Ten Central Elements of Family Practice

John W. Beasley, MD, Marc F. Hansen, MD, Diane S. Ganiere, PhD, Bruce F. Currie, PhD, David E. Westgard, MD, Patrick W. Connerly, MD, L. James Wilson, MD, David L. Weber, MD, and Rudolph C. Hecht, MD
Madison, Wisconsin

Previous studies of the content of family practice have analyzed the discipline in terms of the clinical problem content. Taking a different approach, a study group analyzed the care given to patients by family physicians irrespective of the specific clinical problems. Working with a reference group of family physicians in private practice, ten central elements were identified: (1) comprehensiveness of care, (2) anticipation of problems and continuity of care, (3) personal relationships with a patient, (4) medical knowledge and skills characteristic of family medicine, (5) values and attitudes that enhance family medicine, (6) problem definition and medical decision making, (7) problem management and resource coordination, (8) care of the individual within the family context, (9) involvement with the community, and (10) attentiveness to practice organization. This study provides a different point of departure for the design and evaluation of educational programs in family practice.

As part of a faculty development project, the University of Wisconsin Department of Family Medicine and Practice undertook to analyze its family practice curriculum and to validate it using a reference group of practicing family physicians. Although there have been a number of studies of family practice curricula,[1-20] the attempts to analyze the tasks of practicing family physicians have examined primarily the clinical problem content of family practice as recorded by standardized coding systems[21-32] rather than the processes of care used by family physicians. While the former approach tends to define what the clinical problems of family practice are, it does not describe the elements of physician care that undergird management of problems on individual episodes of patient illness.

From the Department of Family Medicine and Practice, Center for Health Sciences, University of Wisconsin–Madison, Madison, Wisconsin. Requests for reprints should be addressed to Dr. John W. Beasley, Department of Family Medicine and Practice, 777 South Mills Street, Madison, WI 53715.

To meet the need for a more complete definition of the core content of family practice (a definition based on the processes of care as well as on the clinical problem content), an empirical method was used to analyze the care given by family physicians. Thus taking a different approach, the *processes of care* used by family physicians were analyzed rather than the clinical problem content of the practice. This analysis looks at family practice from a patient management perspective, a viewpoint suggested by Stephens.[33]

Methods

An ad hoc study group of Department of Family Medicine and Practice faculty members was formed to conduct the curriculum validation project. The relevant literature was reviewed to provide background, and contacts with the reference physicians were begun. The reference physician group consisted of 11 family physicians, all of whom were in private practice, all board certified,

and three of whom were residency trained. The group ranged in age from 34 to 54 years.

First-Stage Telephone Interviews

In prearranged telephone interviews, the reference physicians were asked, "Describe some care you have given that you feel typified family practice." No coaching was given concerning the types of patients or families or types of care other than to assure the reference physicians that an example of care that *best* exemplified their role as a family physician was wanted. The interviews were recorded and transcribed verbatim. After the physician had described the care given, he or she was asked a series of standardized questions to help elaborate a response. Two illustrative interviews are excerpted below. Most elements appeared to an extent in each interview. However, as shown below, most interviews were more representative of certain elements than others.

Example 1 highlights element 1, comprehensiveness of care. Example 2 highlights element 2, anticipation of problems and continuing of care.

Example 1. Element 1, Comprehensiveness of Care

My case is of a 26-year-old woman who has already had two children and is in her fourth pregnancy. Her last pregnancy ended with the sudden death of the child in utero four weeks before her estimated date of delivery. She was obviously quite anxious about the loss of her last child and was very concerned that this not happen again. She was wondering whether she should see an obstetrician rather than a family physician. Her husband blamed her for the death of their unborn child because she was helping him on the farm. He was verbally blaming her, but he probably had a great deal of guilt himself. While I was counseling the couple about their anxieties and guilt feelings, I discovered the husband had a melanoma. I had him followed up. As the couple believed that supernatural powers had something to do with their prior prenatal loss, I used this melanoma episode in counseling them about the coming birth, reasoning that perhaps supernatural powers were also involved in the early detection of the melanoma to keep the father around longer to take care of the child on the way.

Eventually the whole family became involved in the pregnancy care. The other two children began to act out in school, causing behavioral problems. They saw the pregnancy as a potential threat for uterine death again and were aware of the guilt feelings that the mother and father were tossing back and forth.

I feel the coordination of the psychological problems relative to the pregnancy could not have been handled by a psychiatrist alone. Furthermore, an obstetrician might not have done all of that counseling. This case also involved dermatology and surgery skills.

Example 2. Element 2, Anticipation of Problems and Continuity of Care

My example is a 57-year-old man, a patient of long standing on whom I have done periodic physical examinations over the years. The only striking problem that we assessed in this patient was a mitral regurgitant murmur. I presumed all the while that it was due to rheumatic fever. There was no known history of rheumatic fever, but as he grew up in a rural setting, it could have been entirely possible to have a case go undiagnosed. I noted the murmur as a potential problem, as anyone does who knows about subacute bacterial endocarditis and mitral valve disease of rheumatic origin. He presented one day in the office with a low-grade fever, just not feeling well. There were no identifying features of infection. It occurred to me that before we did anything, we should obtain blood cultures. I did the blood culture on an outpatient basis and learned the next day that it was positive. He was hospitalized at once, and repeat blood cultures were positive, too. The organism was Streptococcus viridans (α-hemolytic streptococcus). We were helped a great deal in dealing with the problem by our consultant pathologists. They were able to give us blood levels, and our inhibitory or bacterial site of concentrations were considered adequate. We obtained additional consultants from the Mayo Clinic. Through joint consultation, it was agreed that the treatment regimen of procaine penicillin and streptomycin was adequate to deal with the disease. The patient improved promptly.

In this case, it was notable that the clinical symptoms were entirely absent; there were no classic subacute bacterial endocarditis findings. I think we diagnosed the disease prior to its manifestation by suspicion of the possibility and by virtue of his murmur.

Upon receipt of the interview transcripts, the study group met to define the common elements. In addition, each member of the reference group was sent the vignettes of those from four other members with the request that they, too, extract common elements, a process that also used telephone interviews. Below is an example of an interview from this second stage of the study.

Example of Second-Stage Interview

Interviewer: "If you were going to make up your own list of family practice criteria that you

see emerging in the case reports, could you tell me what they would be?"

Physician: "I gather you're more interested in definition of what family practice means."

Interviewer: "Yes."

Physician: "While reading these case reports I could almost predict what was going to be said. When family physicians talk about themselves, if they're truly in the right area of specialty, they always return to the concept of continuity of care, such as, for instance, the importance of delivering a baby and watching it grow. This pattern becomes somewhat repetitious, yet it is a very important concept.

"The first case report I reviewed concerned a woman with diabetes and heart failure. A typical picture is described in which a family physician is trying to keep her weight and salt intake down. The crucial factors are the interrelationship with family members and the constellations of family. We all know good care is not simply a matter of mitral regurgitation and a pill; it is whether the family cooperates with the physician and understands and helps the woman.

"In another case, it struck me that there was discretion in anticipating medical problems in a patient with subacute bacterial endocarditis. The physician had known the individual for some time and was anticipating something of that nature would happen."

The study group met again and refined the responses from the second-stage interviews. As an effort at further validation, the study group asked four reference physicians the following question: "If you were going to evaluate your friend's family practice, what criteria would you apply?" Again, the structured telephone interview was used. The responses to this very strongly emphasized good practice management, which was then added to the list of central elements.

Results

This analysis of the care given by family physicians resulted in ten elements emerging as central to family practice. These were discussed and refined until the group reached consensus. Physicians who had not participated in defining the elements were then asked to read them for clarity and salience. Final editing was done to resolve confusion. The ten elements and their descriptions are listed below. The order of listing does not imply a ranking of relative importance.

Ten Central Elements of Family Practice

1. *Comprehensiveness of Care:* The ability to recognize and be responsible for the care of the full range of medical problems, chronic and masked as well as acute and obvious.

2. *Anticipation of Problems and Continuity of Care:* Care of a patient over an extended period of time by one physician in such a way that a patient's problems are adequately managed. This involves (1) availability of care, (2) commitment to keeping track of a patient's problems and their resolutions, and (3) anticipating health risks.

3. *Personal Relationships with a Patient:* The ability to develop, across time, a sense of partnership, friendship, and commitment to the patient, characterized by mutual personal investment, sensitivity, honesty, trust, and respect. The key to the relationship is the physician's having a sense of the patient's worth and dignity.

4. *Medical Knowledge and Skills Characteristic of Family Medicine:* Competency to apply skills in all areas of medicine to the problems presented by a representative patient population.

5. *Values and Attitudes that Enhance Family Medicine:* Placing highest priority on the patient's needs and interests, recognizing and accepting one's own strengths and limits, and counseling patients in a commonsense, nonjudgmental manner and with a sensitivity to patients' beliefs and values so as to be a positive therapeutic influence.

6. *Problem Definition and Medical Decision Making:* The ability to recognize and define the patient's problems from the presenting complaint, past history, and family context, to verify and diagnose those problems, and to select the most appropriate treatment.

7. *Problem Management and Resource Coordination:* The ability to implement appropriate management plans according to the patient's needs and to use appropriately all resources available to the physician.

8. *Care of the Individual Within the Family Context:* Caring for individuals using the data, resources, and trust gained from looking after other family members at various stages of their lives.

9. *Involvement with the Community:* Participating actively in the life of the community and utilizing the understanding and relationships that result

Table 1. Results of Ranking the Elements of Care

Elements	Practicing Family Physicians (n = 15)			Family Practice Residents (n = 11)		
	Rank	Mean Score	Standard Deviation of Score	Rank	Mean Score	Standard Deviation of Score
1. Comprehensiveness of care	3	66	19	1	72	16
2. Anticipation and continuity	4	63	10	4	59	13
3. Personal relationships	1	76	23	2	61	20
4. Medical knowledge and skills	2	69	29	3	60	8
5. Values and attitudes	8	40	22	8	44	22
6. Problem definition and medical decision making	5	57	22	5	54	19
7. Problem mangagement/resource coordination	7	42	19	6	52	20
8. Care within family context	6	47	20	7	50	24
9. Involvement with the community	10	17	9	9	26	14
10. Attentiveness to practice organization	9	26	13	10	22	10

as resources for patient care.

10. *Attentiveness to Practice Organization:* Improving the efficiency of service and the quality of care by monitoring the way the practice functions; this includes (1) accessibility of service, (2) timely patient flow, (3) good medical records, (4) sound business management, (5) good staff morale, and (6) effective partner interaction.

Ranking of Results

In examining the elements of care, it is reasonable to ask whether any of the elements are substantially more important to family physicians than any other elements. The elements have been used to focus faculty and resident discussions regarding the content of family practice training and the relationship of that training to practice.

On several occasions after such a discussion, the family physicians and family practice residents were asked to rank the importance of the elements using a modified nominal group process according to their own sense of family practice. After rank ordering the elements, the participants were asked to assign a value of 10 to the least important element. They were then asked to consider the next most important element and to compare it with the least important. For example, if the second element was twice as important, they were instructed to multiply the score of the lowest ranking element by two for a score of 20. Or, if the second element was equally important, they were instructed to multiply by one, and it too would then have a score of 10. Any value that reflected their individual sense of relative importance was acceptable. They were then asked to continue this process, giving a score to each element, working their way up their list in a similar fashion. Each individual list of scores was then standardized to a total list sum of 500, and the individual values were recalculated based on the individual's actual sum. This gives each participant an equal vote in the group estimate of a score for each element. Table 1 indicates the result of this method for identifying relative rank and value for the elements.

Fifteen practicing family physicians and 11 residents participated in this demonstration. The rank lists and scores are similar. Of equal interest is the wide range of scores assigned to each individual element as indicated by the large standard deviation for each. For elements 1 through 8, there was a range of at least 5 rank positions for each (some individuals ranking the element as high as 1 or 2 and others ranking the same element as low as 5 to 8). Elements 9 and 10 (community involvement and practice organization) were ranked quite differently from the others, which were more similar, with the majority of participants ranking elements 9 and 10 in the lowest several ranks. This different emphasis is also consistent with the gap of estimated mean weights for these elements compared with the others.

Comment

These ten elements, while generally resembling the usual descriptions of the "core" knowledge of family practice, do differ in certain ways. Clearly, this group of reference family physicians did not see the family as such as the unit of care. However, care of the individual within the family context (element 8) was reasonably important. On the other hand, element 9, involvement with the community, and element 10, attentiveness to practice organization, are often not considered to be part of the core learning for future family physicians.

No claim is made for the significance of these ranks and scores in a statistical sense. Rather, a method has been developed that forces persons to look at the importance of the elements in a more quantitative sense. The process has been helpful in fostering discussion of the contribution of these elements of family practice to the ways in which family physicians organize practice and to the organized training needed to prepare physicians for practice.

A review of these elements can assist educators in designing family practice teaching programs for students or residents by providing a checklist for curricular content, eg, how should students be taught to "care for the full range of problems"? Perhaps a more difficult question is, how can they be formally evaluated in this regard?

While questions like these lead to more difficult educational challenges, they will be more useful than questions based solely upon the clinical problem frequency encountered in family practice.

Acknowledgments

This project was supported in part by Faculty Development Grant #5D15 PE 55001 from the Division of Medicine, Department of Health and Human Services. In addition to the authors, the following family physicians participated actively as reference physicians in the Curriculum Validation Project: H. Carlson, R. Edwards, C. Engels, G. Giffen, M. Janssen, G. Kempthorne, M. Lochner, V. Narins, K. Ness, C. Steidinger, and J. Strong.

References

1. Barnett BL Jr: Carving an undergraduate curriculum in family practice. J Fam Pract 1(3/4):20, 1974
2. Canadian Family Medicine: Educational Objectives for Certification in Family Medicine. Willowdale, Ontario. The College of Family Physicians of Canada, 1967
3. Carney TA: Clinical experience of a trainee in general practice. J R Coll Gen Pract 29:40, 1979
4. Eary LE, Kobernick M, Vanderwager WC: Pilot experience of family practice-based combined clerkship. J Fam Pract 7:541, 1978
5. Ciriacy EW, Bland CJ, Stoller JE, Prestwood JS: Graduate follow-up in the University of Minnesota affiliated hospitals residency training program in family practice and community health. J Fam Pract 11:719, 1980
6. Coates ML, Barnett BL Jr: A family practice course for first-year medical students. J Fam Pract 7:371, 1978
7. Delbanco TL: The teaching hospital and primary care. J Med Educ 50:29, 1975
8. Family Practice Residency Curriculum. Wichita, Kansas, Wesley Medical Center, 1974
9. Geyman JP, Deisher JB, Gordon MJ: A family practice residency network: Affiliated programs in the Pacific Northwest. JAMA 240:369, 1978
10. Hadac RR, Smith CK, Gordon MJ: Can continuity of medical care be taught? J Med Educ 54:525, 1979
11. Hall MS: Integrating hospital and family practice posts in vocational training for family medicine. J R Coll Gen Pract 29:359, 1979
12. Hannay DR: Educational methods at McMaster University, Canada. J R Coll Gen Pract 30:430, 1980
13. Holloway RL, Asp DS: Some suggestions for implementing family medicine curriculum objectives. J Med Educ 55:800, 1980
14. Leaman TL: A predoctoral curriculum in family medicine. J Fam Pract 2:107, 1975
15. Leaman TL: Predoctoral education in family medicine: A ten-year perspective. J Fam Pract 9:845, 1979
16. Leaman TL, Geyman JP, Brown TC: Graduate education in family practice. J Fam Pract 5:47, 1977
17. Massad SC: The clinical conference in family practice training. J Fam Pract 7:589, 1978
18. Werblum MN, Dankers H, Betton H, Tapp J: A structured experimental curriculum in community medicine. J Fam Pract 8:771, 1979
19. Werner PT, Richards RW, Fogle BJ: Ambulatory family practice experience as the primary and integrating clinical concept in a four-year undergraduate curriculum. J Fam Pract 7:325, 1978
20. Williams T: A strategy for defining the clinical content of family medicine. J Fam Pract 4:497, 1977
21. D'Elia GM, Folse R: Medical education for practice in non-metropolitan areas. J Med Educ 53:301, 1978
22. Diaz VA, Gehlbach SH: The hospital emergency room as a training site for family physicians. J Fam Pract 8:187, 1979
23. Hodgkin K: Educational implications of the Virginia Study. J Fam Pract 3:33, 1976
24. Mendenhall RC, Tarlow AR, Girard RA, et al: A national study of internal medicine and its specialties: II. Primary care in internal medicine. Ann Intern Med 91:275, 1979
25. Marsland DW, Wood M, Mayo F: A data bank for patient care, curriculum, and research in family practice: 526,196 patient problems. J Fam Pract 3:25, 1976
26. Nelson EC, Kirk JW, Bise BW, et al: The cooperative information project: Part 2. Some initial clinical, quality assurance, and practice management studies. J Fam Pract 13: 867, 1981
27. Parkerson GR Jr, Baker C: Clinical experience of medical students in North Carolina family medicine preceptorships. J Med Educ 55:42, 1980
28. Parkerson GR Jr, Bencze RF, Griffin EW, Baker C: Clinical experience of medical students with primary care career goals. J Fam Pract 9:639, 1979
29. Rhee SO, Luke RD, Lyons TE, Payne BC: Domain of practice and the quality of physician performance. Med Care 19:14, 1981
30. Schmidt DD: The family as the unit of medical care. J Fam Pract 7:303, 1978
31. Shank JC: The content of family practice: A family medicine resident's 2½-year experience with the E-book. J Fam Pract 5:385, 1977
32. Haight RO, McKee CA, Barkmeier JR: Morbidity in the first year of a family practice and its comparison to the Virginia Study. J Fam Pract 9:295, 1979
33. Stephens GG: The intellectual basis of family practice. J Fam Pract 2:423, 1975