALDING, Sage Memorial Hospital, Ganado, AZ 86505

STEVEN S. SPENCER, Medical Director, Navajo Health Foundation, Ganado, AZ 86505

BARBARA STARFIELD, Professor, Division of Health Care Organization, Department of Health Services Administration, School of Hygiene and Public Health, Johns Hopkins University, 615 N. Wolfe Street, Baltimore, MD 21202

HARRY STRUTHERS, 2024-D Sumit Avenue, Baltimore, MD 21207

David Sundwall, Senate Subcommittee on Health, Professional Staff Member, Committee on Labor and Human Resources, Dirksen Senate Office Building, Room G-237 Washington, DC 20510

James D. Taylor, Medical Director, East Boston Neighborhood Health Center, 10 Gove Street, East Boston, MA 02128

Joyce B. Thompson, Director of Midwife Program, School of Nursing, University of Pennsylvania, 420 Service Drive, Philadelphia, PA 19104

Robert E. Tranquada, Chancellor/Dean, University of Massachusetts Medical Center, 55 Lake Avenue, N., Worcester, MA 01605

Robert Van Hook, Director of Primary Care, State of West Virginia, 1800 Washington Street E., Charleston, WV 25305

Graham Watt, The Queens, Glyncorrwg Health Center, West Glamorgan, Wales SA 13 3 BL

Donald Weaver, National Health Services Corps, 1961 Stout Street, Denver, CO 80294

W. Donald Weston, Dean, College of Human Medicine, 118-A East Fee Hall, Michigan State University, East Lansing, MI 48824

Lynne Wilcox, 2856 Treadway Drive, Macon, GA 31211

Stephen D. Wilhide, Southern Ohio Health Services Network, 4030 Mount Carmel-Tobasco Road, Cincinnati, OH

Fay Whitney, 7099 Frank Long Road, Jamesville, NY 13078

Karl D. Yordy, Senior Program Officer and Director of Health Care Services, Institute of Medicine, National Academy of Sciences, 2101 Constitution Avenue, N.W., Washington, DC 20418

Quentin Young, 5522 S. Blackstone Avenue, Chicago, IL 60637