Family Medicine as an Academic Discipline: Progress, Challenges, and Opportunities

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Family practice as a specialty, now just over 20 years of age, arose in response to increasing public pressure and societal needs, not primarily from a breakthrough in new clinical knowledge or technology advances. Its academic discipline of family medicine is necessarily derived more from its clinical principles and functions in practice than from a unique body of knowledge and skills. Nevertheless, the mixture of knowledge, skills, and attitudes are collectively unique as applied by the family physician, and are teachable, learnable, and subject to critical inquiry and research.

This paper presents an overview of the progress, present challenges, and future opportunities of family medicine as an academic discipline. A comparative analysis of the literature in the three primary care specialties reveals more commonalities than differences. Family practice has much to contribute to needed reforms in medical education and the health care system. The field is ideally positioned to be an active part of future resolutions to today's problems in both arenas.
J Fam Pract 1990; 31:297-303.

It is indeed an honor to be named as the 1990 recipient of the Curtis B. Hames Research Award. This award was established by the Society of Teachers of Family Medicine and the North American Primary Care Research Group in 1985, and the five previous honorees have each made unique and lasting contributions to family medicine as an academic discipline. The work of Maurice Wood, Kerr White, Jack Medalie, Jack Froom, and Ian McWhinney has individually and collectively helped to build the foundation and initial directions of family practice as a clinical specialty.

But there can be no better example of the rich tradition and potential for community service and advancement of knowledge than Curtis Hames himself. As a practicing family physician over 41 years in his hometown of Claxton, Georgia, population 2000, Dr Hames has done it all—patient care, teaching, and research throughout his active career. Starting practice in 1947, more than 20 years before family practice was recognized as a specialty, he quickly established an active research program in his own practice and rural county. His research was funded by the National Institutes of Health from 1958 to 1985, and his contributions to the understanding of ischemic heart disease, stroke, hypertension, and related problems have been prodigious and legendary over the years. There is much to learn from Dr Hames in terms of the unlimited horizons and possibilities for relevant research in community practice despite all of the pressing clinical demands of the practice.

With family practice as a specialty just over 20 years old in the United States, it seems appropriate to pause and take stock of its progress, present status, and opportunities as a clinical and academic discipline. What are its successes, its shortcomings, its present challenges, its present opportunities? What can be learned from its first 20 years, and are course changes needed today as the field approaches the 21st century?

SOME BASIC DEFINITIONS

Since family medicine as an academic discipline has been debated for years in terms of its definition (or even its

Submitted June 21, 1990.

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existence, in the view of some critics), it is useful to revisit some basic definitions.

Family Practice

The definition that has been adopted by the American Board of Family Practice and other organizations within the specialty is as follows:

> Family practice is comprehensive medical care with particular emphasis on the family unit, in which the physician's continuing responsibility for health care is not limited by the patient's age or sex nor by a particular organ system or disease entity.

Family practice is the specialty in breadth that builds upon a core of knowledge from other disciplines—drawing most heavily on internal medicine, pediatrics, obstetrics and gynecology, surgery, and psychiatry—and that establishes a cohesive unit, combining the behavioral sciences with the traditional biological and clinical sciences. The core of knowledge encompassed by the discipline of family practice prepares the family physician for a unique role in patient management, problem solving, and counseling, and as a personal physician who coordinates total health care delivery.

Family Medicine

There was early agreement that *family medicine* constitutes the academic discipline that is applied in family practice. In the early years of family practice development, however, there was considerable controversy over the definition of the academic discipline. Some felt that family medicine should be defined only in terms of its *unique* content, as different from all other clinical disciplines. For some this approach tended to focus principally on the behavioral and ecologic interactions of the family as a unit. Recent years, however, have seen a consensus that a functional definition of family medicine is required. In functional terms, family medicine can be satisfactorily defined as that 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. It is a horizontal discipline, sharing portions of all other clinical and related disciplines from which it is derived, but applying these derivative portions in a unique way to families. In addition, family medicine includes new, incompletely developed elements stemming from its own areas of developing research.[1]

As a generalist primary care specialty, family medicine, defined as an academic discipline, together with its domain of practice, has naturally caused confusion, misunderstanding, and intermittent jurisdictional disputes at the interface with other clinical specialties. There is a common tendency among specialists to view their fields as exclusive domains of knowledge and practice skills. Yet boundary disputes are common, not just between generalist-specialist disciplines, but between the non-primary-care specialties as well (eg, disc surgery by neurosurgery-orthopedic surgery, hand surgery by orthopedic-plastic surgery, etc). Upon reflection, it is unrealistic to expect that any particular area of medical knowledge or practice is inherently the domain of only one specialty. This point is made clearly by Draper and Smits as follows[2]:

> In fact there is nothing intrinsically rational or permanent about the way in which medical specialties are currently defined; all are more or less arbitrary. A specialty is essentially a social definition rather than a scientific or logical one; it is simply a social recognition of a grouping of practitioners who are carrying out similar work. Furthermore, the definitions of specialties are constantly changing, and the boundaries of few specialties are hard and fast: the nephrologist will need to be able to read kidney biopsies as well as or better than his colleague in pathology; specialists in respiratory diseases would not consider it appropriate to ask a radiologist to interpret chest x-ray films for them. Any clinical specialty is in fact a mixture of fields such as pathology, anatomy, physiology, biochemistry, pharmacology, and psychology; what defines the specialty is its focus rather than a unique kind of knowledge or skill.

PROGRESS

Family practice arose as a specialty in response to public pressure and societal needs, not as a result of a breakthrough in scientific knowledge, as in the case of many other specialties (eg, the surgical specialties). The 1950s and 1960s witnessed an increasing public concern over the fragmentation of medical care, shortage of primary care physicians, problems of access and cost of care, and increasing depersonalization of the physician-patient relationship. Arising in response to these concerns, family practice has made excellent progress as a specialty despite its lack of a previous academic and research tradition. Table 1 contrasts selected markers of the specialty's status in 1970 and 1990.

An overview of the literature published within family medicine over the first 20 years provides an interesting perspective of the initial directions of family medicine as an academic discipline. As the first academic peer-reviewed journal in the field in this country, *The Journal of Family Practice* has published the majority of original work in this specialty since its inception in 1974. Two content analyses have been carried out, the first for the period 1974 to 1983, the second for the period 1984 to 1988. Together, these two analyses identify patterns and

TABLE 1. SELECTED MARKERS FOR FAMILY PRACTICE AS A SPECIALTY

	1970	1990
Clinical	Administrative departments of general practice in community hospitals	Clinical departments of family practice in over one half of departmentalized US hospitals
	Negligible clinical presence in medical schools	Active clinical programs in family practice in most medical schools
	Handful of board-certified family physicians	Over 40,000 board-certified family physicians
	No certification programs in special areas	Geriatrics as certifiable area of added qualifications (through Boards of Internal Medicine and Family Practice)
	Family practice in high demand before the health maintenance organization era	Family practice in high demand throughout country, with leading role in managed health care
Education	Handful of fledgling departments of family practice in medical schools	Academic departments of family practice in almost 90% of US medical schools
	Small number of new family practice residency programs	384 family practice residency programs in US with about 7300 residents in training
	Less than 5% of medical graduates opting for family practice	Over 10% of medical graduates selecting family practice residencies (up to 30% or more in a few schools)
	Absence of fellowship programs for teaching or research skills	Many opportunities for varied fellowship programs for teaching skills; limited number of 2-year fellowship programs for research skills
	Society of Teachers of Family Medicine (STFM) an embryonic small group	STFM membership over 2800, with many active projects and programs on regional and national levels
Research	Minimal research activity; no collaborative research networks	Active research in many academic departments of family medicine, as well as some collaborative research networks involving community practice settings
	No peer-reviewed academic journals	Four academic peer-reviewed journals listed in *Index Medicus*
	No family medicine representation on National Institutes of Health (NIH) study sections or panels	Some family medicine representation on NIH study sections and panels
	No family medicine members of Institute of Medicine of the National Academy of Sciences	Eighteen individuals from family medicine elected to Institute of Medicine
	No research organizations in the field	Active North American Primary Care Research Group
	No coding or classification systems for primary care	Coding and classification systems developed for both inpatient and ambulatory care

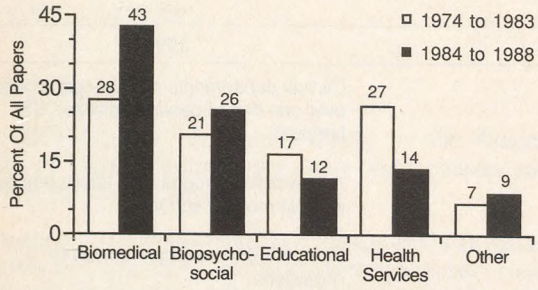

Figure 1. Overall percentage of all papers by major content area (1974–1983 and 1984–1988). Reprinted from Geyman JP, Berg AO: The Journal of Family Practice 1974–1988: Window to an Evolving Academic Discipline. J Fam Pract 1989; 28:301–304.

changing trends in the types of original work in family practice as it develops its research agenda.

Figure 1 depicts a comparison of the major content areas of papers published in the two study periods, 1974 to 1983 and 1984 to 1988. Significant gains can be noted in both biomedical and biopsychosocial papers over the last 5 years, with concurrent declines in both educational and health services papers. Comparative trends for the overall proportions of papers by type is illustrated in Figure 2. Increases in both descriptive and experimental research are documented over the last 5 years, while case studies and opinion papers remained quite stable, and both reviews and methods papers declined.[3]

It is of further interest to compare the published work in family medicine with that of the two other primary care

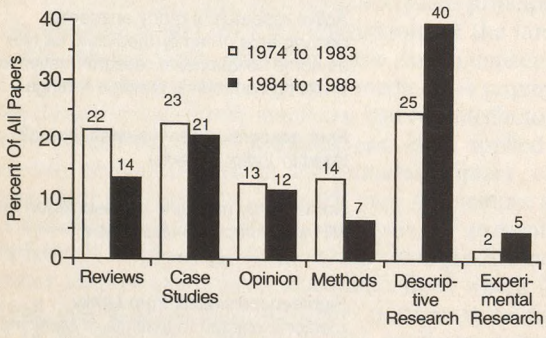

Figure 2. Overall percentage of all papers by type (1974–1983 and 1984–1988). Descriptive research includes case control, cohort, and survey studies. Reprinted from Geyman JP, Berg AO: The Journal of Family Practice 1974–1988: Window to an Evolving Academic Discipline. J Fam Pract 1989; 28:301–304.

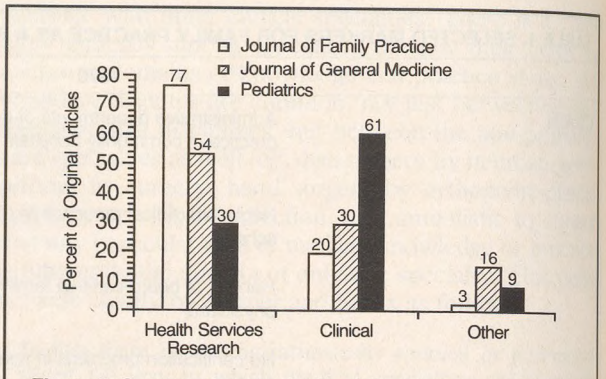

Figure 3. Comparative emphasis of three primary care journals. Source: Rosenblatt and Lishner.[4]

specialties. In a recent paper presented at the Second Health Resources and Services Administration Primary Care Conference, Rosenblatt and Lishner[4] compared the types of research published in three journals—*The Journal of Family Practice, The Journal of General Internal Medicine,* and *Pediatrics*—for the years 1986 to 1988. Figures 3 through 6 show remarkable similarities of the research focus of these three journals. It is readily apparent that most original research papers in both the family practice and general internal medicine literature deal with one or another aspect of health services research. Both the family practice and internal medicine literature demonstrate active interest in provider studies, while the family practice literature has been most involved in technology assessment subjects. The pediatric literature has been largely preoccupied with clinical papers, with much less involvement with health services research or educational issues. All three journals are most concerned with the natural history, diagnosis, and treatment of disease in cohorts of patients (Figure 5). All three have likewise

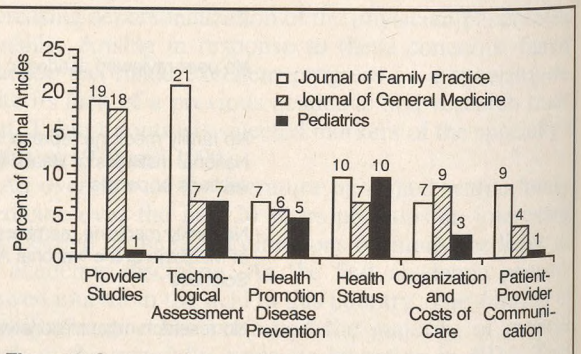

Figure 4. Comparative emphasis in health services research for three primary care journals. Source: Rosenblatt and Lishner.[4]

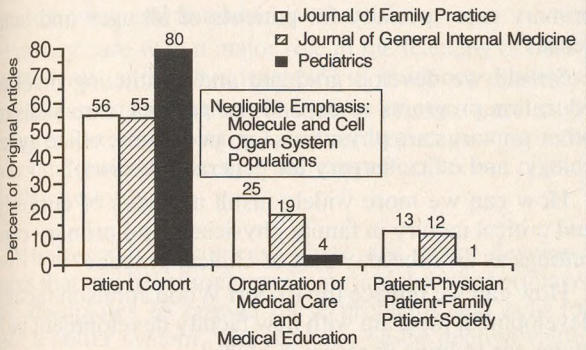

Figure 5. Research focus in three primary care journals. Source: Rosenblatt and Lishner.[4]

done little with molecule and cell, organ system, or population levels. The family practice literature is alone in devoting significant attention to organizational issues (11% of original articles), whereas the internal medicine literature has directed special attention to educational issues (also 11% of original articles). (The family medicine literature has also been actively involved in this area, but *Family Medicine,* the official publication of the Society of Teachers of Family Medicine, now reports much of that work.)

PRESENT STATUS

Although family practice has made very good progress over its first 20 years, this adolescent specialty in 1990 finds itself with a mixture of strengths and problems. Its clinical strengths have been well documented in many studies, and it remains the only clinical specialty in American medicine exclusively and fully committed to primary

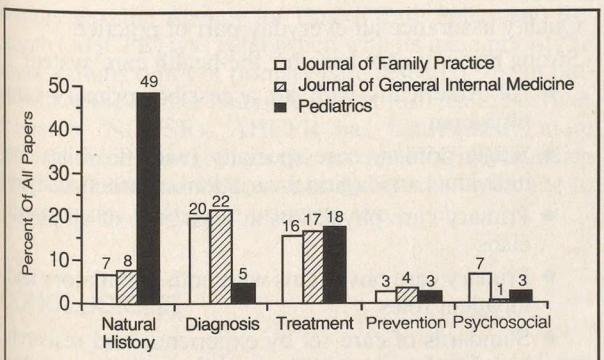

Figure 6. Content of patient cohort studies. Source: Rosenblatt and Lishner.[4]

care. Its educational programs have been well developed, particularly at graduate and continuing medical education levels, and family medicine is now part of the required predoctoral curriculum in about one half of the nation's medical schools. More than one half of the country's general practitioner–family physicians are board-certified in family practice, and the American Board of Family Practice is the first to require recertification on a regular basis (every 6 years). As noted above, progress has also been made in terms of academic development and research.

Despite these gains, the field has some problems, which are shared also with the other primary care specialties. Medical students are opting for the non-primary care fields in large numbers, despite the country's increasing problem with specialty and geographic maldistribution of physicians. This pattern is clearly multifactorial, but certainly relates in part to lesser reimbursement in the primary care fields and increasing student indebtedness. It is difficult to fund medical education programs in any of the primary care fields, especially because of reimbursement inequities for clinical services in primary care. Faculty in the primary care fields are heavily involved in patient care and teaching, and research time is difficult to come by, as are opportunities for faculty development in the research area. With some exceptions, sources of funds are likewise extremely limited for research projects in the primary care fields. Many of the country's academic departments of family medicine are below critical mass in size and diversity, and in particular lack the resources, expertise, or commitment to build a strong research program.

It is paradoxical, in a country with by far the highest investment in health care in the world and with a large, sophisticated medical education establishment, that the health care system continues to unravel with a relatively weak primary care base. The escalating cost crisis in health care has not been altered by any approach to date, whether prospective payment to hospitals, second opinion programs, professional peer-review programs, or other related attempts. The nation's medical schools have done relatively little to address seriously the "primary care problem," and the specialty mix of residency positions is still driven by staffing needs of teaching hospitals, not by regional or national need. Academic medical centers are increasingly beleaguered in a competitive environment, with a shortage of patients resulting in considerable part from the competitive clinical activities of a growing surplus of specialists in the non-primary care fields. The trend toward subspecialization continues unabated, including 60% of internal medicine graduates and a growing number of pediatrics graduates. With organized medicine and the medical education establishment largely frozen in defensive positions, this country is witnessing growing public and societal concern over its expensive

health care system, not accessible to 37 million uninsured Americans, increasingly costly for the government, employers, and patients alike, and with frequently questionable return on investment.

WHERE TO GO FROM HERE?

It is clear that major external changes are unfolding in the environment of health care and medical education, which make future predictions difficult; at the same time these changes create opportunities for reform of health care and medical education. The single most important question for family medicine at this juncture is how can it contribute to an improved health care system, especially to a strong primary care base as its foundation. Thus, the public advocacy role seems urgent for family medicine, both for the patient and for the health care system. As the only generalist specialty relating to patients of all ages and both sexes, family medicine relates more than any other field to the entire health care system and has a unique opportunity for constructive input.

For those involved in charting the next generation of family medicine development, other questions arise:

How can we assure optimal care for all patients in our practices?

How can we extend needed care to the underserved?

How can we build more effective systems of regionalized services?

How can we better utilize the new information technologies in our practices?

How will new information systems alter present consultation and referral relationships among specialties?

How can academic departments of family medicine become essential to the mission of their medical schools as well as family practice residency programs to their sponsoring hospitals?

How can family medicine take the leading role in the teaching and quality assurance of ambulatory care services?

How can family medicine play a leadership role in the development of practice guidelines and standards of primary care?

How can family practice settings be more widely adapted to needed research in the field, including development of collaborative community-based research networks?

In what ways can family medicine collaborate with the other primary care specialties, whether in patient care, teaching, research, or political action?

Should we explore the potential merger, over at least a generation, of the primary care fields to a single, united primary care specialty for patients of all ages and both sexes?

Should we develop graduate and continuing medical education programs to expand the primary care skills of other primary care physicians (eg, pediatrics, office gynecology, and office surgery for general internists)?

How can we more widely instill attitudes of curiosity and critical inquiry in family physicians and primary care settings as an everyday part of clinical practice?

How can we replace the Robert Wood Johnson faculty development program with new faculty development programs for training in research skills?

How can we compete more effectively for research funds from existing funding sources?

These are but some of the questions facing family medicine as a discipline at this point in its evolution. It is clearly beyond the scope of this paper to pursue these here, but in thinking about what lies ahead, I would next like to share a vision that might help to clarify our opportunities and potential future directions.

If one looks at today's problems, it seems apparent that the present structure of the health care system and medical education is not sustainable. It appears to be falling apart of its own weight—the main questions are how fast and what will replace it? If one then develops a goal statement for an improved (idealized) health care system a generation hence, one might write the following specifications:

Basic health care available to all Americans

Equity and access assured for entire population

Simplified system of paying for services

Effective systems for regionalization of health care services

Quality assurance an everyday part of practice

Strong primary care base for the health care system

- All Americans with an accessible primary care physician
- Single primary care specialty (with flexibility for individual and regional variations of practice style)
- Primary care physicians at least 50% of all physicians
- Primary care physicians with both ambulatory and inpatient roles
- Standards of care set by experience and research in primary care settings

Narrowed differences in reimbursement for cognitive and procedural services

Effective guidelines for subspecialty services based on a system view and available resources

Primary care with a major role in the teaching of medical students, and with at least 50% of residency positions

Well-funded research activities in primary care as a means of answering system questions and improving both individual patient care and the cost-effectiveness of the health care system

Despite today's problems, there are recent developments that can help family medicine and the other primary care disciplines to engage these problems and help to build a better system. The resource-based relative value scale (RBRVS), for example, has the potential to improve incentives in primary care and to help fund needed expansion of educational programs. The RBRVS, together with reasonable allocation of managed health care funds, could likewise help to expand the faculties of family medicine departments in medical schools and teaching hospitals. This expansion might involve increased use of the clinical track in medical schools and at the same time increase the size and diversity of faculties to better enable them to address academic and research development. The growth of managed health care programs represents another important opportunity for primary care, especially for family physicians and general internists. Within medical schools, the growing emphasis on ambulatory care teaching, in the aftermath of the GPEP report,[5] should provide new opportunities for curriculum change and increased primary care experiences for medical students. In teaching hospitals it now seems certain that residencies in primary care specialties will account for preferential allocation of future Medicare pass-through funds for graduate medical education.

In the research area, there is an increasing interest by some of the National Institutes of Health to fund projects relating to primary care (eg, how can biomedical advances more effectively be translated into primary care?). Just 3 months ago, the Agency for Health Care Policy and Research (AHCPR) was established with its main priority to foster various types of primary care research. As an outgrowth of the former National Center for Health Services Research (NCHSR), AHCPR has substantially more funding (three and six times the maximal NCHSR funding levels for 1990 and 1991, respectively) and a mandate to pursue issues relating to primary care.

CONCLUSIONS

How to sum this up? It seems clear that family medicine has made very good progress and is now well established and respected for its patient care, teaching, and board-certification programs. Important progress has been made in research, and this research to date has been both appropriate and relevant to family medicine as an academic discipline. The research horizons of family medicine are wide, and its research potential is immense. Some recent developments in funding agencies should provide new opportunities to expand research in primary care with implications well beyond family medicine.

It is useful to reassess where we are in family medicine after 20 years and where we would like to be in another 20 years. Our initial hopes for the specialty were to produce at least 25% of the nation's physicians and to become the base of primary care. We have fallen way short of this goal (10% is closer to our accomplishments), and a different strategy seems needed if future needs for primary care are to be achieved.

There is still more competition than collaboration among the three primary specialties, but examples of tentative collaborations are beginning to appear (eg, cooperative efforts between the Society of Teachers of Family Medicine and the Society of General Internal Medicine). But these efforts are still minimal, and in view of the common concerns of the primary care specialties, it is striking how minimal they are (eg, parallel and uncrossing literature among the three disciplines' journals).

Family medicine is ideally positioned to make important contributions to an improved health care system. We are here to stay, but there are not enough family physicians. Family physicians need to be secure in their legitimacy, and move on to improve primary care and help build a better health care system as it unravels further. They need to be flexible, to explore new bridges and alternatives, and to expand their clinical, teaching, and research roles in primary care. The 1990s promise to be chaotic, but will provide new opportunities to improve medical education and the health care system. Family medicine needs to be a dynamic part of whatever solutions to today's problems evolve!

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