Community Oriented Primary Care
Approaches to Medical Education

By

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Chapter I

Introduction

"Medical education as it is presently organized in this country can best be described as Disease-Oriented Physician Education (DOPE).... Major change in undergraduate medical education is not optional; it is mandatory."¹
As a medical student in an "experimental track" (Joint Medical Program U.C. Berkeley-U.C. San Francisco) whose explicit aim is to assist in the education of physicians with a broad understanding of social issues in medicine, I was amazed by the fact that my exposure to community oriented primary care (COPC) came only in my third year--and that by accident rather than program design.*

In reflecting on the medical education process I have undergone in the last three years, it is clear that I have been trained to memorize and regurgitate vast amounts of isolated information unconnected to any particular patient, the natural history of the disease, its place in the larger community and to patterns of health care delivery or health policy. In comparing the current Joint Medical Program administration's philosophy of emphasizing exposure to academic disciplines, I realize that the original dream for this program\(^2\) and my hopes for a medical education based in a multidisciplinary community-based experience have been lost. It is in this context that my excitement about COPC and the myriad ways it has been introduced into medical education can best be understood.

COPC is an approach to primary care practice that emphasizes the physician's response-ability to the community of which he is a part (greater than the "active patient" population), requiring broad knowledge of its demographics and health needs, and a willingness and

* What makes this lack of awareness even more difficult to accept is that Joyce Lashof M.D., an early and enthusiastic participant in the development of COPC in the U.S., is the Dean of the School of Public Health at U.C. Berkeley.
ability to work with community members to plan, promote, implement and evaluate health care strategies.

What is exciting to me about COPC* goes beyond its direct utilization in the community, to the change it brings in the physician's function in relationship to society, in a movement away from that of a high-tech mechanic and entrepreneur, toward a responsive agent for health promotion, and an involved and valued community resource. While the simple introduction of a class or two focused on COPC and its underlying disciplines along with a community project only opens the window a crack so that some fresh air, and the realization of how stale the educational room was becoming is evident, what is needed in medical education and practice is radical change. The GPEP report\(^3\) and numerous other books and papers\(^1,4,5,6,7\) have not only pointed out the necessity, but have explored means toward that end. With a change in vision of what a physician does, and his place in society, must come changes in medical education to prepare for it. If COPC is not the answer to the ills of medical education and practice, it certainly points us in the right direction.

Currently the major focus of medical education is on the biological basis of disease and its treatment (biomedicine). Although every

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* It must be recognized that the Alma-Ata Conferences' definition of primary care as a practice which "addresses the main health problems in the community, providing promotive, preventive, curative and rehabilitative services" . . . is comparable to COPC. It is only primary care as practiced in Western developed countries, and especially the U.S., that the meanings are different.
medical school pays lip service to the need for a more "well-rounded" physician, the primary requirements in medical education are the grafting on of a large biomedical database and an exposure to role models and a value system that reward invasive clinical procedures in tertiary care hospitals.

The predominant approach to education for primary care medical practice focuses on the treatment of ill patients as they present themselves. This leads to a truncated view of the health needs of the patient population as a whole, the natural history of the disease whose relatively advanced symptomatology and pathology are seen, and a lack of understanding of the community of which this patient is a member and its impact. COPC can bring to this series of encapsulated experiences a sense of continuity and progression, and a broader context in which to more effectively address and assess health care delivery. One of the disciplines upon which COPC rests is applied epidemiology. Medical education includes a minimal exposure to epidemiology and biostatistics, and even more rarely is an orientation to its use as a tool for applications in primary care practice (community diagnosis and program evaluation) taught.

Two distinctly separate educational experiences that are available to some medical students—primary care within the community and community medicine—while serving the valuable functions, respectively, of providing care to patients in an ambulatory clinic or physician's office, and sensitizing students to a community orientation and the use of epidemiology in assessing community health needs, fail to bring these disciplines together in an integrated curriculum to show how COPC may work.*
I hasten to add that COPC's orientation to social groups of necessity includes the cultural, behavioral, environmental, economic and health policy aspects of health care. It is a healthy approach precisely because its view of the human condition is broad, and this offers a more comprehensive approach to addressing problems of health care delivery (access, prevention, community involvement and education, etc.).

There is value in the exposure of all physicians to COPC, or at least the disciplines on which it is based, so that they may become involved and effective in guiding policy decisions, and responsive to the changing needs of our society. Physicians as a group can do more to improve health by addressing the barriers to health (e.g., fragmentation of delivery, lack of education or preventive services), than by simply offering more medical care services. "Systematic identification of medical problems on the level of the practice, with time and energy then spent on well-planned solutions, provides a maximal use of resources that a random medical response does not."8

My preliminary approach to this thesis began with a review of some of the relevant literature, followed by contacting the institutions and individuals at those institutions in the U.S. who were engaged in medical education that involved COPC. They included Pat Schonubi of Montefiore Medical Center, Jack Geiger of the Sophie Davis School of Medicine, Dave Garr from the Medical University of South Carolina,

* A few medical school programs do exist which include a well-developed approach to COPC in the U.S. More on this in Chapter IV, Approaches to Medical Education, Section A.
Robert Like of the Rutgers Medical School and Arthur Kaufman at the University of New Mexico School of Medicine.

I followed up my initial contact with separate questionnaires (See Appendix A) for the instructors and students. The thrust of this line of inquiry was to understand not only the form and content of their programs (e.g., length, when COPC exposure initiated in medical education, what academic disciplines were taught, etc.), but also what the experience of being a part of this approach to medical education was like, its effect on choice of practice and their vision of the place of COPC in future U.S. health care services. Each site was mailed 5 teacher, and 5 to 20 student-oriented questionnaires. Not surprisingly (in retrospect) this rather cumbersome instrument generated only 8 responses out of 80 sent, a rate of return of only 10%. Nevertheless, valuable contacts were made, as was the decision to continue my exploration of current medical schools' attitudes toward COPC by utilizing telephone interviews as in Chapter IV, Section C.

Concurrent with my research I began a course in the School of Public Health on the U.C. Berkeley campus (P.H. 282) that involved both didactic and field work components, leading to the generation of a proposal for a COPC intervention in a rural community. A description of this experience is included in Chapter IV, Section A.
Chapter II

Community Oriented Primary Care:
The Model
The Institute of Medicine in 1984 defined community oriented primary care (COPC) as

"... the provision of primary care services to a defined community, coupled with systematic efforts to identify and address the major health problems of that community through effective modifications both of the primary care services and other appropriate community health programs."\(^9\)

That is, the merging of primary care with a community orientation to a defined and characterized population (The denominator population*) whose health care needs are identified and services to whom are modified based both on community health needs and the ongoing input from monitoring the impact of such implementation (see Table 1).

At this point some definitions are in order so that the components of COPC can be identified and their functions delineated and contrasted:

1. Primary care--Health care delivered on first contact with the health care delivery system and which ideally includes the following attributes: Accessibility of services to the user, comprehensive array of services, coordination and continuity of care over time, and accountability by the practitioner for quality, benefits and risks of such services.

2. Community medicine--"Community medicine is the academic discipline that deals with the identification and solution of

* This population must include nonusers as well as the user or numerator population.
the health problems of communities or human population groups.¹⁰ Its objectives are to prevent disease by modifying the environment and the distribution of health care services. Examples include maternal and child health, communicable disease and sanitary control and nutrition. Its focus is on the population group and therefore utilizes epidemiological methods to perform community diagnosis, surveillance and evaluation. In essence its functions are administrative and hierarchical and usually originate from outside the community and down to it.

With the diminishing of communicable pathogens as primary determinants of disease in the U.S., chronic diseases have highlighted multifactorial determinants, the importance of prevention, and the analysis of methods of health care delivery and organization.

COPC is born from the merger of both of these approaches to health care, so that the concern for and approach to an identified community comes from the primary care practice.

As I mentioned earlier, community involvement is essential for the success of COPC. While such involvement may vary from merely advisory to fully governing the primary care program, ideally the community participates by having representatives from the denominator population assist in identifying health problems and prioritizing interventions. A direct benefit of community involvement is greater knowledge about, and increased use of, the health care program.
<table>
<thead>
<tr>
<th>CLINICAL Individual</th>
<th>EPIDEMIOLOGIC Population Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Examination of a patient</td>
<td>Survey</td>
</tr>
<tr>
<td>Interview and examination of individuals by history-taking, physical and psychologic examinations, laboratory, x ray, and other special techniques.</td>
<td>State of health of communities and families, using questionnaires, physical and psychological testing, and special facilities for such investigations.</td>
</tr>
<tr>
<td>Diagnosis</td>
<td>Community Diagnosis</td>
</tr>
<tr>
<td>2. Appraisal of health status of a &quot;well&quot; person, such as a pregnant woman, well children, periodic health examinations of adults.</td>
<td>2. Usually problem oriented. Differential distribution of a particular condition in the community and the cause of this distribution.</td>
</tr>
<tr>
<td>Treatment</td>
<td>Treatment</td>
</tr>
<tr>
<td>1. According to diagnosis and depending on resources of patient and medical institutions.</td>
<td>1. According to the community diagnosis and depending on resources of the health service system.</td>
</tr>
<tr>
<td>2. Intervention usually follows the patient seeking care for illness or advice about health.</td>
<td>2. Intervention on basis of survey findings often before any illness notified or recognized.</td>
</tr>
<tr>
<td>Continuing Observation</td>
<td>Continuing Surveillance</td>
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</table>

Scales to assess the movement from primary care (Stage 0) to idealized COPC function (Stage IV) have been established by the IOM\(^9\) in the following areas: (1) defining and characterizing the community, (2) identifying community health problems, (3) modifying the health care program and (4) monitoring the effectiveness of program modifications.

Let's examine these levels of COPC function more fully. In defining and characterizing the community one moves from Stage 0--an impression of the community based on generalizations of patterns noticed in the user population by the practitioner; Stage I--extrapolation from larger area census data; State II, use of secondary data that appears to correspond to the denominator population; Stage III--utilization of a data base that includes demographic and socioeconomic status for each individual in the community (at least 90% of the population), but may not be totally current; Stage IV--a current and complete data base that is actively analyzed to elucidate the community health trends and patterns, and which allows identification and contact with high-risk individuals.

When identifying community health problems, staging ranges from Stage 0--no systematic studies of the denominator problems; Stage I--the identification of health problems through general consensus approach; Stage II--the use of secondary data as source from which community health problems are extrapolated; Stage III--use of data sets specific to the community, but on more narrowly focused health problems, Stage IV--systematic methods are utilized to identify and prioritize community health problems and elucidate the determinants and components of such identified health care problems. By examining the distributions of health care problems and that of available care resources and comparing
the two, appropriate health care interventions are delineated. Usually epidemiological tools are utilized in this process, originating from within the primary care practice and giving direct feedback as to appropriate changes which need to be made.

Modification of the health care program depends, for its staging, on the specificity of such changes to the identified needs of the denominator community: Stage 0—the primary care practice has only the numerator (users) as the focus for health care delivery changes; Stage I—modifications are being made that address the larger community, but are not necessarily specific to the needs of this particular community; Stage II—programs are mounted that address community needs as a consequence of special resource(s), but not necessarily based on the target communities' unique problems; Stage III—modifications are based on the target community's specific needs and characteristics, and if necessary both at the level of the primary care practice and community programs; Stage IV—modifications involve precise targeting of the intervention strategy, possibly through the use of risk models, involve the primary care staff and community members, and have specific program objectives and outcome criteria.

When the practice monitors the impact and effectiveness of program modifications, the level of staging depends on the rigor and precision of the methods used: Stage 0—assessment of effectiveness is based on numerator population; Stage I—assessment of effectiveness is based on subjective impressions, although it does consider the community as a whole; Stage II—extrapolates from larger area data in an attempt to assess program impact, but the degree of similarities between these two populations, and thus the assessment, is questionable; Stage III—data
specific to the community is systematically examined by the practice; Stage IV—in addition to Stage III assessment, a more sophisticated assessment design is utilized that indicates positive and negative impacts, the impact of potential competition for resources, improvements in outcomes or notes of change and in the process of care. (The above model is succinctly summarized in Table 2).

It should be kept in mind that any primary care practice (pediatrics, family practice, primary care internal medicine), can begin to practice COPC by expanding the scope of its population beyond that of its active patient population. A shift toward COPC can take place in incremental steps, and awareness of this makes the possibility of such transitions easier and spreads any positive costs over a greater time period.
<table>
<thead>
<tr>
<th>Stages of Development</th>
<th>Defining and Characterizing the Community</th>
<th>Identifying Community Health Problems</th>
<th>Modifying the Health Care Program</th>
<th>Monitoring the Effectiveness of Program Modifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage I</td>
<td>Based on subjective impressions of the practitioners and/or consumers</td>
<td>Based on subjective impressions</td>
<td>Based on national or organization-wide initiatives</td>
<td>Based on subjective impressions</td>
</tr>
<tr>
<td>Stage II</td>
<td>Characterized by extrapolation from secondary data sources</td>
<td>Extrapolation from secondary data</td>
<td>In response to special resources that become available</td>
<td>Extrapolation from secondary data</td>
</tr>
<tr>
<td>Stage III</td>
<td>Enumerated and characterized by ad hoc data base specific to the community</td>
<td>Use of data sets specific to the community</td>
<td>Tailored to identified needs of the community</td>
<td>Use of data sets specific to the community</td>
</tr>
<tr>
<td>Stage IV</td>
<td>Enumerated and characterized from a current and complete data base of the community</td>
<td>Routine mechanisms identify and set priorities among a range of problems</td>
<td>Targeted on specific high-risk individuals and groups</td>
<td>Specific to program objectives and differential impact among risk groups</td>
</tr>
</tbody>
</table>

Chapter III

Context

A. Brief History

B. Problems, Process and Progress
A. A Brief History

In order to understand the COPC model as its is currently presented by the IOM, one needs to examine both its roots and the soil which holds them.

The COPC model had its beginnings in the work of Kark and colleagues in Africa in the 1940s, with further development in Israel and many other countries including the U.S.

The Polela Health Center was established in 1940 as a pilot project in a rural community among a Zulu population in South Africa. A team approach was utilized with physicians, a nurse, and community health workers (CHWs), the clinic provided primary care services and developed the ideas of a defined area for community health studies, which included gathering demographic data, surveying for health practices, and the development of community health education. The latter three functions were carried out by the CHWs, who were Zulus. Frequent team meetings allowed family diagnosis to be developed as well as treatment and educational regimens.

As the defined area expanded over time, so too did the health care team, until more physicians, medical aides, nurses, midwives, nurses aides, CHWs, laboratory technicians, health recorders and administration staff were added. Building on the foundation of community health care, gradually community development as a whole evolved, with community participation in diverse areas related to health: gardening, water supply, enriched diets for children, etc.

The CHWs functioned as outreach from the clinic, performed most of the patient and family education, and aided the rest of the health care team to understand the patients' culture and beliefs, especially in
terms of their perceptions of the cause of their illnesses; and appropriate traditional cures. The CHWs were a bridge between the clinic and the home.

All members of the health team shared information and in the decision making process, as well as in the evaluation of clinic activities and ongoing surveillance of the community's health in weekly team conferences. Recording of community data over time was found to be of great value in decision making.

The involvement of the community, the utilization of community diagnosis and health surveillance, the search for interventions to deal with the identified health problems of the community with concurrent evaluation, are all functions of the COPC model today. As Kark himself said, "Health education and community organization became a foundation for a unified practice of community medicine and primary care, thus developing an integrated promotive, preventive and curative service."

Kark's work continued in the development of a multidisciplinary COPC practice beginning in the 1950s and continuing to the present day at Kiryat Yovel Health Center in Jerusalem (with ties to the Hebrew University-Hadassah Medical School), where primary care curative services are integrated with preventive approaches and community oriented epidemiology.

Of course the work of Kark and his colleagues didn't develop in a vacuum, but is based on and reflective of developments in the rest of the world. Community diagnosis as an aspect of public health developed, in the modern sense, from the work of Lemuel Shattuck who did epidemiological studies focused on disease in the mid 19th century in Massachusetts, and the work of Snow in England. And it was John Grant
in the 1950s who promoted the notion that the community should be studied like a patient.

In order to have a framework within which to understand the current state of education for COPC in the U.S., a brief examination of the relevant health policy and program changes over the last twenty-five years is called for.

In the U.S., projects such as the work by McDermott and his coworkers at Cornell University who in conjunction with the U.S. Public Health Service's Indian Health Services (USPHS, IHS) developed a pilot project for a group of Navaho Indians at Many Farms between the years 1955-1960, illustrate COPC practice. Community participation was active with an involved Tribal Health Committee and Navaho CHWs were utilized. Demographic and epidemiological studies characterized the community and documented needs, and were used to evaluate interventions. In addition, the non-Navaho health professionals were educated about the culture and beliefs of their community.

In the 1960s the Office of Economic Opportunity (OEO) supported the foundation of neighborhood health centers that were charged, in addition to delivering primary care services, to have community involvement and to train health workers. The OEO also supported Student Health Organizations which worked as multidisciplinary teams in community settings to provide direct services and stimulate social change through community action. Since 1969 the American Medical Student Association (AMSA) has taken over some of these functions by offering community-based experiences to medical students at all levels of medical education.
Beginning in 1963 direct support by the federal government was given to medical schools to expand physical plants, faculty and student loans to increase enrollment. In 1971, in response to the Carnegie Commission Report and in 1972 to the Health Professional Education Assistance Act, capitation grants were made available for each medical student enrolled, more student scholarships were made available, and the National Health Scholarship Program was instituted. Participation in NHSE scholarship programs required a medical student upon graduation to practice in designated MUAs. In recognition of how unprepared these university tertiary hospital trained physicians were to cope with these environments, medical school preceptorship opportunities in rural site were funded. Subsequent studies have shown these experiences to influence physicians to choose primary care practice in underserved areas.

In the 1970s it was generally recognized that too many specialists were being produced by medical residencies and that the need existed for post graduate medical education in primary care and better distribution of such providers. Departments of family medicine were increased from 15 in 1969 to more than 360 by 1979. In 1980 the Graduate Medical Educational National Advisory Committee (GMENAC) Report predicted an "excess" of between 10,000 to 50,000 physicians. This finding led to the ending of capitation funds to medical schools and the phasing out of the NHSC programs.

The 1970 Carnegie Commission report stimulated federal funding by the Health Resources and Services Administration (HRSA) to initiate Area Health Education Centers (AHECs) in some 20 states to decentralize health education. Community based programs train future dentists,
pharmacists, nurses and physicians out of the university/tertiary care hospital environment with the goal of encouraging them to practice in the AHEC setting. Some programs have retention rates as high as 80%. What is important about the AHECs (whether in North Carolina, Michigan or Colorado), and programs like the Rural Practice Projects for this paper is the movement of medical students, residents, and young physicians out of the isolation of large tertiary care settings and into a strong experience of primary care, and community needs and resources.

The community health centers of the 1960s have not withered away, even in the face of dwindling federal funding. They are vigorous suppliers of health care with large "market penetration," and have shown their effectiveness in numerous studies by lowering infant mortality rates and hospital emergency room utilization by their clients when compared to similar populations who are nonusers, and all for lower per capita medical costs.

While the GPEP report has indicated the need for change in medical education, diminished federal funding and recent changes in reimbursement for medical care and education delivers us to an uncertain present.
B. Problems, Process and Progress

In an era where cost effectiveness is the key word of governmental health policy makers\textsuperscript{16} COPC (in theory) can be utilized to assess community health needs, organize its delivery in the most efficient fashion, and monitor the process. COPC can "prove itself" by indicating ineffective health care delivery processes, and show cost effectiveness of programs utilizing its model. However, several important problems make what seems a rather straightforward process into one fraught with difficulty.

The primary care denominator problem is in estimating the population at risk, which can be defined as the practice population (those people within the primary care practices' responsibility). Of the many methods for estimating denominators "none has been shown to be satisfactory, and no new ones have materialized."\textsuperscript{17} Without practice denominators, valid rates (number of events/population/time) free of bias are impossible to calculate, and therefore so is the relative frequencies of events (prevalence) in planning and evaluation based on precise epidemiological information.\textsuperscript{18}

This problem arises due to the prevalence of fee-for-service practices in North America which make it difficult to know where the usual source of care for patients lie, and if there are multiple sources of care. These problems are exacerbated by a mobile citizenry, leading to a fairly substantial shift in population base over time. In addition, nonstandardized diagnostic, coding, and treatment schedules also complicate matters. Even when the population is geographically defined, census data will not answer any of the previously raised issues. The use of the practice population, while difficult for many
types of providers, is made easier with enrolled populations as found in PPOs and HMOs.

For all practices, utilization of the computer holds promise for dealing with these problems. While it is expensive to characterize a denominator population, perhaps prohibitively so for single or small group primary care practices, there are distinct advantages, and the ultimate cost-benefit ratio may not be as high as one might initially imagine. Here's why: 1) costs can be shared with other practices, community clinics and governmental health agencies 2) once in operation it is relatively inexpensive to contact nonusers (say over an 18 month period) by a computer generated letter followed, when necessary, by telephone contact. This process keeps the primary care provider aware of the changing demographics and needs of his practice and is essential in assessing the efficacy of preventive programs and in understanding what barriers (cultural, lack of education etc.) exist for those at risk who are non-compliant 3) patterns of disease and risk factors are easily generated 4) the use of a physician, nurse, and patient reminder system generated as the computer scans each chart leads to appropriate preventive procedures 5) effective primary prevention is cost effective for the community.

I don't wish to appear Pollyannaish by glibly proposing that computerized records and follow-up will provide a complete solution to the denominator problem and evaluation of program effectiveness. Quantitative data is limited to the theory behind the questions asked (as well as the method of asking it). Although some outcome data are easily assessed—decrease in risk of cardiovascular disease, changes in serum cholesterol, heart disease mortality, bp or behavior—answers to
how cost effective or generalizable a specific intervention was is difficult to answer, since control groups, community needs, the effects of other interventions (whether of one's own project or of others'), or that of the impact of a complex environment are not easily accounted for. In addition, qualitative data on the impact of an intervention on individuals (attitudes, beliefs, behaviors), and the community as a whole, can only be sought by those trained in the social sciences (see Chapter IV, Section D).

In most urban and suburban locations the community is made up of a great number of numerator populations for a diverse number of primary care practices. How then can a primary care practice in such a situation move away from solely focusing on its active patients population and expand into COPC?

This question has been raised in several contexts, and several answers have been attempted. If individual practices join together to form a larger coalition of practices for the purpose of initiating community diagnosis and planning some coordinated interventions, then COPC functions will be attainable while at the same time these practices can continue to provide their own individual services. An alternative strategy is to use local health departments to coordinate primary care providers and community health organizations in response to epidemiologically derived needs analyses: this scenario would fit models of disease prevention, as well as allow creative responses to continued cuts in federal funding for health care, and an increasing disenfranchised subpopulation.

The impact of reducing barriers to care, and decreasing the rate of progression of chronic diseases is not measured by current statistical
data compilations. Neither is the effectiveness of various types of interventions, and the best combination of health care personnel to deliver it. These factors, in light of the current reimbursement system which reward practices with the greatest numbers of procedures and pays only for short intervals of doctor/patient interactions, wean physicians from the willingness to engage in the psychosocial and educational processes necessary to improve health rather than treating disease. The cost is high and not for the patient alone: in a recent small group discussion with a primary care internist from a large HMO, he bewailed the pressure of 15 minute visits, and admitted his depression and lack of satisfaction with his work.

In several interviews with physicians across the country the issue of the role COPC and the likelihood of its being utilized in HMOs has arisen. Some have argued that since the for-profit HMOs are in the business of making money, there is no incentive for spending resources on "community diagnosis" of the non-user enrolled population, and the creation of preventive interventions for them. The fewer patients who actually use the HMOs facilities the better. And anyway (so the argument goes), as soon as they are too sick to work, they'll drop out of the program.

On the other hand, we have experiences like that of the Oregon Kaiser-Permanente HMO where COPC activities were initiated to identify needs, modify health services, and monitor impact in a very successful (and apparently cost effective) manner.24

Examples from other countries as well, reinforce the importance of validating COPCs use in HMOs and other prepaid practices.
In Israel at the Kupat Holim Health Insurance Institution, health planning and policy decisions are based on a great deal of epidemiologic data about the enrolled community (both current users and non-users). It is felt that ongoing evaluation not only provides information for modifying programs but that this process is ultimately cost effective, allowing optimal use of resources. In addition this program jointly offers undergraduate experiences with the Ben Gurion University Medical School, graduate residency education and continuing medical education, all focused on community health through prevention, detection, community education and treatment.

A non-hierarchical broad clinic team approach (doctors, nurses, social workers, health educators etc.) has been developed as the optimal way to provide for and respond to community health needs. This multidisciplinary primary care team approach is utilized to maintain patients in their home—as much as possible—and this saves money. Dr. Doran's contention that "The relationship between primary care policy and planning is strengthened by the confirmation of health insurance and health care delivery in a single organization," is strong ammunition for those who wish to see COPC integrated into the HMO setting in the U.S.

In my experiences with the rurally located Esparto clinic I have seen how individual community clinics in order to survive in an era of shrinking resources, and adapt to the imperative to qualify for federal funding (granted only if the clinic has a certain number of full-time physicians and staff), has led to the forming of large umbrella-like consortia that can compete successfully for funds. What may be lost, however, is the connection between the governing board of such a consortium and the communities which it is serving. Perhaps more
important is the possible loss of community identification with a clinic or practice as it expands or links-up with others, so that a cultural community (refugee, Chicano, etc.) no longer is sure this practice is "their place."

The lack of early experience in working within a health care team composed of nonphysicians, coupled with a sense of isolation, ultimate responsibility, and the physicians' resultant highly visible prestige and power, give him no practice and little incentive for attempting to integrate his ego and efforts in a nonhierarchical multidisciplinary health care team.

The current and future surplus of physicians is leading to the end of the independent practitioner style of practice, and forcing most new physicians to work in groups--be they HMOs, clinics or PPOs. A next step would be the integration of a part of the medical students basic science and clinical educational experiences with students in nursing, public health and the social sciences (For a more complete discussion see Chapter IV, Section D).

It must be recognized that community participation can bring problems as well as health care progress. Those community members chosen to represent the community may have their own agenda, be highly politicized or hostile, or not be truly representative of the populations at need within the community. There may be difficulty for the physicians who feel threatened by the perceived loss of power, or have difficulty understanding the cultural values and priorities of the community board members. In addition, the community representatives run the risk of losing contact and identity with their community over time and possibly adopting a more medical (numerator) perspective. What is
needed, therefore, is a structure that allows continuous feedback directly from the community.

On the other hand community representatives sensitize the health care planners and providers from different cultures to the target community's possibly alternate beliefs in the etiology of disease and appropriate care practices. Interventions by COPC practices that the community itself accepts as "its own," meet with greater acceptance and compliance.

Geiger\textsuperscript{25} points out the underlying fallacy of the belief that it is the community--through community boards--which needs to focus on the community oriented practice, rather than the involvement of the practice in the community; its families, social networks, etc. The latter is what is necessary for an involved and mobilized COPC practice.

Currently there are few models of COPC utilization in the U.S. in education or primary care practice. To address this lack of knowledge, and to begin to establish a data base on the operation, costs and impacts, and to be able to make recommendations in the areas of education, practice, and public policy, an Institute of Medicine committee was awarded a grant in 1982 by the U.S. Public Health Service.

The results of their study\textsuperscript{24} of seven U.S. sites utilizing various levels of COPC practice and ranging in type of practice from a rural two-physician office in Bailey, Colorado, to the Kaiser-Permanente HMO with 250,000 enrollees in Portland, Oregon, were the following:

1. Provider motivation and philosophy, rather than the community, was responsible for the implementation of COPC, and the support of at least one physician was deemed vitally important.
2. All of the site's interventions were based on previously identified problems that were subsequently "focused" by epidemiologic studies.

3. Little monitoring of the impact of the program modifications (ongoing evaluation) was done, principally due to lack of resources and skills.

4. Fully operational examples of the COPC model could not be found, and therefore no conclusions could be made on such a program's costs or cost effectiveness.

Recommendations of the committee based on their findings, were to develop and test methods for performing COPC functions, and then implement a fully developed COPC model in several practice types so a full assessment of its impact and cost effectiveness could be tested.
Chapter IV

Approaches to Medical Education

A. Illustrative Program

B. The GPEP Report and Education for COPC

C. Survey of U.S. Medical Schools: Knowledge, Attitude and Programs

D. Curriculum for COPC: A Closer Look
A. Illustrative Programs

The models in this section are presented in a condensed fashion which is necessary to fulfill their illustrative purposes here. Unavoidably the richness of detail, and what was deemed "nonessential" for this thesis was discarded.

While this survey is by no means complete, it is representative of the progress and problems encountered as COPC is being integrated into medical education today. What we see here are many first steps of a "journey of a thousand miles."
Proposal from the Medical University of South Carolina

Dr. Garr and his colleagues at the Department of Family Medicine Medical University of South Carolina are attempting to integrate COPC into the educational curriculum of medical students and residents by developing a model curriculum linking COPC and health promotion (H.P.) in a program called Community Oriented Health Promotion (COHP).

Implicit in the COPC model is its focus on and prioritizing of communities' health needs within the context of a participatory population, and this program emphasizes health promotion as "interventions designed to facilitate behavioral and environmental adaptations that will improve or protect health."26 The COPC model will serve as a "framework for integrating the wellness model into medical education and clinical practice."27

The College of Nursing at MUSC will be involved in the program as it begins to offer graduate training in Community Health Nursing, and the interdisciplinary approach in both training and community settings, will strengthen this model.

A preliminary outline of the COHP curriculum for medical students shows a steady--albeit limited--exposure to COHP concepts and practitioners as role models over a four year period. As part of the family medicine clerkship, students over a one month period will receive lectures on COHP concepts, community oriented practice analyses, community sociology and medical anthropology and one half day each week as a participant or observer in a COHP project.

Family Medicine residents receive further exposure to the various disciplines (see Table 1) necessary for COPC and HP over the three year family medicine program, and in the second year, residents working as a
group design an intervention project to be developed, implemented and evaluated in the third year. Although no thorough grounding in epidemiology, health and community planning/administration, group psychology or medical anthropology is possible given the time constraint, perhaps enough of an introduction to understand their place in COHP practice, and experience in working with consultants from these disciplines will occur.

Given the enthusiastic and wide-based support Dr. Garr has received from public health agencies (including the South Carolina Consortium of Community Teaching Hospitals--AHECs) and the schools of medicine and nursing at MUSC, the program appears to be quite viable. Overall, in recognition of the constraints on curriculum time and faculty tolerance, and the boundaries of departmental self-protection, the program is well-conceived, and a vital step for the introduction of COPC into medical education in South Carolina, as well as a model for the rest of U.S. medical and family medicine programs. In addition, several of the recommendations from the 1984 Institute of Medicine's COPC Study are addressed in that "... Methods for performing COPC functions must be developed and presented in a way that makes them usable by providers wishing to move primary care to COPC, and to develop descriptive materials . . . that explain or document how methods . . . have been adapted and used to perform COPC functions."
Table 1

COURSE SUGGESTIONS FOR INCLUSION IN THE CURRICULUM FOR:

I. Residency Training
   A. YEAR I: COPC, epidemiology, sociology, medical anthropology, Health Promotion I, health team concepts, practice analysis.
   B. YEAR II: Health Promotion II (techniques), group psychology, networking, community systems, practice management.
   C. YEAR III: Health Promotion III, COPC (community liaison, evaluation strategies, data aggregation, feedback utilization, program planning and development).

From Community Oriented Health Promotion Project, Garr D.R.
Teaching COPC in Mexico\textsuperscript{28} 

Universidad Autonoma Metropolitana (UAM-X)]

The curriculum is organized into modules of twelve weeks duration utilizing a problem-oriented approach with multidisciplinary methods that link together biology, pathophysiology, family dynamics and cultural and economic aspects of health. This linkage allows for horizontal spread of knowledge within wider spheres of organization.* The basic sciences are integrated with clinical science, epidemiology, anthropology, sociology and health policy--all necessary for analysis of problems at the community level.

Multidisciplinary terms comprised of students from nursing, pharmacology, social work and design (community planning, architecture, engineering) work together on some modules and in community settings on tasks such as needs analysis and the design of proposals for implementing health care with defined populations with faculty and site staff supervision to provide continuity and help students assess the ethics, feasibility and efficacy of their proposals. In addition, the medical students use their growing primary care skills (years 2 to 5) in the communities where they are collecting data.

In the fifth year medical students are placed in rural health settings to provide supervised and evaluated primary care, as well as community diagnoses and interventions.

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* We see similar approaches at the Ben Gurion University in Israel, the Maastricht program in the Netherlands and the University of New Mexico School of Medicine in the U.S.
In evaluating the program as a whole, several issues have become evident: on the positive side these students generally receive outstanding evaluations during the year of required social service, and a high percent of UAM graduates qualify for entrance into residency programs; problems arise for the traditionally trained faculty in providing a multidisciplinary coordinated teaching program, and students have difficulty integrating knowledge and skills, especially in the high-tech or subspecialty hospital-based rotations. More serious, there is great difficulty in finding positions that provide comprehensive care or community-based efforts after graduation, so many former UAM students opt for public health instead of private clinical practice.

**National Autonomous University of Mexico (UNAM)**

This medical school provides a two year track for thirty-six students out of a larger entering class (therefore called the "A-36 Program"). These students receive their first two years of training in decentralized community-based classrooms, along with education in community health. They then rejoin their classmates in the traditional track.
Medical school education in Nicaragua takes place within the health policy context of the National Health Care System (SNUS) that emphasizes primary care, regionalization, and public participation in health activities.

Apart from the addition of courses in community-based social sciences, a traditional teaching style, with distinct courses and a first two years focused on basic biological sciences and a last three years clinical period is followed. However, 20% of the first year students' scheduled time must be in a community setting and not in a community-based hospital, but actually at neighborhood sites—some even in front yards. This direct experience of the people's lives gives a clearer understanding of the social and environmental context of illness, and gives relevance to community medicine. Student response is variable with some viewing the experience as valuable and others as a required task before hospital-based "real" medicine can be learned.

Courses taught relevant to COPC include epidemiology, biostatistics, public health administration and economics. These courses are emphasized since the SNUS, which has created the beginnings of regional health services with COPC as a dominant model, has a different vision of the type of practice desirable for physicians to enter than an academic or entrepreneurial one. Unlike in Mexico, there is great opportunity for public sector employment practicing COPC.
COPC in Costa Rica

Autonomous University of Central America (UACA)

The establishment in the 1970s of regionalized primary care services and an official Ministry of Health policy favoring community participation in health care, along with the integration of fifth year medical students from the UACA into multidisciplinary health teams comprised of dental, nursing and social work students performing community-based data collection and training community volunteers formed the basis for COPC in the Hospital Without Walls Program.

Problems for the program arose from the late (fifth year) exposure of medical students to the COPC model and their subsequent difficulty in being integrated into the multidisciplinary COPC activities. The role for medical students was discontinued in 1982 with the illness of a key individual who supported the program.
University of New Mexico School of Medicine

Kaufman et al. have instituted a separate problem-based learning track in the first two years for 20 students out of the entering class and call it the primary care curriculum (PCC). The goals are to educate physicians who can address community health needs, and to instill lifelong learning skills in its students.

Early in the first year, students are introduced to clinical skills, work in small groups focused on problem cases, and research and share with each other a broad-based approach that ranges from pathophysiology to prevention and community diagnosis. An environment for clinical reasoning and problem solving, communication skills, self and peer evaluation and group support is encouraged. Inherent in this approach is the linking of basic sciences with other disciplines including epidemiology, behavioral science, cultural anthropology and health policy. In addition a COPC project is planned, executed and evaluated by a group approach.

Years one and two are organized into seven problem based learning units ("intro" and "advanced") and a four to six month rural preceptorship. Year three is in hospital clerkships, and the fourth year includes a two-month primary care rural subinternship. The early introduction of clinical skills and the opportunity to practice them with a rural primary care practitioner serves several functions: it brings relevance and enthusiasm to reinforce what has been learned, and it exposes the students to formative role models and practice locations.

Evaluations of the program have brought the following realizations: multi-disciplinary approach requires the same amount of faculty time to teach as the regular curriculum but can be stressful and threatening in
its new demands on the faculty; it is important to involve as many of
the faculty as possible to build wide-based support; the change in PCC
is not only in methods but in student values and attitudes leading to a
greater sense of self-confidence and enjoyment of the process of
becoming a physician; the community based experience is essential to
this process.
School of Public Health

University of California, Berkeley

I am including this program here, although the involvement of medical students and residents is not central to its goals, for several reasons: (1) aspects of its design and implementation could be incorporated into medical education, (2) the program illustrates a cooperative approach between faculty of the UC Berkeley school of public health and the University of California, San Francisco, Family Practice Residency Department (at least at the planning stage), and heralds the future possibilities of medical and public health school joint ventures to produce a multidisciplinary approach to COPC education, and (3) lastly and perhaps most importantly, this program represents my only direct experience with COPC education and its difficulties and rewards.

This program is funded by the Health Resources and Services Administration (HRSA) which was interested in the possibilities and consequences of implementing COPC in Bureau of Health Care and Delivery Assistance (BHCOA) supported health centers utilizing the resources and skills of students in the department of public health. The proposed goals are to (1) determine what elements of COPC are possible to implement in various primary health care delivery sites, (2) determine what impact specific COPC efforts have on the community and the practice (3) determine what would be required to incorporate COPC into ongoing delivery sites, and (4) develop curricula and training modules for educational programs designed to prepare multidisciplinary health care teams to incorporate COPC into health care delivery.
My COPC Experience

It is not my intention (nor am I able) to evaluate this program in a comprehensive manner. My discussion of its content and process comes from an analysis of questionnaires given to current (spring, 1986) students (see Appendix B) and my own subjective experience.

The class met over the course of a semester for four hours a week, with time divided into lecture and lab sections. Course content included but was not limited to COPC theory and model, approaches to community diagnosis, group process and team building, models of health care intervention and relevant health policy issues.

Evaluation of questionnaires* from 6 (out of 17) students representing only 3 sites in our COPC course has highlighted the following areas:

(1) A need for more experimental/practice approaches (and less theory) to group process.

(2) Groups should be formed and contact with projects site should be initiated earlier.

(3) Need for focus on practical applications of COPC to primary care and relevant financial and political problems.

(4) Some students (at one site) perceived a lack of faculty support and role models. Other sites found the opposite.

* It must be kept in mind that this analysis is illustrative rather than representative.
(5) Advice for successful projects--make sure the project is important to the clinic, reasonable in scope, important to the community and the clinic director is involved.

(6) Overall evaluation of course ranged form excellent to good.

The lecture and reading material provided a solid introduction to COPC, especially in the areas of understanding the COPC model and approaches to doing needs assessments for communities. The difficulties for our group came from the following sources: a lack of continuity in feedback and support from our faculty supervisor and no strong sense of commitment or "ownership" by the clinical staff of the COPC model or involvement in formulating possible interventions. In addition, faculty expectations were not always clear and were sometimes contradictory. These problems led to several revisions of our proposed interventions and the attendant objectives, goals and action steps.

After reading the community diagnosis and needs assessment of the population in the Esparto clinics catchment area (California Census Tract 115), we identified three subpopulations with health related needs:

(1) The farm workers--Exposure to pesticides was not supervised.
(2) Teenagers--A high rate of teen pregnancy with its attendant health and socioeconomic problems.
(3) The elderly--Lack of knowledge about and access to the Esparto clinic.

An exploration of the farm worker situation revealed that there was no grant money available to train someone to monitor the growers' compliance with governmental application standards, and the County Board of Supervisors was essentially an extension of the growers who would, to
put it mildly, not take kindly to our interference. We reluctantly dropped this idea—not, I hasten to add, because of the political struggle but because we realized that with our limited resources in terms of money and time (3 to 5 months), we needed to devise an intervention with some likelihood of success.

We discarded working with the teen population since the implementation phase of our project was to be over the summer months, and this coincides with their vacation period.

The remaining group, the elderly, became the focus for our intended intervention. Initially we decided that an elder health fair held at the Senior Center in Esparto would serve as a vehicle for community outreach and education. However, gradual realization that most likely only one COPC student would be available for our summer project and, more importantly, that our proposal only peripherally involved the primary care practice of the Esparto clinic brought to us the necessity for a change of strategy.

After our first presentation of our project to the faculty and other students, it became clear that although we were proposing community health interventions, they weren't based in the primary care practice and therefore didn't follow the COPC model.

Feedback from the faculty and students following our presentation and rethinking of our approach by the students in our group with closer faculty support resulted in an intervention strategy that would attempt to modify the primary care practice and implement community outreach and involvement with clinical staff involvement.

On one of our site visits to Esparto, we arranged to meet with community representatives to deepen our understanding of the health
needs they perceived to be of high priority, get some feedback on our tentative interventions, and to begin to forge the bonds of mutual interest and trust that could lead to a cooperative and ongoing COPC program. What we found surprised us: the group of elders who showed up for the meeting all lived in or near the town of Esparto and were relatively financially secure. Their needs and identified sense of "our community" didn't extend to the over 65 population who lived up the Capay Valley in a more isolated and economically less secure environment.

Some of the lessons about community representatives and the possibilities for problems were brought home to us. We were made aware not only of the fact that "community representatives" needed to be more than a generic term, and have to truly represent the various subpopulations of the community (especially those who might be less mobile and articulate to begin with), but also that any intervention focused on one part of the community shifts resources--and perhaps support--away from others.

I am including in Appendix C our final (or should I say "to date") statement of our goals and the action steps to reach them.

Overall, I found the course well organized and appreciate the opportunity it presented, not only to passively learn about COPC but to deal in a concrete way with the transition of theory into practice and to meet with community representatives and an array of health care providers.

The lessons learned from this COPC project include the importance of the practitioners' enthusiasm in the primary care practice for a COPC orientation and intervention, the need for ongoing and unambiguous
faculty support and an appreciation for the difficulty of translating idealized COPC models into projects in the real world.

In the future I hope this program serves not only as a model for other sites in the U.S. but evolves into a COPC placement for interested medical students and family practice residents from U.C.S.F. and a resource for at least a brief exposure to COPC for the rest of the students.
Medical Faculty
Gadjah Mada University of Yogyakarta, Indonesia

Integrated into the regular medical course work, Comprehensive Community Health Care (CCHC) is really COPC education in the garb of another name (and acronym). Medical students are given early exposure to a defined community in a program that includes primary medical care within the context of responsibility for the defined population. Health education to induce behavioral change, community development and diagnosis, health administration, team management, sociology and communication skills are all emphasized in the curriculum.

The program is six years long and is organized around "Instructional Objectives" which are achieved for the most part in groups of from ten to twenty students and one faculty leader (see outline of CCHC curriculum which follows). As the students progress through the six years of study/field experience, their focus continually widens, starting from family dynamics and health issues to include family networks, the community, and finally the community in the context of its region, historical and cultural status, and the web of interactions that link health care to the country as a whole: health policy and economics.

In addition, increasing responsibility for community diagnosis, designing and implementing interventions, and evaluating the effectiveness of such programs is given to the students.

An emphasis on participation, involvement and identification with the community is initiated when students begin medical school and are assigned to dwellings in different neighborhoods throughout the city
with the expectation that they will become involved as citizens in many community activities.

The core CHCC field experience begins in the third year as each class is assigned an entire village within a twenty minute motorcycle ride from the faculty in a "typically rural area" whose community leaders have been made aware of the aims and objectives of CCHC program and the importance of their active participation in its process over the next two and one half years. This segment of their education begins with a two week interview survey and is followed by one day a week usually of field activities at this site. Community participation is encouraged, so that after students leave, the villages can continue the programs with follow-up assistance by CCHC staff members. The field experiences in these years, and the very rural clerkship in the sixth year are considered by the students to be the "most formative, memorable and useful part of the CCHC curriculum." This experience is followed by a required government service as a health center doctor and team leader posted in a rural area of Indonesia.
<table>
<thead>
<tr>
<th>Year</th>
<th>Lectures/Discussions</th>
<th>Field Work</th>
</tr>
</thead>
<tbody>
<tr>
<td>ONE</td>
<td>- Behavioral Sciences&lt;br&gt;- Government&lt;br&gt;- Primary Health Care</td>
<td>- Rural Family attachment&lt;br&gt;- Neighborhood Social Committee</td>
</tr>
<tr>
<td>TWO</td>
<td>- Readings in: Social Medicine and Issues of National Development</td>
<td>- Rural Family attachment&lt;br&gt;- Neighborhood activities</td>
</tr>
<tr>
<td>THREE</td>
<td>- Community Diagnosis Health Education Applied Epidemiology Rural Development</td>
<td>- Village Survey&lt;br&gt;- Village Attachment with Health Fair, Surveillance&lt;br&gt;- Integrated Rural Development field areas</td>
</tr>
<tr>
<td>FOUR</td>
<td>- Major Problems in Community Health-- Defining and implementing action program</td>
<td>- Village attachment with implementation of programs for eight specific health problems</td>
</tr>
<tr>
<td>FIVE</td>
<td>- Project Design and Implementation in rural Health and Development</td>
<td>- Village Projects in Development&lt;br&gt;- Field Epidemiology Project in Remote area of Indonesia</td>
</tr>
<tr>
<td>SIX</td>
<td>- Health Center Management</td>
<td>- Full time work (2 months) in rural health center with emphasis on team leadership in community outreach.</td>
</tr>
</tbody>
</table>
The decision to make this program an interdepartmental faculty-wide program utilizing a great number of part-time manpower is at once a source of great strength and instability. Many of the staff felt unprepared for teaching this approach and reluctant to make the time commitment away from their basic departmental specialization. It is clear that a comprehensive interdisciplinary program takes both dedication and a great degree of coordination. On the other hand, extensive faculty involvement exposes the entire staff to the potentials and philosophy of this approach to the doctor in society.

A recurrent theme in every medical school when a new program is proposed or initiated (and it is echoed here) is the demand by all existent departments for more, not less, of their own curriculum time.
Montefiore--Eight Week COPC Summer Program

This program was implemented in the summers of 1981, 1982 and 1983 with twelve preclinical medical students in an inner city environment. The program included seminars and lectures, participation in a community health project and community cultural activities, and clinical preceptorships with primary care practitioners in a community health center who served as potential role models.

Students were introduced to the COPC model, and lectures focused on community diagnosis, data collection and analysis, culture and health behaviors and beliefs, exposure to the interdisciplinary team approach to health care delivery and team development, health policy and financing, and clarifying career goals for urban practice.

By the end of this program, students submitted final project reports that included a community description, project goals, activities to meet the goals, evaluations of the intervention's effectiveness and recommendations for follow-up. A high degree of faculty and clinical support was provided.

This excellent COPC module has been put in book form with the expressed intention of providing a guide for other medical schools to implement urban COPC projects, and it is hoped that it will serve to stimulate such programs.
Montefiore Residency Program in Social Medicine
(RPSM)33

This program was founded in 1970 to train physicians to be responsive to the health care needs of inner city communities and to work effectively within multidisciplinary health care teams. Greater than two thirds of its graduates have served, and many are currently practicing in, medically under-served areas (MUAs).

The RPSM faculty is made up of biomedical and psychosocial units which are comprised, respectively, of (1) four family practitioners, two pediatricians, three internists and (2) psychiatrist, psychiatric social worker, psychologist (all with a family systems approach), and a lay teacher of alternative healing systems.

In the first year, students have a one month orientation to the community, the health center, an introduction to the COPC concept, and develop a model of team work and group process.

Later, residents are exposed to a "core curriculum" consisting of community-based epidemiology, community assessment and research, medical anthropology, health policy and administration, patient education skills and community organizing.

Central to their education in COPC is practical field experience which, it is felt, is necessary to develop a focus for theory and to maintain student interest. All residents must complete a Social Medicine Project (as part of faculty or health center projects, or they may develop their own). It is comprised of the following four components:

(1) Establish goals and objectives.
(2) Develop work plan.
(3) Evaluate.

(4) Share with RPSM community.

Some of the problems noted with these projects are the lack of time, the difficulty for some residents to change from highly structured rotations to one that is self-initiated, and a lack of continuity or follow-through with these non-funded projects.

In assessing the level of preparation for practicing COPC after the RPSM it must be recognized that most of their residency training takes place in tertiary care hospitals, and the depth of the Social Medicine curriculum is, of necessity, limited. However, I think that an excellent introduction to COPC is attained.
The Sophie Davis School of Biomedical Education

This program is unique in that students are admitted directly out of high school and combine education for the B.S. and M.D. degrees into a 6 year program. What is important for its inclusion in this section, however, is the goal of training graduates for inner city primary care practice to work "As a clinician, giving first contact continuing integrating care to individuals and families in the urban community; as a community health promoter of all the people in a defined population or geographic area; as a researcher in primary clinical care [and] epidemiology ... and as an agent of change working with the community ..."35

Integrated into the school curriculum are field placements that take place throughout the first two years in the community sites. Students work in teams and learn to collect and integrate demographic and health data, identify all the health care resources available in that community, and to achieve an understanding of its culture and structure. Concurrent with the field experiences are courses in public health and health policy. Each of the four 20-student teams produces a community health diagnosis and analysis of a health-related community problem.

Problems arise in this program in that the students' clinical education takes place in tertiary care settings over a two or three year period, and during this socializing process the community medicine emphasis is missing.

Plans for revision of the curriculum include courses in sociology, anthropology, economics and urban policy; continuity of community
medicine throughout the clinical years; and clerkships in community
based primary care during the senior year of clinical training.

This program appears to be an excellent approach to training
physicians in the skills, values and understanding necessary to practice
COPC.
B. The GPEP Report\textsuperscript{3} and Education for COPC

While this thesis is not directly focused on medical education in the U.S. and the problems therein, it is appropriate to examine the major acknowledged problem areas since I am examining programs that incorporate the community oriented primary care approach (some of which break with traditional organization and curriculum as it has been structured in U.S. medical schools for the past 40 years), and need to see how a COPC curriculum can address some of these concerns.

(1) Medical schools need to shift the focus of education away from the rote memorization of an enormous amount of factual information (a portion of which will be dated by the time they graduate anyway), toward the development of skills and attitudes of self-motivated life-long learning and problem solving. In addition, medical faculties need to adapt to societal changes in demographics and the health care system and to emphasize health promotion and disease prevention.

(2) There is a great need to broaden the educational base of the medical student to include social and behavioral services and the humanities.

(3) Since less than 5\% of physician/patient contact is within the hospital, outpatient and community settings are appropriate for required clerkships.

(4) Basic science and clinical education should be integrated where appropriate into the educational curriculum, and the faculty needs to be more involved in supervision and evaluation of students' clinical performance based on clearly stated goals. The development of close faculty-student
ties--a mentor relationship--is needed to produce greater relevancy and coherency for the student.

(5) Evaluating teaching in medical schools is an enterprise fraught with difficulty. The current most pervasive standard is the level of research and number of publications. This, in addition to utilization of the tenure system, makes it difficult to evaluate and improve teaching quality and to remove ineffective teachers.

While medical education in programs utilizing COPC may not address all the issues raised in the GPEP report, there is evidence that progress is being made.

Schools such as the University of New Mexico PCC, the Maastricht Program in the Netherlands and many others have instituted multidisciplinary problem oriented approaches to medical education that include education and experience in community oriented primary care. The tools for problem-solving and independent learning are an integral part of medical education in these programs.

Education for COPC which is based in an understanding of social sciences, epidemiology, health policy and community involvement broadens the educational curriculum for medical students. Many COPC programs emphasize early (in the "preclinical years") exposure to community-based clinical experiences in out-of-hospital settings such as community clinics or private practices usually located in medically underserved areas which simultaneously provide role models for primary care and community orientation. Programs such as the UAM-X in Mexico, the Gadjah Mada University in Indonesia and the PCC program at the University of New Mexico include a long-term relationship between a faculty member and
a student within a small group, and this allows for greater continuity, and the ability to evaluate the student's performance and needs.
C. Survey of U.S. Medical Schools: Knowledge, Attitudes and Programs

In order to assess the awareness of the COPC model and its integration (even at embryonic levels) in medical education, I divided the United States into seven geographical regions* and assigned the medical schools in each region to a private or publicly funded pool. Each school in each regional pool was assigned a number and then a random number table was utilized to select three representative schools in each region, with the relative number of public schools chosen reflecting their respective numbers in each region (see Appendix D for listing of those schools chosen for interview).

Based on my previous experience with the low rate of return of mailed questionnaires, I utilized a telephone survey journalistic interview with deans and associate deans of each representative medical school (see Appendix E, questionnaire format). In order to quantify some of the responses for ease of comparison, I utilized the following approach:

(1) Level of awareness of COPC Model

Aware of IOM definition = 3
Partial definition/some components = 2
No idea = 1

(2) Courses (and experiences) offered at medical school in COPC and underlying disciplines (epidemiology, social sciences, anthropology, community or preventive medicine, etc.)

* North East (NE); Central Atlantic States (CAS); South; Midwest (MW); Great Plains/Rocky Mountains (GPRM); Pacific South West (PSW); and Pacific North West (PNW).
Substantial emphasis = 3
Some emphasis = 2
Little emphasis = 1

(3) Attitudes: early exposure/experiences to COPC/community medicine important
Very = 3
Moderate = 2
Not = 1

Schools could receive a maximum number of 9 indicating awareness of the IOM definition of COPC (or a comparable model under a different name), offering a substantial number of contact hours in the disciplines underlying COPC and/or COPC related field experiences, and recognition of the importance of integrating an exposure to COPC or community medicine into the medical school experience.

In analyzing the results of my survey, I have found the following:

(1) Slightly more than 30% (7 out of 20 schools) reported an awareness of the COPC model.

(2) There were no significant geographical differences found in awareness, attitude or exposure.

(3) Of the schools that placed substantial emphasis on courses and experiences in COPC and underlying disciplines, all were public institutions.

(4) 50% of the schools surveyed felt that early exposure to, and/or experiences in, COPC or community medicine were very important.

(5) Assuming my sample to be truly representative, U.S. medical schools--both public and private--fall in the middle range
(combined average = 6.15) in terms of level of awareness of the COPC model, courses offered in the disciplines underlying COPC or COPC itself, and attitudes toward early exposure to this model.

Other areas were explored in a deeper fashion in response to questions in the following three topics: (1) the courses/disciplines that were important for education in COPC, (2) the barriers to implementing COPC in medical education and practice; (3) the future of COPC. The issues raised are interesting, so I will present them here:

(1) The courses deemed important for COPC are epidemiology and biostatistics; health policy and health systems; preventive, occupational and community medicine; cultural anthropology, sociology and political science. There was an emphasis on anthropology and social science as disciplines apart from behavioral science by many schools. In addition, the importance of field experience—projects in the community—was stressed again and again.

(2) Barriers to implementing COPC in education and practice: a "tertiary care mind set of faculty" and the difficulty of teaching community or preventive medicine in tertiary care hospitals; the lack of available models to follow and few field placements; rigid medical board requirements; a lack of time and funds; student attitudes valuing "hard science" of biomedicine; and turf problems with interdisciplinary health sciences. A few deans mentioned the need to demonstrate the utility of COPC. In terms of medical practice, one interviewee summed it up: "There is no DRG for it."
(3) The future of COPC: The use of COPC may be driven by economic necessity—it saves money to do community diagnosis and characterize your population with computers, and with the future practice of physicians in IPAs and HMOs there will be an economic incentive to know the needs of the community for marketing and consumer satisfaction; all medical schools will be doing outpatient training with community doctor preceptorships due to lower hospital census counts, so the opportunity for COPC will be greater; if COPC is associated in the public mind with marketing strategy, it may turn off communities.
D. Curriculum for COPC: A Closer Look

A review of COPC literature, and the results of my contacts with some 20 medical educators involved with COPC, have highlighted three important areas of training for the education of future COPC practitioners: 1) applied epidemiology, 2) medical anthropology, and 3) the multidisciplinary team approach to health care delivery. In this section I will explore these topics further.

"... epidemiology without a clear theory of community medicine can only bring our specialty into disrepute ... there is need for a theory which unites medical activities to the life of society..."

Traditionally epidemiology is used to test hypotheses about the etiology of disease, and then to disseminate such findings in the literature. At the very least, an exposure to epidemiology has made its way into every U.S. medical school. The number of "contact hours" may vary from fifteen to a hundred, but the focus in which it is almost universally presented is traditional.

The use of epidemiology in COPC calls for new functions, applications and goals. They are:\[37,38\]

1. Based in the primary care practice itself.
2. Pragmatic and action-oriented, concerned with the welfare of the community that is cared for.
3. Conducted in a defined area and therefore usually on a small scale.
4. Forges a short feedback loop in the context of a specific practice and community.
5. Has various phases of utilization:
A. Community diagnosis which is detailed and focused on selected health problems. Over time this approach merges into ongoing surveillance of a populous health status.

B. Interventions arise from the community diagnosis, and epidemiology is utilized in formulating objectives, target groups at risk, and assist in the development of strategies.

C. Utilized in the appraisal of program effectiveness whether of program reviews or program trials.

6. May be used to actively involve the community via participation in planning and field work.

7. Clinical epidemiology—increases knowledge of the community (prevalence rates, common causes of diseases, etc.), and aids in case management.

Unfortunately, at the present time* there is almost no one who can teach this "applied" or "primary care" epidemiology, and there are few ongoing COPC sites in which to gain experience. Mullen\(^3\)\(^8\) points out the need for primary care epidemiologists who can "teach and consult in academic centers and practices that are developing COPC programs." And Kark\(^3\) points out "... all COPC practitioners [physician, nurse, health worker] should have have had sufficient exposure to epidemiology to enable them to appreciate its importance, play their part in the

* St. Thomas's Hospital Medical School in London has an interesting program wherein the Department of Community Medicine teaches epidemiology, primary care, sociology and statistics to medical students and residents.
collection of data, make appropriate use of epidemiological findings, and know when and how to use expert epidemiological help."

An illustrative study based on questionnaires sent to 122 university affiliated Family Practice Residency programs (reply rate 38.5%) to assess sociocultural/community training, indicated that the two least frequently taught topics were techniques for evaluating community health care needs, and method of organizing services to meet community needs.39

"Although . . . U.S. medical schools have attempted to integrate the social and behavioral sciences into medical education, there is still considerable dissatisfaction with this process."40

Ultimately, what is taught to medical students and how it is presented springs from a specific cultural belief system, which legitimizes this process of socialization, and produces physicians with certain beliefs about their role and how best to function within it. For the most part there is a lack of awareness by both students and teachers of any cultural bias.

Increasingly physicians are caring for patients from different ethnic and socioeconomic backgrounds, and it is vital for primary care delivery as well as COPC that physicians understand the cultural and social context of their patients and defined population.41,42 "If current immigration trends continue, 39% of the population of the U.S. will be foreign-born or children of foreign-born by the end of the century."43

In caring for patients from different ethnic and socioeconomic backgrounds, it is especially important for the delivery of COPC to
understand the cultural and social context of the defined population. Only by the use of ethnographic studies and a knowledge of cultural medicine\(^42\) can the physician understand the community from an "insider's" perspective, and assess the impact of cultural differences on access to and utilization of health care services, the doctor-patient relationship, patient compliance, case management, and community diagnosis and outreach. An eclectic approach to research is called for; one that utilizes ethnographic studies (which allow for greater depth of knowledge and the emergence of patterns of belief and behavior not touched on by other tools), as well as epidemiological, historical and economic investigations of the community.

There are problems in teaching these perspectives to medical students. In general medical students (and faculty) see little value in the integration of social science and clinical medicine, there is competition for time in the curriculum, many schools focus almost exclusively on psychiatric models, and few medical schools have medical anthropologists or departments of social science as part of their faculty.\(^44\)

A teaching framework for cross-cultural health care has been developed called the LEARN model. It is a process-oriented model developed and utilized at the Family Practice Residency at San Jose Health Center in California.\(^45\) The acronym stands for Listening to the patients' perceptions, Explaining your perception, Acknowledging differences and similarities, Recommending a treatment plan, and Negotiating agreements.

Many other family practice residencies (UMDNJ-Rutger Medical School, Case Western Reserve University, etc.) have instituted training
in medical anthropology, and the Society for Training in Family Medicine (STFM) has a cross-cultural newsletter with information on educational resources including training programs, books, and connections with others involved in cultural health issues.

Multidisciplinary health care teams are important to provide comprehensive primary care and COPC\(^8\). Such non-hierarchical teams can provide medical services, domiciliary care, access to more specialized care, knowledge and skills in health education, prevention and self-care, social and psychological understanding of illnesses, and community diagnosis and outreach.\(^{46}\) Although the form of the teams reflects the functions it is called on to perform, optimally the team members form a symbiotic relationship and work in a synergistic fashion.

For COPC, interdisciplinary health care teams may include nurses, social workers, physicians, anthropologists and epidemiologists. The multiple skills available by such teams can address the complex problems facing patients and families, and offer great resources for patients. Just as COPC sees the community as a patient, the patient can regard the health team as his physician.

A survey to assess the extent of interdisciplinary health team education in medical school found only 23% of U.S. schools with a program or program component, and fewer than half of these utilized the experience of building students into teams.\(^{47}\) In my survey only 10% of U.S. medical schools had any education or experience with interdisciplinary health team education.

Schools which have tried experimental programs with teams made up of student nurses, physical therapists, social workers, occupational therapists and medical students have focused attention on the theory and
practice of team building, leadership styles, communication and conflict resolution, group decision making, and team effectiveness assessment. It was found that the medical students had the greatest problem adjusting to working with other professionals. Most studies concluded that it was important to introduce the interdisciplinary team approach early in medical education.\(^{48,49}\) If second and third year medical students are already so socialized to work in isolation with heightened sense of their own prestige and position, it's easy to see how much more difficult this process would be for most physicians.
Chapter V

In Conclusion . . .
In Conclusion...

There is no conclusion. As one dean of one medical school said to me, "COPC is an ideal that one strives to attain. Over time the name may change, but the basic goals remain."

In a discussion I had with Paul Nutting, M.D., (Institute of Medicine, Washington, D.C.), he responded to my questions about the prospects for implementing COPC in U.S. medical schools by initially saying, "... First, let's see more primary care exposure." I think the evidence from my survey is clear that many schools are exposing their medical students to primary care out of the context of the tertiary care hospitals. While the majority of these schools are utilizing a combination of short third and fourth year rotations in community hospitals and private practice settings with preceptors (i.e., University of Rochester), programs such as the Michigan State University's Upper Peninsula Program and the University of Minnesota include either third or fourth year clinical rotations completely at community-based sites or long (9 to 12 month) rural preceptorships. In evaluating these experiences, it was found that the community-based students saw more patients, did more procedures, and were given greater responsibility than their tertiary care based classmates.

Evaluations of the findings from the PCC program at New Mexico University School of Medicine, Pennsylvania, Upper Michigan, Maastricht, etc., indicate that medical students benefit from experience in the "preclinical" years to primary care and COPC by exposing medical students to role models and alternative practice sites. In addition, it is clear from Nicaragua's National Autonomous University and Indonesia's
G.M.U. that early exposure to the community and multidisciplinary teams is important for future physician acceptance and ease of functioning within this health delivery situation.

Clearly the problem oriented approach lends itself well to educating medical students in COPC. But as Kaufman himself points out, there is little money for new schools where change is easier to implement (indeed, there are dwindling resources overall), and faculty resistance to change is a force to be reckoned with. In this light, Harvard Medical School's "New Pathway" is a heartening development as a problem oriented track available for a small number of freshman medical students each year. The degree of community orientation and utilization of the COPC approach remains to be seen, however.

The importance for medical students of actually working in the community doing demographic studies, community diagnosis, designing and evaluating interventions has been stressed by every physician/educator I interviewed. There was also almost universal agreement that the earlier in the 4 years one exposed medical students to this experience, the greater the likelihood that the orientation would be incorporated. Others have pointed out the importance of "bridging experiences" over the clinical years so that the orientation is not lost in the tertiary clinic clerkships.

The organization of the CCHC program (6 years in length) at the Gadjah Mada University Medical School in Indonesia seems to provide an ideal model for COPC education. The problems arise in trying to transport it to our society. While a 5 or 6 year medical program that truly integrated clinical exposure with the basic sciences, and offered ongoing COPC projects may be wished for in the U.S., it isn't likely to
come about soon. We don't have the overwhelming need—as in third world countries—to design a comprehensive and efficient health care delivery system in the face of an enormous lack of basic health care services. In addition, current medical education (with a few exceptions) in the U.S. is four years long, with a per annum cost of at least twenty thousand dollars per student per year. No one today can seriously consider extending the length of medical education. However, many medical schools do allow a year "off" to pursue other studies, such as an MPH.

The results from my survey of U.S. medical schools were encouraging. Particularly surprising was the fact that 30% of the schools reported an awareness of the COPC model, and 50% felt that early exposure to COPC or community medicine was very important for their medical students.

This must be contrasted with a study of 40 southern medical schools that assessed the nature of curricular changes in the 1980s which showed that while an equal number of changes toward traditional versus 1960s and 1970s values occurred in new medical schools, 18 out of 25 changes in established medical schools were toward traditional curriculum. "No schools reported significant change in efforts related to changes in health and health care emphasizing health promotion and disease prevention . . ."50

Studies from the late 1970s and as recently as 1983 have indicated both the need for new models of health and disease in medical education that incorporate the psychological and social matrix, as well as the predominate biomedical fixation of medical students.51,52
Interviews with faculty from the Family Practice Departments of the University of New Jersey Rutgers Medical School, University of California, San Francisco, University of South Carolina School of Medicine, Marshall University School of Medicine and the University of Colorado School of Medicine have highlighted the importance of family practice residency programs for the generation of opportunities for COPC education (epidemiology, health policy, etc.), and community projects, not only for their family practice residents, but for clerkship exposure to COPC for medical students, as family practice clerkships and/or electives. All of the residency programs above either incorporated into their current programs COPC education and projects, or were in the process of setting such programs up.

The next steps that I think are attainable for the spread of COPC are

1. Public education--COPC programs often utilize the media as part of community outreach to encourage community participation and input and to achieve greater awareness of the planning and intervention strategies employed. What is needed is a second level use of the media to highest existent successful COPC programs. As Buford points out about the public, ". . . it can't demand what it doesn't know about."53

2. Offering continuing medical education credit courses to educate already practicing physicians about COPC and include discussion of the benefits--and costs--of integrating various levels of COPC into their ongoing practices.
3. Contact and educate national professional organizations about COPC concepts (e.g., family practice nursing).

4. Early exposure of medical students to interdisciplinary health teams to curriculum in the social sciences and epidemiology can develop a broad denominator reference for medical students within which to see each patient.

5. Like Mullen, I am advocating that centers for research and training in COPC need to be established. The nucleus for such programs will readily be generated by cooperative efforts between departments of family medicine and nearby university-based schools of public health. Ideally departments of community, family and preventive medicine in conjunction with those of nursing and the social sciences working with already existent community clinics or other primary care systems can pool resources and structure a curriculum and field experience for their students to function as multidisciplinary teams in ongoing community diagnosis, interventions and evaluations. A minimum of two months rotation at these community sites, putting theory into practice, fitting the COPC model into political reality and utilizing the skills of COPC epidemiology, community organizing, team work and group process should be available as an elective for medical students and residents. The beauty of the COPC model is that ongoing evaluations of the health care interventions and of the educational/field work experience for the COPC students leads to an ever richer database from which one can modify both the ongoing programs and the approach of
those programs in the planning stage. The sharing of scarce resource make this approach attractive. Contracting with HMOs, community clinics and group practices seems feasible since such projects can expand their market share and aid in health promotion.

In my limited experience with designing an intervention as a student in a COPC course, several issues have arisen that pertain to the structure and process of such proposals:

A. A strong desire for involvement in the COPC process must exist within the power structure of the primary care service. A commitment of time and resources is necessary, as is the feeling on the clinics' part that the COPC project is valuable for the community and for the patients.

B. Faculty supervision needs to be continuous, and ongoing evaluation and clarification of goals and problems should be addressed.

C. Back up resources should be available to the students as the need arises (health planning, statistics, etc.).

The exposure of an ever-increasing number of physicians to the COPC model, in conjunction with an expanded database on its effectiveness can eventually lead to wide-spread acceptance and, one can hope, eventual incorporation into much of health care training and delivery.

6. An informal newsletter ("The COPC Network") should be started listing rotation opportunities, curriculum, and faculty interested in participating in COPC projects. This can be
circulated to sociology and medical anthropology departments, schools of nursing, public health and medicine. The cross-fertilization that results from faculty and student exchange allows greater exposure and spread of COPC, while at the same time creating enthusiasm and desire for faculty to implement COPC projects in their "own backyard." Making provisions for including guest faculty in COPC projects, along with creating a national pool of students from many disciplines, assists in the national extension of COPC.

7. Small programs based on the eight week Montefiore model should be implemented. The impetus may come initially from family practice residencies* but should be extended to include medical students in their family practice rotations, ideally, some in the first two years of medical education.

In keeping with the COPC model, all interventions should be monitored for effectiveness (the short feedback loop) so appropriate modifications take place and goals are achieved.

The exposure of an ever-increasing number of physicians to the COPC model, in conjunction with an expanded database on its effectiveness can eventually lead to wide-spread acceptance and, one can hope, eventual incorporation into much of health care training and delivery.

While there is reason for pessimism in the health policy climate of cost benefit analysis, DRGs, shrinking block grants for health and loss of medical school capitation payments, I am buoyed by what I have found. Model programs and curriculums such as those at Montefiore and

* Suggested from discussion with Garr and Braveman both F.P. Faculty.
Berkeley; interdisciplinary projects that explicitly emphasize the integration of prevention as at South Carolina's COPH program; the use of COPC by HMOs; and the spread--perhaps even a fad--of problem oriented medical education. All of these developments seem to capitalize on the disaffection of physicians with their current training and practice styles, and the public's desire for a more personal and involved medical care system that promotes health and prevents disease, and recognizes the resources to be tapped as patient is transformed into partner.
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Appendix
Appendix A

Community-oriented Primary Care
Instructor's Questionnaire

1. What is your definition of community-oriented primary care?

2. Why did you initiate participation in community-oriented primary care programs to educate physicians? What were your goals?

3. What form did/will your program take (undergraduate medical education, residency education, time commitment, classroom education, community project involvement, etc.)?

4. Is your program affiliated with a university? If so, in what way?

5. Does your program involve a multidisciplinary approach (use of epidemiologist, statisticians, social workers, nurses, etc.)?
6. Will you send me an outline of your curriculum?

7. With which academic/health disciplines should a physician interested in community-oriented primary care be familiar (epidemiology, medical anthropology, health policy, etc.) and why?

8. If you have had experienced in directing/teaching a community-oriented primary care program, would you briefly evaluate/critique that experience? What worked? How could the program have been improved?
9. Should community-oriented primary care be introduced into undergraduate medical education? What form should it take? What barriers do you think must be overcome?

10. What is your vision of the place of community-oriented primary care in health care in the future?
Community-oriented Primary Care
Student's Questionnaire

1. At what level in your medical education were you exposed to community-oriented primary care?

2. Briefly describe the program (e.g., summer field work project, course in regular curriculum, project in residency) and duration.

3. Did you work as part of a multidisciplinary team?
   
   If your answer is yes:
   
   a. What other disciplines (epidemiology, health planning, nursing, etc.) were involved?

   b. What difficulties did you experience?

   c. What would have better prepared you for this experience?

   d. What did you learn about group process (hierarchy, decision-making, negotiation, sharing and valuing of ideas, etc.)?
5. Did you find the experience valuable? In what ways?

6. How could it have been improved?

7. Do you think exposure to community-oriented primary care should be provided as an optional part of all medical school curricula? If yes, what form should this take?

8. Briefly comment on the place community-oriented primary care has in health care in the U.S. today.

9. How has your community-oriented experience influenced your career plans/interests?
Appendix B

Questionnaire for Berkeley COPC Students

1. At what site was your COPC projects?

2. What is your academic/professional discipline?

3. In which of the following areas have you had experience/training?

- Epidemiology
- Health Policy
- Cultural Anthropology
- Sociology
- Health Administration

4. Please critique the course on the following areas.
   A. Content
      1. COPC Theory and Model
      2. Community Diagnosis
      3. Models of Health Care Intervention
      4. Models of Health Care Intervention
      5. Health Policy Issues Around COPC

   B. Do you feel your knowledge base about COPC is adequate for this project?

   To allow you to assist in designing and implementing future interventions?

   C. What specific team-building and communication skills did you learn?

   How could this have been improved?

   D. Did you have sufficient and timely contact with your target community? Providers?

   E. Did you find your group focused on the clinic's needs or the community's? Was this a problem for you?
5. One of our lecturers raised the issue of the communities' perception of us: we come from a different and academic environment; our involvement is episodic and lacks continuity; our goals are oriented to fulfilling academic requirements; there may be no follow-through or ongoing benefit to our intervention; variable levels of community involvement, etc. Please address any issues which seem relevant to you.

6. Did you experience difficulty in translating COPC theory into practice? If yes, please explain.

7. Do you feel you had adequate role-models or faculty supervision?

8. How would you rate this course/experience overall? Why?

9. If you were to be responsible for designing an ideal COPC educational experience, how would you structure it?
Appendix C

Esparto Goal Statement Objective and Action Plan

Goal: To enhance the delivery of COPC in Census tract 115 (Esparto area), we propose to assist the Esparto Clinic in providing accessible, affordable, and available services to the population 65 and over in the Capay Valley.

Objectives

1) COPC students, working as part of the Esparto Clinic will increase the involvement of the Capay Valley seniors in their own health care issues by assisting in the organization of a committee to be called the Capay Valley Senior Health Access Committee (CVSHAC), representative of the community, by August 30, 1986.

Methods:

a) Data will be collected to present to the Esparto Clinic staff, and community members, regarding problems of access to health care services. Collection will include:
   -- re-analysis of data from the 1985 COPC survey by Census tract 115, looking specifically in depth at the questionnaires from the 28 elders in the Capay Valley.
   -- data from past surveys
   -- anecdotal reports from seniors, community agencies, etc.

b) COPC students will work with the Capay Valley community to nominate and recruit members for the committee, with the following guidelines:
   -- at least one, but no more than two representatives from Capay, Esparto, Brooks, Buinda, Rumsey, and the Indian Reservation.
   -- one representative from the Board of Directors of the Esparto Clinic
   -- at least one representative from the Esparto Clinic staff.

The committee is not to exceed 14 total members, and at least 2/3 of the total will be seniors. The committee will be staffed by COPC students, COPC faculty, and the Esparto Clinic preceptor.

c) COPC students will make presentations to the committee and the Esparto Clinic about the COPC project, overview of the data to date, reasons for this year's project, and existing data regarding health access problems and barriers to care, with particular attention paid to the following issues:
   -- the need for assistance with claim forms
   -- the need to approach the Esparto Clinic Board of Directors about excessive fees
   -- the need for continuing health education
Objective #1 (cont'd)

d) The committee, with the assistance of the COPC students, will identify community needs around access on an ongoing basis.

e) The committee will, with the assistance of the COPC students, develop feasible priorities and action steps.

Assuming that the CVSHAC adopts the following objectives (#2-4) as priorities, the following methods, evaluation procedures, timelines, and budgets will apply.

2) CVSHAC staffed by the COPC students, will increase the awareness of the Agricultural Workers Board of Directors regarding barriers to care of the elderly population, specifically problems of affordability (excess fees) by August 30, 1986. They will do this by the following steps:

a) Gather information
   a1) Assessment of outpatient fees in the area: Woodland Clinic, Private physicians, etc.
   a2) Documentation of decreased encounter rate of Esparto Clinic since fee increases.
   a3) Personal interviews with seniors and the Esparto Clinic staff to collect statements.
   a4) Re-analysis of COPC questionnaires from 1985 survey.

b) Work with CVSHAC in the creation of a proposal to recommend an appropriate Esparto Clinic fee schedule, and arrange for proposal presentation to the Agricultural Workers Board of Directors.

c) Presentation of the proposal to the Agricultural Workers Board of Directors.

3) CVSHAC, staffed by COPC students, will implement a program for a volunteer network who will provide ongoing assistance to the elderly population regarding Health Insurance claim forms, by August 30, 1986.

a) CVSHAC will nominate and select interested and committed community members who will form this network.

b) CVSHAC will arrange a training program about Health Insurance Claim forms to be given by the North Bay HSA for the appointed members of the network and other interested parties.

c) CVSHAC will arrange appropriate dates, times, and places for willing participants, and will facilitate training sessions.

d) CVSHAC will work with the Esparto Clinic staff to set up a system of referral, using the Esparto Clinic as a base, for future elderly in need of claim form assistance.
Objective #3 (cont'd)

e) CVSHAC will provide publicity via posters, newspaper ads, etc. regarding available claim form assistance and the existing referral system through the Esparto Clinic.

f) CVSHAC will set up a system of data collection, data interpretation, and data evaluation (numbers served with favorable/unfavorable outcomes, etc.)

g) CVSHAC will arrange a follow-up session to respond to needs for continuing and supplemental training, and for ongoing evaluation of overall project effectiveness.

4) CVSHAC, staffed by COPC students, will increase health education of the Capay Valley senior population by arranging a series of four lectures to be given by the Agricultural Workers staff by August 30, 1986.

a) Contact the Agricultural Workers staff to solidify prior commitment to the lectures.

b) CVSHAC will assess the health interests of the Capay Valley seniors.

c) Arrange dates, times, and places for the lectures.

d) Publicize lectures via newspapers, posters, etc.
Appendix D

Interviewed Schools

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Appendix E
Journalistic Interviews with Deans and/or Faculty
From Representative Medical Schools

Hello. My name is Michael Medvin, and I am a third year medical student at U.C.S.F. doing research on medical education and community oriented primary care.

1. Are you aware of the community oriented primary care model?
   a) If no: give IOM definition and ask about courses/experiences in community medicine, epidemiology, public health, social sciences and the place they should have in medical education. What are the barriers to their introduction?
   b) If yes: what is your definition of COPC?

2. Are aspects of the COPC model and related disciplines integrated into your program (philosophy, courses, fieldwork)?

3. How important/appropriate is early (within the first two years of undergraduate medical education) exposure to community medicine/COPC orientation and field work?

4. What courses are important?

5. What about exposure to a multidisciplinary approach?

6. Is your program connected to a school of public health?

7. What do you think is the future of COPC in the U.S.?