Family Practice Forum

Risks of Referral

Jack Froom, MD, Richard I. Feinbloom, MD, and Melville G. Rosen, MD
Stony Brook, New York

Family physicians receive broad-based training, and an important component of their domain is the diagnosis and management of frequently occurring illnesses in their patients within the context of the family and community. Physicians in other specialties acquire in-depth knowledge of diseases that occur less frequently and possess skills to perform complex diagnostic and therapeutic procedures. Although family physicians provide definitive care for over 95 percent of patient encounters,[1-3] the remainder require consultation, referral, or both. With consultation, patient care is shared, but the responsibility remains with the primary physician. Referral denotes "a permanent, temporary or partial transfer of responsibility for care of the patient,"[4] although the primary physician may be expected to continue a supportive relationship that includes the psychological and social components of the problem for which the patient is referred.

Consultation and referral rates are influenced by patient factors such as age, marital status, and race[4]; physician variables such as age[5] and length of training[6]; and community variables such as payment sources,[4] location of practice,[7] and even the season of the year.[1] The major reasons for consultation and referral given by physicians in rank order of frequency are (1) to obtain a second opinion concerning patient management, (2) to compensate for lack of required facilities or specific skills, (3) to obtain a second opinion for diagnosis, and (4) to comply with the request of the patient or family.[6]

Both consultation and referral can confer major benefits to patient and physician. These benefits include access to expert knowledge and sophisticated technical skills; nevertheless, there are risks. The major risk to the patient from consultation is confusion that can result from disagreement between the referring physician and the consultant. For referral there are additional risks as illustrated by the following brief examples.

A patient with recurrent urinary tract infections can pose a dilemma for the primary care physician, and referral to a urologist is a common consequence. According to Kunin,[8] "urethral dilatation is probably the most common procedure used by urologists to treat females with recurrent infection." Yet, careful measurements of the caliber of the distal urethra do not show decreased diameters in girls with recurrent urinary tract infection compared with those without infection, and urethral dilatation has no beneficial effect on preventing recurrences.[9,10] Additional costs and discomfort are incurred, therefore, without expectation of benefit.

A second example concerns children with recurrent acute otitis media and persistent middle ear effusions. Reduced hearing can be a consequence, and placement of ventilating tubes can be appropriate therapy. The procedure, however, is not without risk (general anesthesia is usually required) or complications (scarring, otorrhea, cholesteatoma, and others).[11] In a recent survey of 500 otolaryngologists, 32 percent of respondents insert tubes in one month or less, following diagnosis or referral.[12] It is true that the effusion could have been present for several months prior to the first visit to the otolaryngologist, but 40 percent of those surveyed felt that tubes were used too frequently. Early referral, therefore, carries a risk of an intervention that may be either premature or unnecessary.

Continued on page 625

From the Department of Family Medicine, State University of New York, Stony Brook, New York. Requests for reprints should be addressed to Dr. Jack Froom, Professor of Family Medicine, Department of Family Medicine, Health Sciences Center, State University of New York at Stony Brook, Stony Brook, NY 11794.

References:
1. Stone PH, Turi ZG, Muller JE: Efficacy of nifedipine therapy for refractory angina pectoris. *Am Heart J* 104:672-681, September 1982.
2. Antman E, Muller J, Goldberg S, et al: Nifedipine therapy for coronary-artery spasm: Experience in 127 patients. *N Engl J Med* 302:1269-1273, June 5, 1980.

Continued from page 623

The last example concerns referral of patients with suspected or known coronary artery disease. In this case the dilemmas are both diagnostic and therapeutic. The choice of diagnostic tests available includes exercise stress tests, radionuclide perfusion studies, radionuclide ventriculography, and coronary artery angiography. "The major objective is to insure that the benefits of a diagnostic strategy exceed the risks and that the net benefits of the diagnostic strategy chosen are greater than those of the alternatives."[13] Yet, "coronary arteriography is not always resisted vigorously"[14] by physicians who care for patients with angina pectoris. Therapeutic decisions pose even greater problems. A positive stress test in an asymptomatic patient or a patient with atypical chest pain could lead to coronary angiography. Demonstration of significant coronary artery obstruction might eventually result in coronary bypass, although the benefits of such surgery in asymptomatic individuals have not been demonstrated. Even in symptomatic patients (except in selected subsets), the benefit of surgery is still a matter of contention.[15-19] In addition to these technical considerations, appropriate diagnostic and therapeutic decisions require information about illness behavior, family factors, patients' expectations, and a host of other variables. The family physician may have some of this information but is often not consulted or included in the decision-making process.

In these three examples, patients referred by family physicians could receive an unnecessary procedure, a procedure administered prematurely, or one in which decisions are made without full consideration of all the multiple and complex operative factors. Some of the factors that contribute to these patient risks include community variables, factors that relate to physician training, and those that involve interaction among the family physician, the consultants, and the patient.

Among the community variables is the issue of reimbursement for physicians' services. Is an hour of physician time spent doing a diagnostic procedure (such as cystoscopy) really worth considerably more than one hour of time spent obtaining a careful history, performing a thorough physical examination, and producing an assessment and plan? Large monetary rewards for complex diagnostic and therapeutic procedures are likely to

increase their use. In addition, a society that believes that all problems can be solved by technology is apt to encourage technological solutions.

In regard to physician training, skills in performing complex procedures receive major emphasis in postgraduate training. Physicians who acquire these skills value them and fear that they might atrophy if they are not applied with moderate frequency. A natural consequence may be the extension of indications for a given procedure when the caseload is low (such as the period spent establishing a practice). Emphasis on new technology and on procedures during the training period also tends to blunt considerations of alternative approaches that involve knowledge of the natural history of disease process without intervention.

Probably the most important variable contributing to patient risk for referral is impaired communication between family physician and consultant. That consultants receive insufficient information from referring physicians and that feedback from consultants to referring physicians is inadequate have received ample documentation.[20-22] In addition, neither has the role of the patient in sharing in decisions that involve uncertainty yet been clearly defined, nor has the science of making decisions under conditions of uncertainty been incorporated into clinical practice.

Several things can be done. Fee structures can be revised so that technological interventions are not unduly rewarded and, therefore, encouraged. Directors of residency training programs should consider community morbidity patterns in relationship to the curriculum for their residents. The family physician should provide the consultant with pertinent information and take part in both diagnostic and therapeutic decisions. Finally, the patient must be made an active participant in the decision process. Uncertainties about diagnosis and therapeutic outcome should be shared with the patient. What is ultimately involved is making decisions under conditions of uncertainty in which both the probabilities of outcomes and the values of the patient must be taken into account. The family physician can play an important, possibly unique, role in such principled gambling because of his knowledge of the patient and his family, the shared trust that has been developed over time, and his defined role as an advocate for the patient.[23] Although referral risks may not be entirely eliminated, a trio of patient, consultant, and referring physician can reduce these risks and contribute to increased satisfaction for all parties.

References

1. Geyman JP, Brown TC, Rivers K: Referrals in family practice: A comparative study by geographic region and practice setting. J Fam Pract 3:163, 1976
2. Schmidt DD: Referral patterns in an individual family practice. J Fam Pract 5:401, 1977
3. Metcalfe DH, Sischy D: Patterns of referral from family practice. J Fam Pract 1:34, 1974
4. Penchansky R, Fox D: Frequency of referral and patient characteristics in group practice. Med Care 8:368, 1970
5. Morrell DC, Gage HC, Robinson NA: Referral to hospital by general practitioners. J R Coll Gen Pract 21:77, 1971
6. Brock C: Consultation and referral patterns of family physicians. J Fam Pract 4:1129, 1977
7. Riles GJ, Wille CR, Haggerty RJ: A study of family medicine in upstate New York. JAMA 208:2307, 1969
8. Kunin CM: Prevention and management of urinary tract infections. Philadelphia, Lea & Febiger, 1979, p 279
9. Fair WR, Govan DE, Friedland GW, et al: Urinary tract infections in children: Part 1—Young girls with nonreflexing ureters. West J Med 121:366, 1974
10. Kaplan GW, Sammons TA, King LR: A blind comparison of dilatation, urethrotomy and medication alone in the treatment of urinary tract infection in girls. J Urol 109: 917, 1973
11. Naunton RF: Panel on experience with middle ear ventilating tubes: Tympanostomy tubes: The conservative approach. Ann Otol Rhinol Laryngol 90:529, 1981
12. Armstrong BW, Armstrong RB: Chronic nonsuppurative otitis media: Comparison of tympanostomy tubes and medication versus ventilation. Ann Otol Rhinol Laryngol 90:533, 1981
13. Stason WB, Fineberg HV: Coronary artery disease: What is a reasonable diagnostic strategy? Ann Intern Med 95:385, 1981
14. Braunwald E: Coronary-artery surgery at the crossroads. N Engl J Med 297:661, 1977
15. Kloster FE, Kremkau EL, Ritzmann LW, et al: Coronary bypass for stable angina. A prospective randomized study. N Engl J Med 300:149, 1979
16. The Veterans Administration Cooperative Study of Surgery for Coronary Arterial Occlusive Disease. Effect of medical vs. surgical treatment on symptoms in stable angina pectoris. Circulation 60:888, 1979
17. Palac RT, Hwang MH, Meadows WR, Croke RP, et al: Progression of coronary artery disease in medically and surgically treated patients 5 years after randomization. Circulation 64(suppl 2):17, 1964
18. European Coronary Surgery Study Group: Prospective randomized study of coronary artery bypass surgery in stable angina pectoris: Second interim report. Lancet 2:491, 1980
19. National Institutes of Health Consensus Development Conference Statement: Coronary-artery bypass surgery: Scientific and clinical aspects. N Engl J Med 304:680, 1981
20. Cummins RO, Smith RW: Reports to referring physicians, letter. N Engl J Med 393:361, 1975
21. Hines RM, Curry DJ: The consultation process and physician satisfaction: Review of referral patterns in three urban family practice units. Can Med Assoc J 118:1065, 1978
22. Curry RW Jr, Crandall LA, Coggins WJ: The referral process: A study of one method for improving communication between rural practitioners and consultants. J Fam Pract 10:287, 1980
23. Bursztajn H, Feinbloom RI, Hamm RM, Brodsky A: Medical Choices, Medical Chances. New York, Delacorte Press/Seymore Lawrence, 1981