Comprehensive Care Revisited

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Although the term comprehensive care has gone out of fashion in medical education, the concept has had a resurgence in attempts to teach primary care and family practice. Review of the early experiments in the teaching of comprehensive care in the 1950s reveals that much that was learned then is not being applied today. Surveys of medical school teaching and graduate training in primary care make it seem likely that there will be insufficient practitioners in the foreseeable future to meet the public need for personal physicians. Restructuring of both medical curricula and the delivery systems for personal health services may be necessary to apply effectively what has long been known about the teaching and practice of comprehensive primary care.

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Concern for patients as individuals has always been an integral part of medical education. After World War II, however, as a reaction against the growing tendency toward specialization in American medicine, a new emphasis appeared that was labelled "comprehensive care." With foundation support as well as encouragement from leaders in medical education, the concept became popular and remained so in medical schools for at least a decade. The term then began to disappear as an explicit focus for medical teaching during the 1960s, but at the same time came into use in federal legislation, and is still used descriptively as an attribute of model health delivery programs. Some of the principles developed in the early teaching experiments, for example, were incorporated into the Medicare amendments to the Social Security Act in terms of setting levels of care appropriate to patient needs. Not only hospital care was to be reimbursed but also nursing home care and home care. In developing its plans for neighborhood health centers, the Office of Economic Opportunity also drew heavily on principles worked out in the teaching of comprehensive care.

Today in medical education the emphasis is on "primary care" and "family practice," and interested support for this has broadened to include, besides the medical profession, legislators, foundation executives, and the consumers of medical care themselves. Legis-

latures, for instance, in many states have mandated family care departments and programs for state medical schools in an effort to redress a perceived imbalance between specialization and general patient care. Residencies in family practice have been established, and institutes and symposia on the family practitioner held. Primary care has also gained much attention from internists and pediatricians as well as family practitioners. It is once again a time of ferment in medical education. The question may be raised, however, whether this activity represents a resurgence of interest in comprehensive care or, instead, an entirely new phenomenon.

In many respects the current emphasis on *family* and *primary* care appears to approximate in another guise what in the 1950s was widely called *comprehensive care* by medical educators. In the belief that viewing the present-day concerns for better patient care as reflected in undergraduate programs, graduate training, and health delivery systems within the perspective of the earlier medical school experiments may be instructive, this essay reviews the comprehensive care movement of the 1950s, examines in some detail two of its major experiments, and summarizes the lessons learned. It then compares today's approaches, notes what might be applied to modern teaching that was previously learned, and suggests a rationale for the future.

The Comprehensive Care Movement

Although the term "comprehensive" had been used in relation to medical care for many years, the Commonwealth Fund Annual Report for 1949 (page 2) first brought it clearly into relationship with medical education. The key sentences are: "Medical progressives use the word *preventive* when they think of what medicine could do before pathology develops; *constructive* when they set "positive health" as their goal; *comprehensive* when they as doctors deal with people whole instead of in parts; *social* when they feel the pressure of the human environment on the individual and want the doctor to be at least aware of it."

A number of experiments in medical education were undertaken during the next decade, some fostered by the Commonwealth Fund; some, supported in other ways. These included a variety of different approaches. In a survey of the literature carried out in

1959, Ascheim (Reader and Goss, 1967: 6–8) found 32 programs described, which he divided into four major types: external preceptorships, home care, family health-advisor, and integrated clinics. He concluded, "Clearly, comprehensive care programs are not all woven from the same cloth."

Most of the programs used the word "comprehensive," however, to describe an effort to impart to students a point of view implying the exercise of skill and judgment in the integration of various services required to meet the needs of individual patients, including attention to emotional and social as well as physical factors, and continuing supervision of the patient through each episode of illness. The aim for students was to reverse their growing absorption with disease at the expense of interest in the patient. It was hoped that the student would come to understand the patient in the context of his life situation and daily problems as, at the same time, he learned to recognize and treat disease processes. He would then be able to work with the patient more effectively in the management of the patient's illness. It was generally agreed that a rather long time period was necessary for the student to develop an appropriate relationship with his patient, longer than that afforded by a brief hospitalization. An office practice arrangement was believed desirable where students under supervision could take on a responsible role and follow patients from the time of onset of an illness through an entire episode. A first step in developing a teaching model was usually the reorganization of services to patients. Outpatient departments of teaching hospitals in terms of convenience, contiguity, and access to a supply of patients were a natural choice for program sites.

What Was Learned from Efforts to Teach Comprehensive Care

Over the years a considerable bibliography has accumulated on the subject of teaching comprehensive care. By examining the two major experiments in the field, which were carefully documented, to determine what they showed and then by looking at some of the critical reviews, it may be possible to answer questions that educators continue to raise concerning the reasons for success and failure in this kind of teaching.

Lessons from Two Major Experiments

Colorado When Fred Kern, Jr., M.D., was designated the Medical Director of the University of Colorado experiment, he was a faculty member at Cornell. He and George Reader, the Director of the Cornell Comprehensive Care and Teaching Program (CC & TP), had been closely associated during their residency training at The New York Hospital and as Cornell faculty. Kern and Reader kept in touch during the formative periods of their respective programs, and together sought help in evaluation. Reader aligned himself with the Bureau of Applied Social Research of Columbia University for evaluation; Kern first turned briefly to the Educational Testing Service of Princeton, New Jersey, and then chose to collaborate with the Department of Psychology at the University of Colorado. Reader's CC & TP began formally in the summer of 1952, while Kern was organizing his General Medical Clinic (GMC) at the Denver General Hospital. For part of that academic year, Kern sent one of his key physicians to work with Reader's group and then started his program a year later in 1953. At Cornell, the evaluation of the experiment took the form of a sociological study, directed by Professor R.K. Merton of Columbia; at Colorado it became a social-psychological experiment, directed by Professor Kenneth Hammond.

Hammond and Kern (1959), showed rather clearly that the GMC Program did reduce the development of increasingly negative student attitudes toward comprehensive care, without impairing the acquisition of traditional medical knowledge and skill. They also identified a "scheduling effect"—students during the second half of the senior year when they were anticipating the internship experience with its emphasis on disease orientation were more resistant to the program goals. Hammond and Kern (1959:160) speculate about the importance of learning the role of psychological and social factors in disease prior to participating in the GMC Program and conclude "if comprehensive care implies a knowledge of behavioral science, then medical students should learn behavioral science as a basic course." They question, however, whether behavioral scientists are ready to assume the responsibility for such teaching.

An important consideration, particularly highlighted by Hammond and Kern, was the teaching setting and the type of patients available. The GMC Program was carried out at the Denver

General Hospital, a city hospital, while the control students worked in the clinics of Colorado General Hospital, the University Hospital. They report that students and staff all felt that the GMC patients were unsuitable teaching material for a comprehensive care program. They presented a limited variety of disease entities and overwhelming social problems; they did not appear anxious to regain health and employment; and they broke appointments so frequently that clinic function was significantly affected. GMC students were therefore more likely than control students to encounter patients who were old in years, members of ethnic minority groups, welfare recipients, from unstable or broken families, or incumbents of low-valued socioeconomic status. This resulted in complex communication barriers between the GMC students and their families.

At the conclusion of the formal experiment, the control group was eliminated so that all students worked in the GMC for a six-month period in their fourth year, but less intensively. They had two or three half-days of GMC and a mixture of specialty clinics at both hospitals each week. GMC staff began screening patients for admission rigorously, opening another medical clinic and seven specialty clinics at Denver General Hospital in July 1956. With these changes, almost all student dissatisfaction disappeared (Hammond and Kern, 1959: 160–161).

A few years later, however, the City of Denver and the University of Colorado disagreed over finances, and in 1960 the Denver General Hospital cut all ties with the University. The GMC Program ended as of that time. It was never reconstituted at Colorado General Hospital even when a new clinic facility was constructed there. Instead, emphasis was placed on attempting to simulate solo physician offices.

As Hammond and Kern (1959:160) say: "the success of this type of educational program depends upon the full support of everyone—participating faculty members, cooperating agencies, and the hospital staff." Clearly they did not continue to receive such support, and the program ended.

Cornell As has been noted above, Reader turned to Professor R.K. Merton and his colleagues at the Bureau of Applied Social Research of Columbia University (BASR) for help with evaluation of the CC & TP. The CC & TP staff had decided that a shift in students' attitudes and values in the direction of patient rather than disease orientation was sought as a major outcome of the program and,

if possible, this was to be measured. Accordingly, the sociologists developed a before-and-after research design, with comparison to be made, as well, between the two halves of each class. One-half of the class would take Comprehensive Care first while the other half was taking Surgery, Obstetrics, and electives, which allowed a comparison of the two halves in December of each year. Following careful, qualitative field work and depth interviews with staff and students, the BASR sociologists devised questionnaires to tap attitudes and values, and to measure response to the differential stimuli of the two types of curricula. This was later supplemented with continuing interviews with diarists in each of the four medical school classes and by analysis of the actual behavior of clinic patients in terms of referral patterns and costs. A separate study (Reader and Goss, 1967:335–355) of the Cornell faculty was done to determine the climate of faculty opinion. The first student questionnaire was administered in the spring of 1952 to the third-year class about to enter the new program. The CC & TP started formally with students in the summer of 1952.

As reported by Reader and Goss and their colleagues (1967), the CC & TP was clearly found to have the desired effect, for most students, of reversing the usual trend from first through fourth year of an increasing preference for patients with definable physical illness. Professional objectivity and self-confidence were enhanced. Students, when exposed to the CC & TP, developed greater appreciation of the significance of social and emotional problems of patients than those not exposed to it. They also became more discriminating and more realistic. But the effect was short-term; when students left the program, they tended to revert to a disease rather than a patient orientation.

The setting was recognized as all important in creating the right atmosphere for practicing comprehensive care. Ideally, it appeared to require a place where physicians, appropriate consultants (including at least a psychiatrist, surgeon, and gynecologist-on-call), nurses, social workers, aides, and others work together; and, by communicating among themselves, provide a compassionate, friendly environment.

Although the original concept of the CC & TP was to bring the new orientation to all patients served by The New York Hospital, it became clear to the CC & TP staff that a Comprehensive Care Clinic must deal primarily with those patients who look upon the hospital as their physician and not with the many others who have a

personal physician but who are referred for specialty consultation. For teaching purposes, too, selection of patients is important. In order to catch the imagination of a medical student, it is necessary to give him new patients who are sick. Well patients and well families do not seem to offer students the challenge necessary for their professional growth.

Also, although family-oriented care may be desirable for every patient, it was found to be unrealistic to expect one physician to deal with every member of each family. Family members, moreover, did not seem to want this kind of arrangement. Home care, on the other hand, offered a student the experience in the family setting of dealing with a sick person and yet being dependent on the help and understanding of family members.

The CC & TP staff became committed to the belief that students must work with ambulatory patients over a four-to-six month period in a responsible role, with advice and supervision readily available to them, and in a setting where there is a positive attitude toward patients among all members of the staff. A hectic environment and the pressure of too many patients was found to be strongly inhibiting of the development of the desired attitudes.

At the conclusion of the five-year experimental period, the CC & TP continued for nine more years (until 1966) in much the same way. In 1966–67, the curriculum was changed to allow a four- instead of a six-month rotation. Two years later, however, in 1969, the curriculum was changed again to make the fourth year a free elective period. Senior faculty and the Medical College administration had concluded that early specialization was important for medical students and could be accomplished best through electives. They felt that third and fourth year teaching could readily be combined into a somewhat extended third year at which point traditional teaching would be complete, allowing the students to follow special interests in the last year. One of the electives offered was in comprehensive care but only an occasional student chose it, and the Home Care experience had to be abandoned. Medicine and Pediatric clerkships in the third year provided only a limited experience with ambulatory patients. It was quickly noted that third-year students, still uncertain about their diagnostic skills, tended to focus on the patient's disease rather than on his or her life adjustment as well.

The Commonwealth Fund provided a budget for the CC & TP until 1960. Besides the important financial support, this meant that

the director had budgetary control over key personnel in the program. Later, although the various departments of the Medical Center continued to support CC & TP staff members, they did not have the same sense of allegiance to the program itself. A critical coordinating element was lost. From this it may be suggested that central budgetary control is an important element in the creation of an appropriate patient-care setting for the practice and teaching of comprehensive care.

One of the reasons for the end of the CC & TP at Cornell and one that threatens the practice as well as the teaching of comprehensive care in any university hospital—is implicit in the findings of the study of the Cornell faculty. Caplovitz (Reader and Goss, 1967: 335–355) identified a considerable number of faculty members with a constellation of attitudes represented by lack of interest in some patients, desire to refer out those patients with social and psychiatric problems, and doubt that students gain anything from working with patients on their own. This point of view is clearly antithetical to teaching the comprehensive care of patients and contributed to its demise.

The two experimental programs both demonstrated that it is possible to establish an interdisciplinary team and to provide an appropriate setting within the outpatient department of a teaching hospital for the practice and teaching of comprehensive care. Also, they showed that most students will learn the appropriate attitudes and skills for handling the full range of problems, social and psychological as well as physical, that ambulatory patients present. It was found that this could be accomplished without interfering with the learning of factual knowledge about disease entitities, and may even enhance such learning. Although the majority of students had a positive response, some students were found to be resistant to such teaching, which in fact may harden their antagonism toward social and psychological factors in illness. The positive effect of the programs on students, moreover, appears to be short-lived and to be determined mainly by the setting in which they work. Those students who take the course in the latter half of their fourth year appear to be least responsive, presumably in anticipation of their role as interns where a disease orientation is sanctioned and traditional.

The Reviews of Comprehensive Care Teaching

Lee (1962), Snoke and Weinerman (1964), Sanazaro and Bates

(1968), and Alpert and Charney (1973), published major reviews of those teaching programs which focused on comprehensive care in medical schools. In addition Rezler (1974), reviewed and analyzed the effects of such teaching on the apparent change in student attitudes, and Goodrich et al. (1972), studied the reasons for the apparent failure of comprehensive care as a hospital-based form of health care delivery. These together represent a valuable resource and critique of the movement.

More particularly, Dr. Peter Lee (1962) at the behest of the Commonwealth Fund studied nine experiments in medical education which he reported to the 1960 Teaching Institute of the Association of American Medical Colleges and subsequently published as a monograph. Only four of the nine, Cornell, Colorado, Temple, and North Carolina, did he identify as comprehensive medicine experiments although Western Reserve, which Lee describes under "Reorganization of the Medical Curriculum" had as one of its main goals emphasis on the same principles. Lee stressed the importance of interdepartmental collaboration in achieving the educational objectives implied by comprehensive medicine and cited the functional significance of establishing explicit educational goals. He was struck by the effect of formal evaluation in widening the generic impact of model programs. He also pointed out the value and importance of collaboration with social scientists both in evaluation and in research into various aspects of patient care.

Snoke and Weinerman (1964), studied 20 programs, reviewing published materials and making actual site visits to five, Colorado, Cornell, Harvard, North Carolina, and Temple. They analyzed these in detail and were particularly troubled by the isolation and in some instances artificiality of model programs. They applauded the team approach, the responsibility given students, and the positive effects of family-oriented practice and home care experiences. They recommended combining a special teaching unit with reorganization of the whole outpatient department or even the use of a group practice center outside the hospital which would provide a proper cross-section of patients.

Sanazaro and Bates (1968), reported an ambitious attempt to analyze the teaching of comprehensive medicine and its results. They reviewed the available literature and then compared student performance in "comprehensive" versus "noncomprehensive" schools using a critical incident technique. The study led to one firm

conclusion (Sanazaro and Bates, 1968:789): "The definition of comprehensive medicine varies considerably among medical schools and among faculty members in the same school. Despite this variation, and regardless of whether a formal teaching program was offered in comprehensive medicine, the great majority of students who were observed in this study were judged by their faculty members to be performing at a satisfactory level in accord with behaviorally-defined criteria of comprehensive medicine." They were left unsure that a special teaching program is necessary.

Alpert and Charney (1973), reviewed seven programs in their monograph on education for primary care, three of them (Temple, Colorado, and Cornell) in detail. They concluded that the programs succeeded as experiments in medical education but failed because the majority of the faculty never recognized them as more than that. They felt that the programs were too isolated, indicating that the principles were not widely accepted. They also suggested that the fourth year of medical school may be too late to introduce students to such programs, and cited the lack of role models and the inevitable conflict between the goals of primary care and hospital medicine.

Rezler (1974) reviewed the available literature on attitude change in medical students up to 1974. She noted in regard to the teaching of comprehensive care that a positive orientation toward treating patients with social and emotional problems tended to be short-lived in all programs. She quoted Etzioni as saying (Rezler, 1974:1029) "to solve social problems by changing people is more expensive and usually less productive than approaches that accept people as they are and seek to mend not them but the circumstances around them . . ." and concludes that the best solution is to select students for admission with the appropriate attitudes. She would also select faculty members with the right attitudes to provide appropriate role models.

Although there is some disagreement among the reviewers as to the value of special or experimental programs, they all note the importance of positive role models in the faculty. If Sanazaro and Bates are correct that proper attitudes are found among some medical students in all types of medical schools, and if Rezler is correct in her assumption that attitudes cannot be changed permanently, the problem of delivering comprehensive care to patients comes back to the delivery system that is developed. Some leaders with the

right attitudes are undoubtedly necessary, but the setting and the composition of the team may be the most significant factors in seeing that patients obtain personal services that meet all their needs.

Goodrich et al. (1972) reviewed the history of four hospital-based projects for delivering comprehensive care and recommended a community-based approach with coordination provided by a community agency such as the health department. They felt the hospital provided an unsatisfactory environment for comprehensive care.

Why Did Comprehensive Care Programs Disappear?

Some of the reasons comprehensive care programs were phased out in medical education have been noted: loss of support from faculty and administration, student resistance, and fragmentation owing to loss of central budgetary control. Perhaps another major reason the concept has not continued in the form it was begun, however, is the difficulty of making such programs pay their own way after grant support from interested foundations has ended.

The staff required for a comprehensive care clinic includes a basic doctor-nurse-social worker team, clerks and registrars, and consultants. Student participation requires an expenditure of extra time to allow the student to formulate the problems for review and to offer a tentative plan of management. In addition, the concept that the various specialists will be brought together with the student and patient obviates separate visits for the patient to each consultant, which might be charged for separately in the ordinary course of events. All of this makes for an expensive form of health care delivery under fee-for-service although one that may be quite appropriate under prepayment. Most striking, however, has been the effect of inflation on the costs of services themselves. In a study (Reader and Olendzki, 1960) of clinic costs in 1955 at The New York Hospital, the median cost for patients in the Comprehensive Care Clinic per year was $38. In 1962 (Goodrich et al., 1970), patients in the Welfare Medical Care Project (another comprehensive approach to health care delivery) averaged almost twice as much. Today a single clinic visit to The New York Hospital often costs as much as a year's ambulatory care in 1962.

In the 1950s, hospital administrators were not particularly aware of the losses occasioned by outpatient care or, if aware, believed it feasible to absorb them. Increasing cost and inadequate

reimbursement for ambulatory services brought home to those making fiscal decisions the great expense of outpatient care and particularly the comprehensive care of ambulatory patients.

Present Status of Comprehensive Care Teaching

In an effort to determine what direction comprehensive care teaching has taken in recent years, a letter was sent by the authors to key people in 113 medical schools inquiring about the current status of comprehensive care teaching in 1974. It resulted in responses from 48 schools. From the remaining schools in most instances it was possible to obtain catalog descriptions of courses.

The central paragraphs of the letter read as follows:

> Almost all medical schools advocate the desirability of instilling their students with the basic principles of comprehensive care, i.e., patient orientation, continuity of care, family and environmental orientation, preventive as well as curative care delivered by team effort with a multi-dimensional approach, etc. However, the courses designed to teach such principles have undergone vast revision since the first comprehensive care teaching programs of the early fifties and presently fall under a large number of different headings including: preclinical core courses in health ecology, preventive, community, family medicine, and clinical clerkships and preceptorships in family care, community medicine, group practice, ambulatory care, etc.
>
> We would be most appreciative if you could send us a brief description of any such courses being taught at your school including required and elective courses at both preclinical and clinical levels. Pertinent information would include course set up, number of hours, level of students, their duties and sponsoring department, statement of goals and purpose. If you already have such material printed up we would be most happy to receive a copy.

There were only ten schools for which no information was available. Interestingly enough, there were many discrepancies between catalog descriptions of courses and the letter responses, in which case the letter responses were taken to be the more reliable. In general, the responses obtained were at the same time enthusiastic and frustrated. Most educators expressed a strong desire to teach and practice comprehensive care. However, they felt their programs were inadequate at present and were anxious to share ideas and to know the survey results. Analysis of the responses to this letter and

to the catalog descriptions indicated that the principles of comprehensive care are being taught through many small, fragmented approaches which fall into the following main categories:

1. *Family Medicine*: this is becoming the most popular—many schools have formed departments and offer at least one course.
2. *Community Medicine*: these courses are as diverse and complex as the variety of communities which are available to the schools for assigning students.
3. *Ambulatory Medicine*: these courses generally assign students to outpatient departments where they have an opportunity to become involved with certain aspects of comprehensive care such as follow-up of ambulatory patients.
4. *Preclinical*: the more successful courses amongst those of the standard curriculum are those in which students participate in field trips and evaluate problems as well as hear lectures.

Within these categories, the courses themselves fall into the following formats:

— students observe private practitioners, group practitioners, public health officers, etc.
— students participate in a private or group practice, in a community organization, in clinics or outpatient departments . . . . with attendant responsibilities.
— students are presented with various problems relative to health care delivery and are asked to study and evaluate them.
— students participate in lectures, seminars, field trips.

(Table 1 gives a more specific breakdown of the survey findings with some examples of each category).

All in all, there is a striking similarity to the types Ascheim found in 1959 with the exception that family medicine has gained in status, community medicine has emerged as a new term, home care has lost ground as a student experience, and ambulatory care programs are relatively brief experiences which do not emphasize integrated clinics. From the survey findings we can conclude that the teaching of comprehensive care has not disappeared but instead, still appears in a host of diverse forms.

TABLE 1

Types of Courses Described as Comprehensive Care Teaching in Responses from 48 Schools

1. Family Medicine		
a. A family is assigned to a student for a period of time, usually one or more years.	Tulane Vanderbilt Albany	South Carolina Tennessee
b. Preceptorship with a family practitioner	U. of Missouri (Columbia) Nebraska Louisiana State U. of Minnesota Mississippi Arkansas U. of California (Davis) Colorado	Washington University Georgetown Georgia Hawaii Iowa Kansas North Carolina Oklahoma Tulane
c. Family Practice Clinic	Oklahoma U. of Texas (Houston) U. of Virginia	
d. Family Practice Clerkship	U. of California (Davis) Nebraska Iowa	Kansas Kentucky U. of Missouri (Columbia)
e. Discussion of clinical problems in seminars or research projects	Nebraska U. of Minnesota	
2. Community Medicine		
a. Preceptorships in various types of primary care sttings	Migrant Farm Workers: U. of California (Davis and San Francisco) U. of Minnesota HMO: Georgetown County Health Dept.: Nebraska Georgetown American Indian Program: Georgetown Group Practice: Georgia	North Carolina

	Indiana Nebraska U. of Virginia
	Community Health Center: Iowa Vanderbilt
b. Community medicine research	U. of California (Davis and San Diego) Mount Sinai Indiana Medical College of Wisconsin
c. Lectures, labs, field trips	Einstein U. of California (Davis) Indiana
d. Student accompanies Public Health nurse on home visits	U. of California (San Diego)
3. Ambulatory Medicine	
a. General Medical Clinic	Albany North Carolina Einstein
b. Clerkship	Dartmouth U. of Virginia Duke
c. Clinics set up as group practices for teaching	Harvard Indiana Washington University (St. Louis)
d. One year in specialty clinics	Rochester

4. Preclinical

Lectures and Seminars in most schools covered the following range of topics:

Models of Primary Care
Systems of Health Care
Medical Ecology
Medical Sociology
Epidemiology and Biostatistics
Interviewing Patients

Primary Care—The Current Focus

The current focus of the greatest attention among medical educators is on the teaching of primary care. Walsh McDermott (1974:292) says in regard to it that it is "the type of care traditionally rendered by the general practitioner. The word 'primary' is misleading. Presumably it crept into usage to underline the importance of the initial stage in obtaining medical care; however, it also conjures up a picture of a series of well-demarcated stages something like the old-time evacuation of casualties from battlefield dressing stations to base hospital. 'Primary' does not clearly convey, as it should, that the care in question is ideally a continuing affair. One may receive it from the same person, whenever it might be needed, over months, years, or decades. It is *general* medical care."

The most elaborate and recent effort at definition is that of Parker et al. (1976: 428–429). Their summary states:

> Primary care provides basic services, including those of an emergency nature, in a holistic fashion. It provides continuing management and coordination of all medical care services with appropriate retention and referral to other levels. It places emphasis, when feasible, on the preventive end of the preventive-curative spectrum of health care. Its services are provided equitably in a dignified, personalized, and caring manner.

Clearly, there are many similarities between the concepts of comprehensive care and primary care. Alpert and Charney (1973:2) in their critique miss the point when they suggest the term comprehensive care be retired because "it is insufficiently restrictive to define a subcategory of medicine" and "it is divisive." The designation was never intended to define a new subspecialty of medicine but rather to express a point of view about care of the patient. The aim of education in comprehensive care was to offer students an experience that would leave them undifferentiated physicians (generic) at the time of graduation. Whatever term is used today—primary care, general medical care, or comprehensive care—the goals of medical educators appear not to have changed very much from the 1950s. It is the methods used that are constantly in flux in an effort to find what may work best. The next question to examine is whether those concerned with teaching medical students are

building on previous information as do those who try to advance knowledge in other fields.

What Lessons From the Past Are Being Applied Today?

The Association of American Medical Colleges commissioned a survey (Schroeder et al., 1974) of United States medical schools in 1973 to determine what is being done to provide for students effective teaching in primary care. If this is accepted as a term similar to comprehensive care, the results of the AAMC survey when combined with the response to the authors' letter of inquiry should provide an idea of what principles are being applied today.

The AAMC survey indicated that although 69 percent of schools require a defined ambulatory care clerkship, the majority of experiences are less than two months in duration. A non-hospital ambulatory setting seems to be the major resource for ambulatory teaching. Formal training in emergency care is part of the undergraduate curriculum in only 49 percent of schools. Medical students are required to learn about alcoholism and drug abuse in only 26 percent of the 82 medical school programs in existence. Learning about health care management subjects ranged from 30 percent of schools requiring information on certification and accreditation of health professionals to 50 percent of schools requiring courses on delivery of health care.

Schroeder et al. (1974:833) state: "There are, as yet, no clear patterns for optimal program development; indeed, it may well be that each institution will have to design a unique program consistent with its own strengths and governance . . . The eventual shape of the individual programs will depend to a large extent on the commitments and priorities of the AMCS (American Medical Centers)."

Although attempts at teaching principles of comprehensive care are still widespread, there seems to be little attention to the creation of appropriate settings, which have been found to be the most effective ways of reinforcing desired attitudes. There is considerable reliance on didactic courses, but not much on student responsibility for patients over time. Where departments of family medicine have been established, on the other hand, there does seem to be a real institutional commitment, available role models, and a setting that includes a model practice. Perhaps the new emphasis on

graduate training for learning comprehensive or primary care offers a new and better avenue for success, one that will be reflected in undergraduate teaching as well.

Graduate Training in the Family Practice Residency

Although general practice residencies have been available since at least the 1940s they did not prove to be particularly popular or successful until the Academy of Family Practice was organized in 1969. With the development of specialty boards in family medicine, there came a growing interest among students in applying for family practice residencies. The latter have grown in number from 59 in 1971 to 205 today, partly as a result of legislative stimulus. In many of the state universities, as at the University of Minnesota, the legislature has underwritten the whole residency program. Nevertheless, there are today only 1,502 first-year positions available throughout the country.

Graduate Training in Primary Care Residencies

The American College of Physicians and the Academy of Pediatrics have both fostered the idea of a special primary care track in their residency programs. Flexible residencies are also offered that combine medicine or pediatrics with some obstetrics and gynecology, psychiatry, and minor surgery. In a position paper on Integrated Health Manpower Policy for Primary Care, the Federated Council for Internal Medicine (1976) has pointed out that at least 2,500 new training positions will be needed for primary care, the majority of which, they believe, should be in internal medicine. They point out that one of the areas where training programs have lagged is in the ambulatory setting, and call for improvement in ambulatory facilities, upgrading of staffing, and financial subsidy. There are, however, at present only 3,700 first-year resident slots in internal medicine and, out of 433 approved medical residencies, only 30 offer a primary care track. In pediatrics there are 274 approved residencies with about 2,000 first-year slots. No breakdown is available for primary care tracks in pediatrics.

The point that emerges from this is that graduate training in family medicine or primary care is not likely to produce sufficient numbers of primary care specialists in the near future to serve the

American public. Physicians for some years to come will continue to need some orientation toward primary or comprehensive care during their undergraduate days even if they specialize later. Another alternative in meeting the present public demand is development of a better health care delivery system, with teams of nurses, new health workers, and physicians working together to deliver the kind of care called for in Parker's (1976) definition. A striking feature of this definition in fact is that it does not refer to an individual physician as a provider. No one, even the most skilled family practitioner, could provide all that the definition requires for patients. Parker et al. appear to be referring to a *system* within which the patient will find what he or she needs. Anoter point to be noted is that many types of physicians may, indeed must, participate in this system in order for it to function effectively.

Each and every medical student, as has been shown many times over, will not necessarily embrace the appropriate set of attitudes required to become excellent primary or comprehensive physicians. The nurse practitioner is one type of new health worker who can help to fill this gap. By virtue of their selection and training, nurses are more likely to be interested in the personal problems of patients than many students. With the addition of clinical skills, the nurse practitioner can readily become one of the most important members of the primary care team (Ross, 1973). Training of such team members should be rapidly expanded along with graduate training of primary care physicians.

A Rationale for Future Education in Comprehensive Care

Recognizing that all medical students should at least be exposed to the principles of comprehensive or primary care, but that there is virtue in diversity of approach, what are the elements that are most likely to be of importance to the medical schools? Role models who are generalists with status in the major clinical departments, or in a department of their own, together with a graduate training program emphasizing comprehensive care of patients would seem to be prerequisites. An appropriate setting must be found within or without the teaching hospital where a team approach is applied to a selected cross-section of patients. For those who believe a prepaid group

practice is a suitable environment, a careful reading of Freidson's *Doctoring Together* (1975) is in order. The pressures of such a practice would preclude the proper teaching of comprehensive care. A teaching area out of the mainstream is needed, where the pace of work can be controlled and there is time for contemplation. Students should be assigned their own ambulatory patients for a period of at least six months. This experience should come after the regular inpatient clerkship in Medicine and should be integrated with a graduate training program in primary care to avoid the "scheduling effect." Course work in the behavioral sciences and public health in the first two years of medical school might provide a useful basis for later practice. Health advisor assignments to patients in the early years might also prove helpful in building positive attitudes. Costs of such education must be budgeted and not met out of practice fees. Ongoing financial support is essential. The state of confusion of the present position of the medical schools in addressing themselves to the problem of primary care is aptly summarized in the Association of American Medical Colleges' *Perspectives in Primary Care Education* (1975). Although the report indicates the confusion, the diversity of points of view, there is also great interest and concern expressed, and, with that, the promise of change.

It must be recognized that the structure of the American medical school and the attitudes of its faculty may preclude the optimum teaching of primary or comprehensive care. Goodrich et al. (1972) may also be correct in their belief that the teaching hospital is not the appropriate site for its practice. Changes in the delivery system may have to take place along with changes in the structure of medical education.

Relman (1975:146), one of the participants in the recent symposium on primary care, made a most profound point when he said: "We should remember that the primary care problem is not to be solved simply by giving the appropriate training to the appropriate mix of physicians. The demand for more primary care being heard on all sides these days is symptomatic of a much broader malaise in our health care system. To deal effectively with the roots of the problem, we will need important changes in the organization and financing of the system as well as reforms in graduate education."

Two exciting new experiments in primary care, however, are worth watching. One is at the Massachusetts General Hospital (Grossman et al., 1975); the other, at the Beth Israel Hospital

(Delbanco, 1975), both in Boston. In these, an attempt has been made to develop a group of primary care internists practicing together with other health personnel within the hospital outpatient department in a financially autonomous way. If successful, presumably they would set the pattern for care of ambulatory patients for both teaching hospitals. Within these settings, medical students and residents may learn to deal comprehensively with patients. Thus far these are relatively small operations, can accommodate very few students, and are not completely self-sufficient financially. Like the early comprehensive care experiments, they are models launched with foundation support and have yet to be able to show that they can continue to be viable even for as long as a decade.

Summary and Conclusions

Attempts to teach comprehensive care to medical students which began in the 1950s took a variety of forms. Two major experiments at Colorado and Cornell demonstrated that teaching can be done but that it tends to have a short-lived effect on student attitudes. The setting in which it takes place is the most important element both for effective practice and for the teaching of the principles of comprehensive care. The programs themselves terminated for a variety of reasons, the most important of which was probably lack of financial and faculty support.

Although medical educators continue to be interested in teaching the principles of comprehensive care, different terms have come into use. Family medicine and primary care are two of the most popular. Surprisingly little is being applied today, however, of what was learned previously through the various teaching experiments. Students tend to have too brief an experience with ambulatory patients in most schools. Family medicine programs appear to show some promise in providing appropriate role models and a model practice setting.

The production of primary care practitioners through formal graduate training does not seem likely to be sufficient to meet the needs of the public for the immediate future. Therefore, other types of health professionals will need to be trained, such as the nurse practitioner, and all medical students will require some exposure to the team approach of primary health care delivery. In a society

which values diversity, continuing experimentation and change in teaching and practice methods may provide the only and best hope for the future.

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The advice and assistance of Mary E.W. Goss, Ph.D., is gratefully acknowledged.

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