SPECIAL ARTICLE

FAMILY PRACTICE IN EVOLUTION

Progress, Problems and Projections

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Abstract Family practice has developed in direct response to the public need for primary care with the elements of comprehensiveness, continuity and accessibility. This specialty represents a re-emphasis of the generalist role in medicine, with particular concern for the family as the unit of care. Since the American Board of Family Practice was formed nine years ago, the first phase of development has been completed. Teaching programs in family medicine have been effectively established at undergraduate and graduate levels throughout the country in both university and community settings. Refinement of teaching programs and initiation of a strong ongoing research effort are now required. The continued successful evolution of family practice as a foundation of primary care in the United States is essential to extend the highest possible quality of care to the entire population at a cost that can be afforded in a society with limited resources for health care. (N Engl J Med 298:593-601, 1978)

OVER ten years have now passed since the publication of the three major national reports that together served as a foundation for the genesis of family practice in the United States: the Millis, Willard and Folsom reports.[1-3] It has been nine years since the formation of the American Board of Family Practice. The period of initial development of this new specialty was occupied primarily with the tasks involved in establishing teaching programs in family medicine for medical students and residents, with less attention to other necessary elements of the specialty's development. This phase has now been largely completed, and a second phase of further maturation is starting.

It is important at this stage of transition in the development of family practice to reassess its progress, current problems and future directions. The progress of the field to date will be described in relation to the more critical issues initially encountered by the specialty as it emerged in the late 1960's. Four important issues currently facing the specialty will next be discussed, which then will permit consideration of projected future directions in the field.

BACKGROUND AND INITIAL ISSUES

The recognition of family practice in 1969 as the 20th specialty in American medicine is of interest in a number of respects. It represents a re-emphasis of the generalist role in medicine, with particular concern for the family as the unit of care, comprehensiveness and continuity of personal care and ready access to care. Thus, at a time when the number of primary-care physicians had been steadily decreasing, despite a growing population with increased expectations for health care, family practice was seen as a major response to the mounting deficits in primary care. This development therefore represents an assertion of the need for a generalist role in the health care of families, whereas pediatrics represented such an assertion for the care of children (specialty board formed in 1933) and internal medicine represented such an assertion for the care of adults (specialty board formed in 1936). That the idea of a broad-breadth specialty dealing with the health-care needs of families and individual patients, regardless of age or sex, is not new is evidenced by the fact that formal efforts were previously made within the American Medical Association in 1919, and later in 1941, to establish a board of general practice.

Family practice has also been seen as representing an increased concern for health maintenance, prevention of disease, long-term care of chronic illness, rehabilitation and counseling for common health problems. It must be admitted that its predecessor, general practice, as well as many other disciplines in medicine, has focused more strongly on episodic care of acute problems. Family practice has been charged with the need to integrate behavioral science with the care of organic medical problems as well as to coordinate the patient's overall health care in the context of his or her family and available resources within the community, including consultants in the more limited specialties.

Stephens, who views this development as a reform movement in response to major cultural, social and political trends, has presented an interesting perspective of the genesis of family practice:

> The medical establishment itself is created to a considerable degree by forces that originate in the larger social order — forces of political, economic and cultural significance for society as a whole. It is my belief that family practice education bears a special, perhaps even a unique, relation to these external forces, and that its current significance and its future development lie in our understanding of these forces and relationships.[4]

Since family practice had no formal place in medical education in the United States before 1969, a number of major issues were immediately raised as the new specialty took root. Perhaps the most important issues can be summarized as follows: What is the

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academic discipline of family practice? How can teaching programs be organized in family practice? What should be the content of curriculum in family-practice programs? Can faculty be recruited to teach in developing programs? Can interest among medical students in this emerging specialty be developed and sustained? And will graduates of family-practice residency programs locate in areas of need?

Progress to Date

The Academic Discipline

In the early years of family-practice development, considerable attention was paid to the conceptual definition of its academic discipline. There was some controversy on this issue, and the attempts by some to focus primarily on its unique content as different from all other clinical disciplines blurred the debate for a time. It is difficult — even impossible — to define with precision the distinguishable body of knowledge in any broad clinical specialty, such as family practice, internal medicine and pediatrics. Family practice, as the broadest field in medicine, incorporates in a particular way portions of all other clinical disciplines and related fields.

In an excellent paper that directly addressed this question, McWhinney proposed four essential criteria for the definition of any academic discipline: a distinguishable body of knowledge; a unique field of action; an active area of research; and a training that is intellectually rigorous.[5] Use of all these criteria enlarged the definition of the academic discipline of family practice. It became clear that content alone could not adequately define this discipline, and that a functional definition was required. The term "family medicine" has therefore evolved as the academic discipline of family practice. It can be defined as the body of knowledge and skills applied by the family physician as he or she provides primary, continuing and comprehensive health care to patients and their families regardless of their age, sex or presenting complaint.[6]

Other specialties have defined themselves on the basis of anatomic areas, age or sex. Family medicine cuts across territorial boundaries of all the traditional specialties, and varies in its application by each family physician based upon his or her own training, interests and skills, as well as the community in which he or she practices and the proximity to other medical resources. Regardless of individual differences between practices of family physicians, Stephens suggests that "the sine qua non of family practice is the knowledge and skill which allow the family physician to confront relatively large numbers of unselected patients with unselected conditions and to carry on therapeutic relationships with patients over time."[7] Infusion of new areas of knowledge and skills can be expected to add to the academic discipline of family medicine as research efforts in the field expand.

Organization of Teaching Programs

The development of teaching programs in family practice, at both undergraduate and graduate levels, has been the principal thrust in the field to date in the United States. The growth in numbers of programs has been impressive in a short span of years. Table 1 and Figures 1 and 2 reflect this growth at the undergraduate and graduate levels, respectively.

At the undergraduate level, emphasis has been placed on progressive exposure to family medicine during all four years of medical school. Family-practice faculty members are often involved in the teaching of "Introduction to Clinical Medicine" courses (history taking and physical diagnosis), preceptorships, clerkships, preventive and community medicine and related areas. Barnett[8] has presented an excellent overview of the philosophy and content of undergraduate curriculum in family medicine in one medical school, and case studies of three additional undergraduate programs in family medicine have recently been published.[9]

Table 1. Organizational Units for Family Practice in Medical Schools.*

Unit	Number
Departments	84
Divisions	13
Other programs	4
Departments under development	9
Schools without activity	21
Total	131

*Data, compiled by Division of Education, American Academy of Family Physicians, Kansas City, MO, represent all medical schools in the United States, including branch campuses & medical schools not yet fully accredited but in an advanced stage of development.

At the graduate level, residency development has been based upon the *Essentials for Graduate Training in Family Practice*, a document jointly completed in 1969 by the American Academy of Family Physicians, American Board of Family Practice and Section on General/Family Practice of the American Medical Association. These *Essentials* call for three-year residency programs combining ambulatory-care training in a continuity-of-care setting (family-practice center) with hospital-based training in the traditional specialties and additional training in a range of subspecialty areas. Many of these residency programs have been developed in community hospitals, and there has been an increasing emphasis on university affiliations (Table 2). Some well developed networks of university-affiliated family-practice residency programs have been described,[10-12] and case studies of three well established graduate programs in family practice have recently been reported in some detail.[13]

Jason has called for medical education to model itself more directly on the needs of the future physician's practice.[14] The same premise has been expressed by Hodgkin in these words: "Teaching what

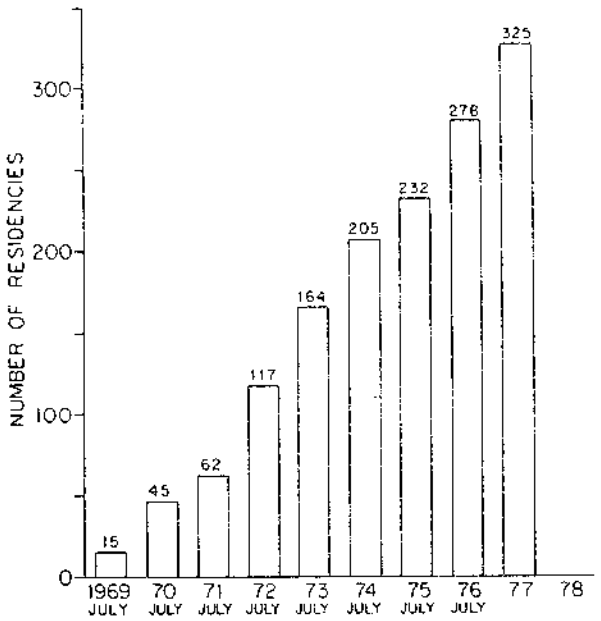

Figure 1. Total Number of Approved Residency Programs in Family Practice in the United States, According to Year (Based on Data Provided by the Division of Education, American Academy of Family Physicians, Kansas City, Missouri).

is unrelated to the facts of practice tends to be unrealistic and easily deteriorates into dogma."[15] Considerable progress has been made in many family-practice residency programs in this direction. At the Medical College of Virginia, for example, the profiles of teaching practices in the several affiliated residency programs have been documented to be nearly identical to those of nonteaching practices elsewhere in Virginia.[16]

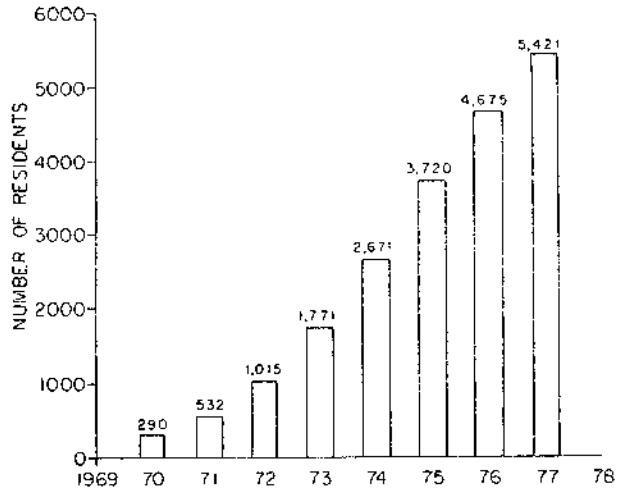

Figure 2. Total Number of Residents in Approved Family-Practice Residency Programs in the United States, According to Year (Data from Same Source as Figure 1).

Content of Curriculum

Brief reference has already been made to the content of undergraduate curriculum. At the graduate level, considerable variation in curriculum was initially demonstrated among developing family-practice residency programs. However, differences among programs are now decreasing as further experience has been gained in program and curriculum development. Table 3 represents the curriculum in a "typical" residency program today, and is consistent with criteria and guidelines currently in use by the Residency Review Committee for Family Practice as well as the Residency Assistance Program, a national program with broad sponsorship described below.

Over a three-year period, the family-practice residency program invariably involves teaching rotations of about one year in internal medicine (including such medical electives as cardiology, neurology and dermatology), six months of pediatrics, four to six

Table 2. Types of Family-Practice Residencies *

Type	No. of Programs
University affiliated	195
Community-hospital based	58
University based	52
Military-hospital based	16
Total	321

*Data, provided by Division of Education, American Academy of Family Physicians, Kansas City, MO, represent all approved & operational programs in the United States as of August, 1977. 4 of the approved programs were not yet operational on that date

months of obstetrics-gynecology, six months of surgery and its subspecialties (including ophthalmology, orthopedics, otolaryngology and urology), two months of emergency medicine and one month of psychiatry (plus a strong thread of behavioral-science teaching presented longitudinally over the three-year program). Rotations during the second and third years involve progressive resident responsibility over first-year experience. The family-practice center provides the resident with an opportunity to care for an increasing number of families on a continuity basis over a three-year period, and adds to his or her learning and synthesis of knowledge and skills derived from other parts of the residency program.

The resident's experience and training over a three-year period represents that derived from the care of his or her patients in the teaching practice (family-practice center), as both outpatients and inpatients, and that derived from other parts of the residency program, such as inpatient rotations on other services and ambulatory experiences in other specialty clinics or community settings. Considerable emphasis has been placed on evaluation of resident experience and performance on a competency basis in most family-practice residencies. Several kinds of evaluation methods have been reported that provide specific and individualized descriptions of resident experience.[17-19]

Table 3. Curriculum in a "Typical" Family-Practice Residency.

Subject	Inpatient Rotations	Family-Practice Center
	mo	*½-day/wk*
1st yr:		
Medicine	4	
Pediatrics	3	
Obstetrics-gynecology	2	1
Surgery	2	
Emergency room	1	
2d yr:		
Medicine	4	
Pediatrics	3	
Obstetrics-gynecology	2	3
Cardiology	1	
Psychiatry	½	
Emergency room	1	
3d yr:		
Medical specialties	4	
Surgical specialties	4	4
Electives	4	

Recruitment of Faculty

The recruitment of faculty for developing teaching programs in family practice has presented a challenge because family medicine is a new academic discipline in formal medical education. The pressing need has been to attract excellent clinicians from the community with interest and skills in teaching, who can serve as role models for students and residents, organize and administer teaching programs and contribute to the developing academic discipline. Considerable progress has been made in this area, and many family physicians have entered teaching, on either a full-time or a part-time basis, and have made this transition effectively. Faculty development workshops have been held regularly throughout the country, with particular emphasis on such areas as teaching skills, curriculum development, program organization and evaluation.

A recent national study of full-time family-practice educators has identified a profile of this group in terms of practice experience, previous training and board certification.[20] In a sample of 240 full-time teachers with an average age of 45 years, about two thirds had at least 10 years of practice experience. A similar proportion had completed two or more years of graduate training, most commonly in general/family-practice residencies. Almost all were board-certified, most in family practice (84 per cent) and some in other fields, particularly internal medicine and pediatrics.

Student Interest

A frequent question raised during the late 1960's, as family practice was first developing, was whether interest in this new specialty would be developed and sustained among medical students. The answer to this question in the late 1970's is strongly in the affirmative. The percentage of first-year positions in family-practice programs in the United States that is filled is now 94 per cent (virtually all residents being graduates of American medical schools) for the 2183 approved first-year positions. Medical schools with formal teaching programs in family practice report 15 to 35 per cent of their graduates entering family practice. Despite the growth in the numbers of first-year positions in family-practice residencies, the demand for such positions by medical-school graduates continues to exceed available openings, and some students with career goals in family practice are forced to opt for alternative pathways of graduate training.

Location of Residency Graduates

The deficit of primary-care physicians, particularly for those trained in breadth to care for the everyday problems of families, is a generalized phenomenon throughout the country in urban, suburban and rural areas. The record to date shows that graduates of family-practice residency programs are locating their practices in all these settings. Studies by the American Academy of Family Physicians have shown that over half the graduates of family-practice residencies enter practice in communities of less than 25,000 population, with a balanced distribution in larger communities as well (Table 4). It is of interest that over half the graduates enter single-specialty partnership and group practice, and that only 17 per cent enter solo practice (Table 5).

Table 4. Distribution of 1977 Graduating Residents According to Community Size.*

Character & Population of Community	No. of Graduates	Percentage of Total
Rural area or town (<2,500, not within 40 km of large cities)	81	11.1
Rural area or town (<2,500, within 40 km of large city)	20	2.7
Small town (2,500–25,000, not within 40 km of large city)	180	24.7
Small town (2,500–25,000, within 40 km of large city)	107	14.7
Small city (25,000–100,000)	127	17.4
Suburb of small metropolitan area	14	1.9
Small metropolitan area (100,000–500,000)	78	10.7
Suburb of large metropolitan area	55	7.5
Large metropolitan area (>500,000)	45	6.2
Inner city/low-income area (>500,000)	23	3.2
Totals	730	100

*Data, compiled by Division of Education, American Academy of Family Physicians, Kansas City, MO, are based on a 68% response rate from a survey of 1977 graduates.

Table 5. Practice Arrangements of 1977 Graduating Residents.*

Type of Arrangement	No. of Graduates	Percentage of Total
Family-practice group	268	38.6
Multispecialty group	80	11.5
2-person family-practice partnership	146	21.0
Solo	117	16.9
Emergency room	32	4.6
Hospital staff (full-time)	30	4.3
Other	21	3.0
Totals	694	100

*Data, compiled by Division of Education, American Academy of Family Physicians, Kansas City, MO, are based on a 68% response rate from a survey of 1977 graduates. These results are quite similar to results of earlier surveys of 1975 & 1976 resident graduates.

Organizational Development

The progress demonstrated during the last decade in educational aspects of family practice has been associated with concurrent growth and development of various organizations relating to the specialty.

The American Board of Family Practice, established in 1969, is the first certifying board in medicine to require recertification by examination. The first recertification examination was held in 1976, with over 1400 diplomates taking the examination, which includes cognitive testing as well as audit of actual patient records. Since 1970 over 11,000 diplomates have been certified in family practice.

The American Academy of Family Physicians, second in size only to the American Medical Association among medical organizations in the United States, is the major organization representing family practice through liaison with other medical organizations, government and other groups. The Academy has played an important part in the development of family practice to date through a range of efforts including faculty development, consultation to educational programs, collaborative clinical investigation, postgraduate education and related organizational activities.

The Society of Teachers of Family Medicine was established in 1968 as an academic organization concerned primarily with the development and improvement of teaching skills in family medicine. With a membership of over 1300, including family physicians as well as other disciplines involved in the teaching of family medicine, this group is engaged in such activities as faculty development, curriculum development and evaluation and research.

The North American Primary Care Research Group is a small but vigorous group developed to promote research in the several primary-care disciplines in the United States and Canada. By means of annual meetings devoted exclusively to the presentation and critique of original work, this group is concerned with the development of research skills and methods in this hitherto neglected area of research.

Major Issues Today

Excellent progress has been made during the first phase of family-practice development, and all the initial issues have been effectively addressed. However, it is clear that the development of any specialty is a long-term evolutionary process, and that some of the important needs of a specialty cannot be met until some of the more pressing initial organizational efforts have been completed. Indeed, this situation obtains in family practice, and the important issues today are somewhat different from those in the late 1960's. Perhaps the most pressing issues today are the following: How can the research base in family practice be established? How can the quality of teaching programs in family practice be assured? To what extent can tomorrow's family physician deal with the family, not just the individual patient, as the object of care? And how can the future practices of graduates of family-practice residencies be organized for best use of their training and best to meet the needs of their patients and communities?

Research Base in Family Medicine

There is a wide spectrum of important research needed in family medicine, which is quite different from traditional biomedical research. Three broad areas of needed research pertain to clinical strategies, health-care services and educational methods. On a patient-care level, the family physician has several inherent advantages relating to research: contact with all members of the family of all ages and both sexes; direct experience with primary care of unselected patients; opportunity for long-term follow-up observation of patients; multidisciplinary approach to care; and contact with patients in all stages of disease. The family physician, therefore, has a wider perspective of health and disease on the community level than anyone else in medicine.

Much of the medical literature to date has been derived from the study of patients admitted to university hospitals, who represent only one out of 250 patients seen by physicians and one out of 1000 patients at risk each month.[21] Since 90 to 95 per cent of all doctor-patient contacts occur at the primary-care level,[22] family medicine has both the opportunity and the responsibility to add to knowledge of health and disease from the unique perspective of the family physician.

Although scattered reports of noteworthy research in family practice have been published in recent years, the over-riding priority in the specialty to date has involved the organization and development of teaching programs. Visible and respected examples of research programs and researchers have not yet been developed in most family-practice settings in the United States. This deficit has been accentuated by the lack of experience and skills in research among most family-practice faculty and practitioners.

The attitude of general practice in the past and, to a considerable extent, of family practice today has placed emphasis and highest value on the reduction of clinical knowledge and skills to practical dimensions that are readily understandable and recallable. This approach has often seen research as lacking relevance to everyday clinical practice. Such an attitude has frequently been reinforced, during the family physician's medical education, by his reaction to research activities in other disciplines involving esoteric conditions and complex pathophysiologic mechanisms, not perceived as directly applicable to the work of the family physician. Within family practice a new attitude of critical inquiry must be developed that sees the importance and relevance of research within the developing specialty itself.

There is some recent evidence that the relative lack of research in family practice will be corrected within the next few years. Some of the basic tools are receiving general application, including the problem-oriented medical record, coding systems, data-retrieval systems and active audit programs. Increasing collaboration is occurring among family-practice settings and with other disciplines, including other clinical specialties, epidemiology, social science and biostatistics. A fellowship program intended to develop research skills for future family-practice faculty has been established by the Robert Wood Johnson Foundation. Some conceptual and methodologic papers dealing with family-practice research have been published,[23-27] and case studies of three active departmental research programs have recently been described in some depth.[28]

Quality of Teaching Programs

The relatively rapid development of many new undergraduate and graduate teaching programs in family practice, together with the decentralization of many of these activities, has called for concurrent development of effective evaluation and quality-control mechanisms. This approach has been recognized as an important priority in the field, and substantial efforts have already been mounted in this regard. These efforts include such areas as program review, accreditation, teacher development, competency objectives and audit. Accreditation requirements for family-practice residencies have been increasingly formalized in recent years, and between 40 and 50 per cent of new applications for residency programs are disapproved by the Residency Review Committee for Family Practice. An intensive method of program review, the Residency Assistance Program, has recently been funded by the W. K. Kellogg Foundation and implemented through the joint sponsorship of the American Board of Family Practice, the American Academy of Family Physicians and the Society of Teachers of Family Medicine. Over 30 experienced family-practice educators have developed specific guidelines for quality in family-practice residency programs, including such factors as faculty/resident ratios, curriculum, evaluation procedures and related areas. This program involves two-day in-depth consultation visits by experienced family-practice faculty to residency programs requesting assessment and consultation.[29] Over 100 consultation visits have already been conducted.

The rapid growth of family-practice residency programs has prompted some observers correctly to voice concern over quality control of these programs.[30,31] Although everyone can agree with the over-riding importance of "quality" in educational programs, there is less agreement on what this word means. Some equate quality with university-hospital settings and wonder how achievable it is in community settings. Others define quality by the number of full-time faculty members involved in a program, the size of the hospital involved, the amount of time devoted to a curricular area or other, related aspects of a teaching program. The definition of a "quality education" appears to be as elusive as previous attempts to define the "good physician."

The essential first step toward measurement of quality is to recognize the limits of current definitions and the complexity of the problem. The measurement of quality in a teaching program is a complex process that involves, for the individual resident, four basic categories: skills, competence, performance and outcomes.[32] In this context, such simple yardsticks as the size of a teaching hospital or the number of full-time faculty members may not have any bearing on the learning, performance or effectiveness of care of an individual resident in training. Thus, a resident in a 200-bed hospital with a family-practice residency and no other house staff may develop greater competence and provide better care than an equally well motivated resident in a 400-bed hospital with a larger full-time faculty and sizable house staff in other specialties. The variables in quality of a teaching program are numerous, and include such dimensions as varied resident needs, motivation and learning styles, spectrum of clinical exposure, responsibility for patient care, enthusiasm and qualifications of faculty, whether full-time, part-time or volunteer, and many other elements. Quality should probably be viewed as a constant process of improvement requiring continued self-assessment.

Family as the Object of Care

The importance of the family as the object of care has been well documented.[33-36] It is axiomatic that the specialty of family practice is involved in the comprehensive, ongoing care of individual patients and their families, and that the knowledge and skills re-

quired by the family physician include a broad range of clinical competencies. It is likewise axiomatic that the family is the basic unit of care in family practice, but herein is involved a profound conceptual shift extending well beyond the care of the "whole patient" to the care of the family, not just the individual, as the patient. Although this point is part of the everyday language of the developing discipline of family medicine, actual practice (even in teaching programs) still reflects a predominant focus on the individual, rather than the family, as the object of care.

Family-practice teaching programs throughout the country have placed varying degrees of emphasis on behavioral science as a curricular approach to this general area. The development of a strong teaching effort in behavioral science, however, does not assure that the family as a unit becomes the object of care. As Carmichael has noted, caring for the patient in the context of the family is by no means the same as turning the family into the object of care.[37] A conceptual shift is needed, together with more effective clinical methods, to deal better with the family as a unit.

Organization of Future Practices

Family-practice teaching programs, particularly at the residency level, have already made remarkable progress in the development of new approaches to patient care, medical records, audit, data-retrieval systems and methods of practice management. Graduates of family-practice residency programs have a wide range of clinical competencies as a result of their hospital and ambulatory-based training. It is therefore important that their transition into practice allow their capabilities to be effectively used in the care of their patients and families, both in their office practice and in the hospital.

Family-practice residents require some exposure to actual practice settings in the community as a part of their training. Each program likewise has the obligation to develop and evaluate new approaches to practice in terms of exportability to practice (nonteaching) settings. For example, effective methods of family counseling, health maintenance, patient education and team practice require testing within the constraints of community-based practice.

Family-practice residents must become skilled in, and committed to, ongoing habits of audit and self-assessment, for both ambulatory and hospital-based care. Clinical departments of family practice must become active in community hospitals and assume an effective role in monitoring of quality of care and delineation of hospital privileges in collaboration with other specialty departments. Hospital privileges must be based upon the individual physician's previous training and demonstrated competence.

Future Projections

Patient Care

The profile of the future family physician's practice will vary somewhat according to the individual physician's interests, training and geographic setting of the practice in terms of needs of the community and available medical resources. However, it is likely that the similarities among the practices of family physicians will be far greater than their differences.

A number of recent studies have shown that the well trained family physician provides definitive care for at least 95 per cent of patient-care problems encountered in everyday practice.[38-40] It can be anticipated that future family physicians will assume a broad role in patient care, both in and out of the hospital. On the basis of preliminary (unpublished) reports of practice patterns of family-practice residency graduates in some parts of the country, it can be expected that a majority of family physicians will include obstetrics in their practices. Family physicians must necessarily be well grounded in diagnostic and therapeutic alternatives and must assume increasing responsibility for allocation of health services for their patients in what is certain to become an era of limits. Consultation and referral will usually involve the subspecialties; frequently, this situation will entail a continuing role of the family physician on a shared basis with the consultant, with the family physician continuing to provide general medical care for the patient and counseling for the family and the consultant managing the specific problem (or problems) requiring consultation.

Some have proposed that the future family physician/primary-care physician confine his or her practice principally or exclusively to the ambulatory-care setting while serving in a triage role as the entry point to the health-care system.[41,42] Such an approach, in my judgment, would in the long run compromise the continued clinical competence of these physicians and their ability to provide primary care of high quality to their patients. The sharp separation of medical careers into community-oriented ambulatory care and hospital-based intensive care of acutely ill patients would involve serious problems for both medical practice and medical education. The creation of a system with built-in discontinuity between ambulatory and hospital patient care could be expected to jeopardize the quality of care, increase its cost, decrease patient compliance and depersonalize care further. Although it is theoretically possible that the ambulatory-care physician could transmit all necessary medical information to the hospital-based physician regarding each hospitalized patient, this procedure would not be likely to happen in everyday practice. It is more probable that hospital care would be further overutilized, important medical problems overlooked, unnecessary studies and procedures per-

formed, and the patient further confused by an encounter with an unknown physician at a time of major personal crisis. Although research on the effect of continuity of care is still embryonic, studies already reported indicate that costs of medical care, as well as patient satisfaction and compliance, are adversely affected by lack of physician continuity.[43-45]

Most family physicians in the future are likely to practice in groups that serve populations of at least 5000 to 6000. The most common type of group will probably be the single-specialty group, but a variety of group arrangements will probably develop. Team practice will undoubtedly include various mixes of nonphysician health professionals, but it is still uncertain what types of "teams" will stand the test of time and experience.

Education

Educational efforts in family practice will be directed to the continuum of undergraduate, graduate and continuing medical education. At the undergraduate level, further refinement and development of curricula can be anticipated in each year of the medical-school curriculum. Family practice has much to contribute to undergraduate education in such areas as the natural history of common illnesses, preventive medicine, community medicine, the integration of behavioral science with clinical medicine and related areas.

At the graduate level, continued expansion of residency positions in family practice will be required. One important trend will be the increased development of regional networks linking medical schools with affiliated residency programs in community hospitals. The network being developed at the University of Washington, a prototype for this trend, includes collaborative efforts in curriculum development, evaluation, sharing of teaching resources, faculty development and research.[12] Another important trend will probably be the increasing development of interspecialty agreements concerning curricular approaches to specific clinical competencies required by family physicians. An excellent example of this method is the recent agreement concluded between obstetrics-gynecology and family practice known as the "ACOG-AAFP Recommended Core Curriculum and Hospital Practice Privileges of Obstetrics-Gynecology for Family Physicians."[46]

At the level of continuing medical education, several important approaches are already in operation — annual educational requirements of 50 hours per year by the American Academy of Family Physicians, recertification requirements every six years by the American Board of Family Practice, increased emphasis on audit in family practice and increased involvement of family physicians in various types of teaching programs. It can be projected that teaching and self-assessment materials that are developed in family-practice residency programs will become increasingly accessible to and used by practicing family physicians.

Research

Perhaps the most exciting dimension in the future of family practice lies in the area of research. An excellent example of the potential for research in this field is the statewide study of the content of family practice completed last year in Virginia.[16] As further progress is made in family-practice development, particularly in educational programs, the capability and opportunity to carry out needed research in family medicine will continually increase. It can be anticipated that the necessary tools for research will become more generally available, including data-retrieval systems, audit, library services and assistance with design and analysis of research studies. Among the many examples of important research areas are the following: cost effectiveness of health maintenance and preventive procedures; effectiveness of diagnostic and therapeutic methods; longitudinal audit of selected clinical problems; functional outcomes of care; content of family practice in different settings; and effectiveness of educational approaches at various learning levels.

As research methods and faculty skills continue to improve in family-practice research, it can be anticipated that original work in the field will move past its present descriptive phase to more sophisticated predictive and causal studies using case-control and cohort methods. The study and reporting of clinical experience through the unique perspective of the family physician should make a valuable and needed contribution to medicine in general, and to primary care in particular.

Discussion

Lynn recently observed that the public demands ready access to family physicians who can provide primary care for the large majority of illnesses, provide expert referral when indicated and serve as health-care and general counselors for patients and their families:

> This role has been present in society in times past, and it appears to be a reasonable assumption that the demand for this role will continue. The current emphasis on family practice stemmed from a public perception that this role was not being well served, which resulted in political and economic forces being brought to bear to correct this situation.[47]

As a sociologist with long interest and experience in the study of the medical profession, Freidson made the following observations in 1970:

> With the decline of the general practitioner, the layman has had less and less chance to gain responsiveness from professionals to his own views. And as the state comes to intervene more and more — a state which has become so large and formal as to be rather distant from the lives of its citizens, and whose notions of public good are guided largely by professionals — the individual client has even less opportunity to express and gain his own ends. Some way of redressing the balance must be found.[48]

There is ample evidence that family practice is effectively developing as a major response to these needs of the public in the United States. This development is an important part of an accepted national goal to have over 50 per cent of American medical graduates enter one of the primary-care specialties. Since this goal requires over 7500 graduates to enter first-year residency positions in these specialties each year, each primary-care specialty must join in this effort. Petersdorf has noted the existing surfeit of physicians in most specialties other than primary care, as well as the difficulty that pediatrics has in expanding residency positions owing to a limited number of patients on teaching services.[30,49] Continued expansion of opportunities for residency training in both family practice and general internal medicine is therefore critical to meeting national needs for primary care.

It is clear that the American health-care system is under heavy fire for its high cost, fragmentation and potential depersonalization of services. Public expectations of medicine may well be unrealistic in many respects, but the pressures to change the system in an attempt better to meet the perceived needs of the public have become strong. The genesis and development of family practice have not occurred in a vacuum, but as a logical part of a larger sociocultural evolutionary process.

The challenge now before medicine is to play an active part in the reassessment and remodeling of the health-care system to extend the highest possible quality of care to the entire population at a cost that can be afforded in a society that may not be able to expend a larger portion of its gross national product on health care. The continued successful development of family practice as a foundation of primary care in the United States is an important part of this remodeling process, and represents an effective response to existing and projected deficits in primary care.

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