Clinical Implications of the National Study of the Content of Family Practice

William L. Stewart, MD
Gainesville, Florida

The national study on the content and structure of family practice presented in this issue offers a wealth of new information describing the field. This paper will address some aspects of the practice patterns that are of particular importance.

There are a number of interesting findings contained in the profiles of family physicians that have an impact on the clinical content of family practice. The percentage of physicians performing various routine tests in their offices was surprisingly low. Only 57 percent of the physicians performed blood counts in their offices. Yet a laboratory is required in all family practice centers used for resident training. Forty-seven percent of the responding physicians performed chest x-ray examinations in their offices, 66 percent performed electrocardiograms, and only 40 percent performed any type of culture. Again, residents are being taught to use all of these modalities on a regular and rather frequent basis. Perhaps most surprising was the 92 percent of respondents who reported doing urinalyses in their offices. One would have expected this figure to be 100 percent.

None of the respondents functioned primarily as either pediatricians or geriatricians. The clinical content of family practice remains broad, meshing well with the goal of the specialty—to care for people of all ages. It should be noted that residency-trained family physicians took care of more female patients in their childbearing years than did their non-residency-trained counterparts, a fact which has obvious implications for both residency training programs and the future clinical content of family medicine.

The incidence of depression or anxiety was higher in the Virginia Study than in the current study. This diagnosis was also made more frequently by residency-trained physicians (4.6 percent) than by non-residency-trained physicians (2.8 percent). It is surprising that depression or anxiety was diagnosed infrequently, for other studies have indicated a much higher incidence. Residents are learning to recognize this problem, and one would expect that this diagnostic category will be used more often in the future.

Dr. Stewart is Professor and Chairman of the Department of Community Health and Family Medicine, University of Florida College of Medicine, Gainesville, Florida.

It was also surprising to learn that the only diagnosis for which residency graduates spent at least 25 percent less time than their counterparts was obesity, which would suggest that residency programs may not be teaching residents the appropriate management of this problem.

Ninety-four percent of the respondents had hospital privileges. Board-certified physicians devoted a larger proportion (26 percent) of their practices to inpatient work than did noncertified physicians (20 percent), and the proportion of board-certified physicians is constantly increasing. It is important to note that the number of physicians in a region had no significant effect on the breadth of the family physicians' hospital privileges.

When comparing residency-trained with non-residency-trained physicians, there were significant differences in the clinical content of the hospital practices. Three types of diagnostic clusters occurred more frequently in the hospital practices of residency graduates: pregnancy; psychosocial problems, such as alcoholism and anxiety or depression; and other medical diagnoses, such as asthma, anemia, and cardiac arrhythmias. Non-residency-trained physicians managed more surgical diagnoses, such as appendectomy, cholecystitis, and hernias; orthopedic diagnoses, such as fractures and all types of back pain; and two medical conditions, chronic obstructive pulmonary disease and hypertension. These findings would seem to indicate that in keeping with current US family practice residency training, family physicians in the future will be more comfortable treating patients with relatively complex medical diagnoses and psychosocial problems.

Another interesting finding was that 45.7 percent of the responding family physicians performed obstetrical deliveries. The glaring exception was physicians in the Northeast, where only 6 percent of the respondents performed deliveries. It was also found that family physicians in poorer and less populated areas were more likely to engage in obstetrics, which would certainly seem to validate the continued emphasis on obstetrics in family practice residency programs. A strong obstetrical practice should also result in an increase in the number of pediatric visits in the future.

0094-3509/82/080723-03$00.75
© 1982 Appleton-Century-Crofts

The section on the utilization of diagnostic and therapeutic tests and procedures by family physicians contains some surprising information. The five major diagnostic conditions utilized as tracers in the study were tonsillitis and pharyngitis, upper respiratory tract infections, essential hypertension, diabetes mellitus, and anxiety or depression. A diagnostic test was ordered in 19.6 percent of all patient encounters. Whether or not this is an appropriate percentage cannot be answered by this study. It is possible that many of these patients had been seen previously and had had diagnostic studies performed before the current visit. However, it would be interesting to compare this percentage with that derived from a similar study of practicing general internists and to relate the findings to outcomes. In this study, a therapeutic procedure was defined as including counseling and drug therapy as well as injections. Utilizing this definition, a therapeutic procedure was performed in 75.8 percent of all ambulatory encounters. In only 46 percent of encounters was a systemic drug prescribed, while in 11 percent an injection was included. This is an interesting finding because family physicians have at times been accused of overprescribing.

It is not surprising that a complete blood count or urinalysis was the most frequently ordered outpatient diagnostic test (20.8 percent). The next most frequent diagnostic study was a blood chemistry (4.8 percent). Following these, in descending order, were other x-ray examinations, Pap smear, chest x-ray film, automated chemistry panels, breast examination, electrocardiogram, and finally, cultures. Again, it would be interesting to compare these percentages with those engendered by other primary care physicians.

In only 18.1 percent of first visits for tonsillitis and pharyngitis was a throat culture obtained. It would appear that without a throat culture many patients may receive inappropriate treatment with antibiotics. In fact, this may have been the case, since 84.1 percent received drug therapy, with 21.3 percent receiving injections. Residency-trained family physicians did order throat cultures three times as frequently as non-residency-trained physicians. Residency-trained physicians also used fewer drugs and injections than their counterparts and spent more time with their patients. This bodes well for the future of family practice.

It would be interesting to speculate why 15.6 percent of first-visit patients with an upper respiratory tract infection received a drug injection. The nature of the drug injection is not specified, and it is possible that the injection was used for a secondary diagnosis. If this were penicillin, however, its appropriateness could be questioned if used for an upper respiratory tract infection.

Hypertensive patients on their first visit had diagnostic procedures performed 29 percent of the time and blood tests 21.5 percent of the time. Although these figures appear to be low, a number of these patients may have been seen and had a physical examination by another physician. It is impossible to tell from the study how many of those patients with borderline hypertension had been asked to return for repeat blood pressure measurements, which could explain why 32.4 percent of patients received no medication. In only 23.3 percent of patient encounters for hypertension was counseling recorded. While this may reflect a data-recording deficiency, it would be hoped that this percentage will increase as more residency-trained graduates enter practice.

Eighty-five percent of diabetic patients received blood tests on the first visit, and 65.3 percent received drug therapy. These figures seem to indicate that a rather large percentage were mild diabetics who were treated by diet alone. Again, only 28.7 percent of first-visit diabetic patients were reported to have received any type of counseling. Some of these patients may have been previously diagnosed as diabetic and had been under the care of other physicians.

Interestingly, 16 percent of patients diagnosed as having neurosis or depression had blood tests on their first visits. Very few patients in this category received an injection. Of first-visit patients 55.4 percent received medication, and 79.1 percent of them did so on follow-up visits. One suspects that not all of these medications were warranted. Time spent in counseling these patients was also lower than expected; only 33.4 percent received any counseling on the first visit and 27 percent upon follow-up. Unfortunately, there is no information comparing residency-trained physicians with non-residency-trained physicians in this category. It is hoped that residency-trained physicians would spend more time with these patients and utilize fewer drugs than their older counterparts.

The most frequently performed outpatient therapeutic procedures varied, in descending order,

from the prescription of systemic drugs (46 percent) to cauterization or cryotherapy (0.6 percent), with no real surprises in between except for the 11 percent for injections other than immunizations. The percentage of patient encounters involving prescriptions for systemic drugs was encouragingly low and would suggest that family physicians are not overprescribing. However, one would have to wonder about the nature of and indications for the injections reported for 11 percent of patient encounters which were unrelated to immunizations.

It is to be expected that physicians who have the capability of performing tests in their offices would order these tests more frequently, and this was, in fact, the case for all of the common diagnostic modalities. Because of patient convenience and residency training in laboratory medicine, the performance of these tests could be expected to increase in the future.

A significant finding of the study was that women, particularly in their childbearing years, saw female physicians, when available, more frequently than they saw male physicians. In view of the increasing number of women in medicine, this may have some future impact on the practices of male physicians with respect to women of childbearing ages.

In summary, this is a valuable study. It indicates that there are significant differences between the practices of younger residency-trained physicians and the older cohort of general practitioners. These differences rest largely in the types of disease entities treated in hospitalized patients. The younger physician is more likely to manage more complicated medical illnesses, whereas his or her older counterpart is more likely to manage surgical problems. Because of the bimodal age distribution of general practitioners and family physicians, there will be a significant shift in the future toward the type of practice engaged in by the younger respondents. There were also distinct differences between the two groups with respect to the ordering of diagnostic tests and the utilization of various therapeutic tests and procedures, the time spent with patients, and the providing of obstetrical services. These differences will probably disappear as the practices of residency-trained physicians become the norm in the future.

A sizable percentage of family physicians are performing obstetrical deliveries except in the Northeast. This should eventually increase the proportion of pediatric visits.

It is also interesting to note that, although practices tended to age somewhat along with physicians, there was no tendency to practice either pediatrics or geriatrics exclusively. Family practice continues to care for all age groups.

Several points need to be borne in mind with regard to the results of this national study of the content of family practice. The major source of clinical data contained in this study was a log-diary form by which the physician recorded data on all patients seen during a three-day period. Although this type of approach is frequently employed, it has some limitations with respect to complete accuracy. The data were collected in 1977 from physicians who had been selected from the 1975 American Medical Association Professional Activity Questionnaire, and hence included only the earliest group of residency-trained or board-certified family physicians. This initial group may well differ significantly from more recent graduates in their practice patterns. Finally, the survey period was slightly different for the original group of self-identified "general practitioners," who were sampled in July and September, and the self-identified "family physicians," who were sampled in October. This could account for some of the differences observed between different subgroups of physicians and could, for example, decrease the true incidence of upper respiratory tract infections for both groups.

The clinical content of family practice, as determined by this study, meshes quite well with current definitions and goals of the specialty, particularly for recent residency-trained family physicians. The process and quality of care as currently practiced, however, leave something to be desired. In particular, the amount of time devoted to counseling of patients needs to be increased. The amount of drug prescribing for patients with psychosocial problems needs to be decreased. Greater attention needs to be paid to the various aspects of preventive medicine. Happily, there is evidence that some of these changes are already beginning to take place in the practices of younger residency-trained family physicians.

It would be most interesting to repeat this study in ten years. One would expect to find greater homogeneity among family physicians by that time. It would be interesting, however, to see what other differences might become evident.