Referral Patterns in an Individual Family Practice

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This retrospective study of referral patterns in an individual private practice demonstrates that the family physician provides definitive care for the large majority of patient problems in everyday practice and does not function primarily as a triage officer. Ninety-seven percent of all patient contacts, both ambulatory and in-hospital, were managed by the individual physician and his staff. Two-and-one-half percent of patient contacts required consultation with local specialists, and only .5 percent required referral to a tertiary care center. These results are compared with other large-scale population studies of the "ecology" of medical care and with other recent studies of referral patterns in family practice.

In 1972, third and fourth year medical students began rotating through the author's private family practice for a one-month elective preceptorship sponsored by the Harvard Family Health Care Program. Details of this preceptorship have been described in a previous paper.[1] The students participated in the care of patients in a community hospital, in the preceptor's office, and in patients' homes. While working closely with the practicing family physician for an extended period of time, they sought firsthand answers to many vital questions about a career in primary care. Their contacts with other members of the community medical staff exposed them to discussions of social, economic, political, and administrative issues which were unfamiliar to those confined to an exclusively academic environment.

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One of the recurrent fears expressed by these students, who were considering a career in family medicine, was that the family doctor functioned primarily as a triage officer. Although their firsthand experience and reassurance from the preceptor helped to dispel this myth, there developed an obvious need to document referral patterns in family practice. This stimulated the following retrospective study.

Methods

Following postgraduate training in internal medicine and pediatrics during the 1960s, the author established a private practice in a town of 18,000 located 35 miles north of Boston. Facilities included an 850 sq ft office with routine laboratory and EKG equipment; an 85-bed community hospital; a 150-bed level II and III nursing home; and a town department of Public Health, with a home care nursing staff.

This practice provided first contact, comprehensive health care for the entire family. Obstetrical care was provided by a group of physicians working in the same building. The author participated in the prenatal care and assumed responsibility for the newborn in the hospital nursery. After one year of practice, an associate joined the author in an office- and expense-sharing arrangement. Records were housed together but color coding clearly identified the primary physician.

The data for this study were obtained from a retrospective study of the author's records. Data concerning services rendered for the author's patients by the associated physician were included. The year studied was July 1, 1972 to June 30, 1973. This represented the author's third year of practice.

Results

Figure 1 is a profile of the patient population in this practice; there were 3,379 patient records from a total of 1,169 families. In this survey, a family was defined as a single household. The age distribution is similar to other studies[2] which suggest that the young doctor begins practice with a predominance of young families.

Figure 2 is a summary of the number of ambulatory visits recorded during this period. Again, the majority of the 4,388 visits were made by younger patients. Figure 3 summarizes the number of hospital visits. As one would expect, the majority of these 1,426 hospitals days were dominated by the older portion of the patient population.

A total of 5,814 patient contacts were made during the year. Consulta-

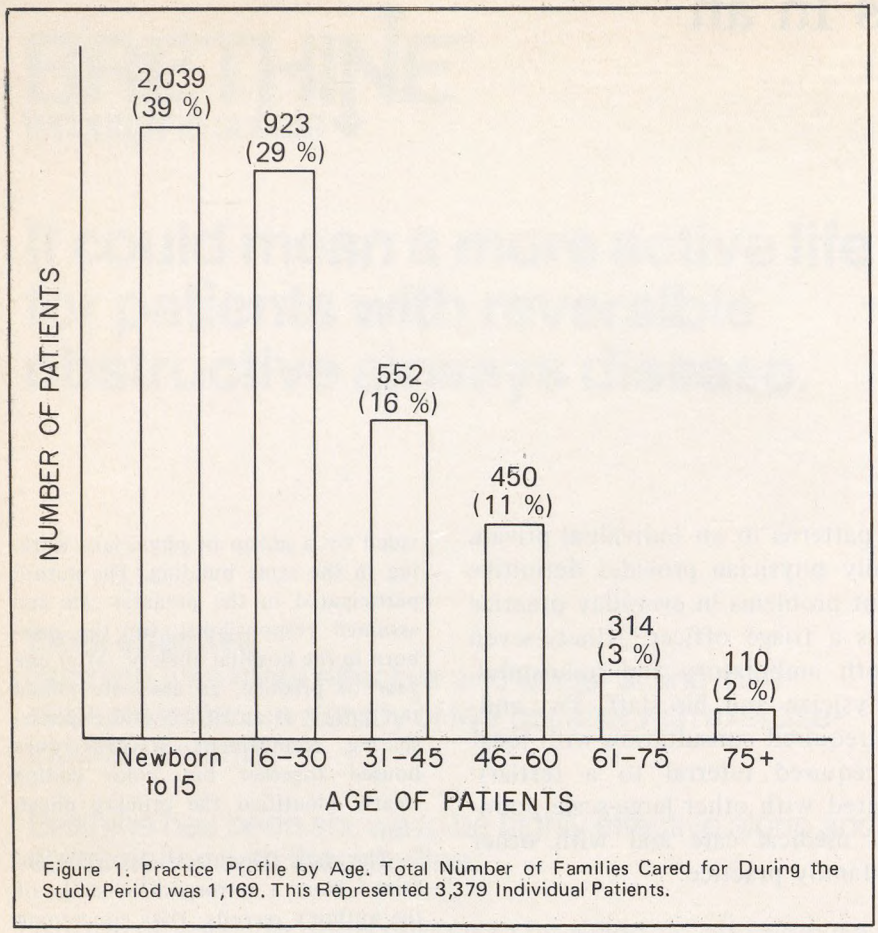

Figure 1. Practice Profile by Age. Total Number of Families Cared for During the Study Period was 1,169. This Represented 3,379 Individual Patients.

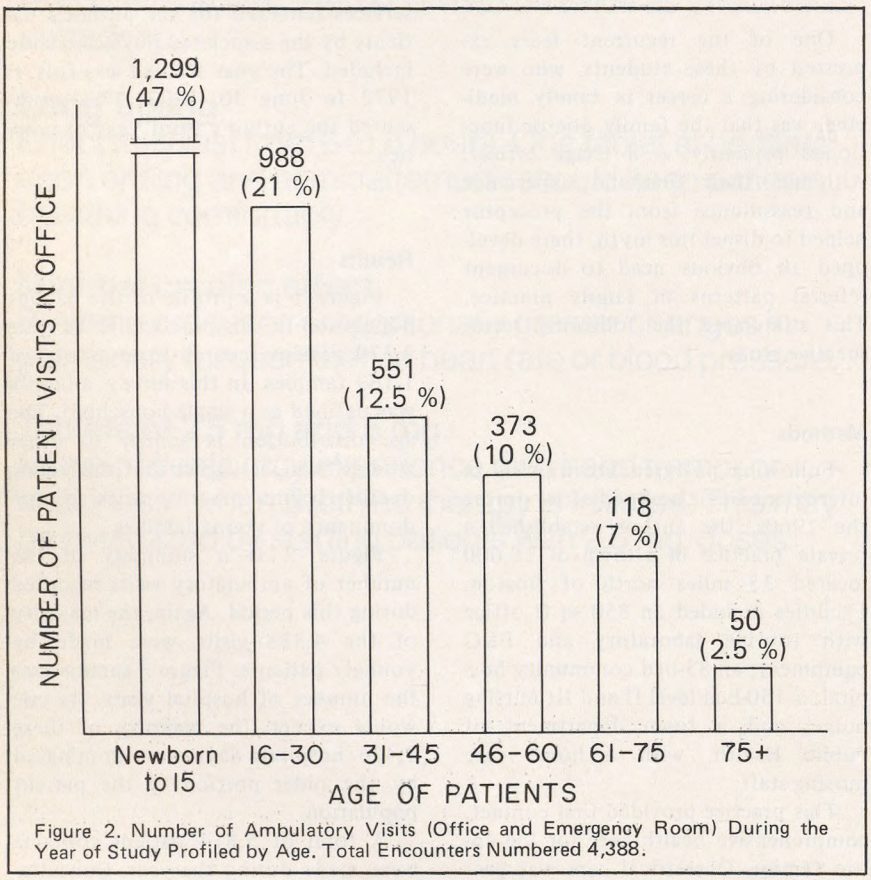

Figure 2. Number of Ambulatory Visits (Office and Emergency Room) During the Year of Study Profiled by Age. Total Encounters Numbered 4,388.

tion with local specialists was obtained on 147 occasions. The majority of these occurred in the community hospital or in other community offices. These were predominantly consultations with general surgeons, orthopedists, and gynecologists. A significant number of these were obtained to add support to the original medical opinion rendered by the primary physician.

During this year of study, only 29 patients were referred to a university medical center. Less than one half of one percent required the expertise of a tertiary care center. These included cardiac catheterization prior to by-pass surgery, acute leukemia, sepsis in a newborn, reconstructive surgery for hypospadias, the work-up for hemoplegic migraine in a teenager, work-up and exploration for persistent unexplained occult bleeding of the gastrointestinal tract, evaluation and treatment of bone tumor in a child, and other equally unusual conditions.

Discussion

The family physician is not a triage officer. In this one practice, 97 percent of all patient contacts were managed by the family physician, his staff, or other health-care professionals under his direction. Only three percent of these contacts required consultation with community-based consultants or transfer to a tertiary care medical center. Figure 4 presents this data graphically. These results are similar to those found in larger population studies of the ecology of medical care,[3] which suggests that during any given year 1.0 percent of the United States population is admitted to a university hospital. The number of ambulatory visits (over 4,000) is higher than White's[3] estimation of 750 per 1,000 population (which would be about 2,500 for this population of 3,379 patients). This can be explained by the emphasis that was placed on preventive health care in this practice. The White data also suggest that 100 people per 1,000 are hospitalized per year in a community or secondary care facility. With an average length of hospital stay of seven to eight days, this would produce 750 hospital days per 1,000, or about 2,500 hospital days per year for this practice. The

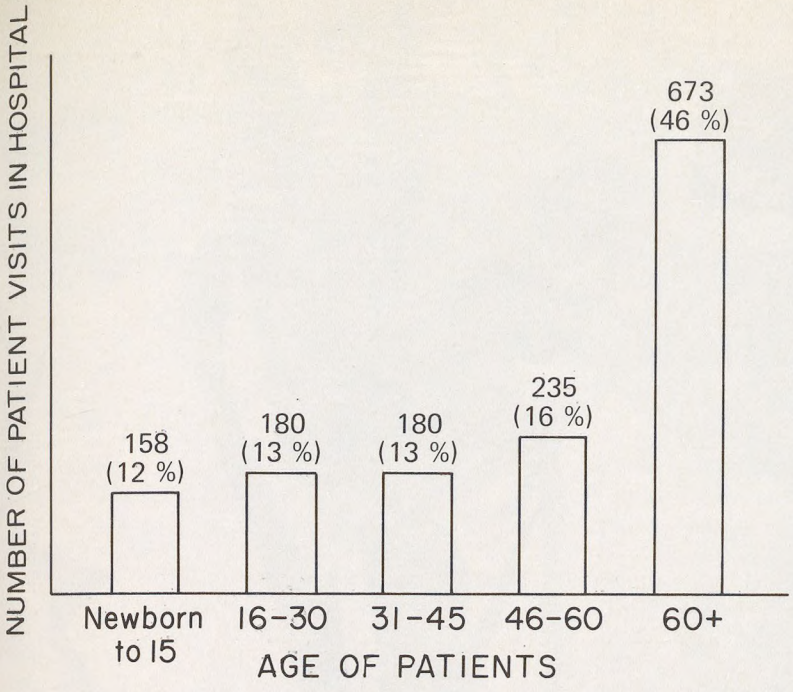

Figure 3. Number of Community Hospital Visits During the Year of Study Profiled by Age. Each Hospital Visit for Every Patient was Tabulated. The Total Encounters Numbered 1,426. The Average Daily Hospital Census was 3.90 Patients.

considerably lower value of 1,426 can be explained by (1) the younger age group in this practice, (2) the fact that hospitalization for obstetrical service was not included, and (3) the emphasis on preventive health care and ambulatory diagnostic evaluation.

Metcalfe and Sischy[4] studied five private practices in the Rochester, NY area and found an overall referral rate of 2.0 to 2.5 percent. These were predominately for general surgery (25.5 percent), obstetrics-gynecology (10.8 percent), and orthopedics (9.8 percent). Geyman and co-workers[5] analyzed the referral patterns of eight family physicians in central and northern California. Their study demonstrated an overall referral rate of 1.6 percent of a total of over 6,000 hospital and office visits, and emphasized that referrals by family physicians to general internists and pediatricians are relatively infrequent. The results of the present study would support Geyman's suggestion that referral rates may be slightly higher on the east coast than on the west coast.

The data from this simple, grassroots study of one family practice demonstrate for students interested in family medicine that the family physician is not a mere triage officer in our contemporary health-care system; he or she provides definitive care for the large majority of patient problems presenting in everyday practice.

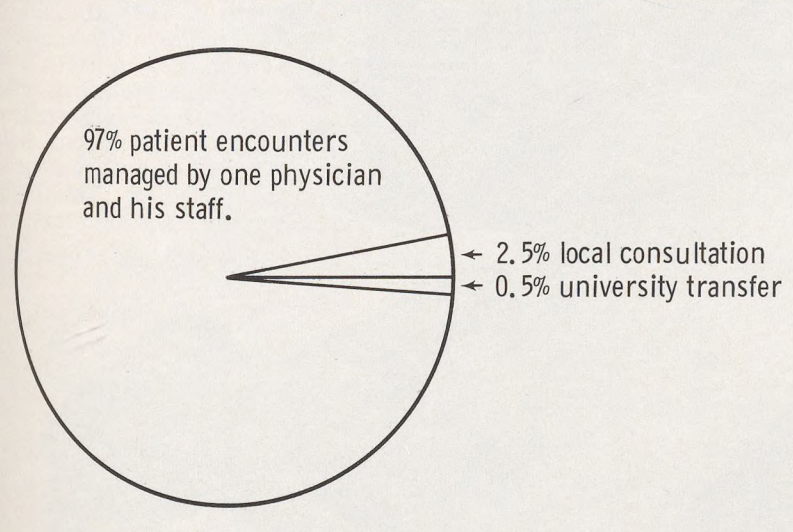

Figure 4. Graphic Representation of Referral Pattern.

References

1. Messner E, Schmidt DD: Videotape in the training of medical students in psychiatric aspects of family medicine. Int J Psychiatry Med 5:269-273, 1974
2. Brown JW, Robertson LS, Kosa J: A study of general practice in Massachusetts. JAMA 215:301-306, 1971
3. White KL: Life and death and medicine. Scientific American, from the Scientific American Book by the same title, New York, Bettmann Archive, Inc, 1973, pp 3-16
4. Metcalfe DH, Sischy D: Patterns of referral from family practice. J Fam Pract 1(2):34-38, 1974
5. Geyman JP, Brown TC, Rivers K: Referrals in family practice: A comparative study by geographic region and practice setting. J Fam Pract 3:163-167, 1976