
Referral and Consultation in Primary Care: Do We Understand What We're Doing?

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Consultation and referral decisions by primary care physicians have an enormous impact on the cost and quality of care that patients receive. Studies suggest that for each dollar generated by a family physician, \$2 are generated by the consultant physician, and \$4 by the associated hospital.¹⁻³

Patient health is also certainly affected. Appropriate consultation and referral may lead to prompt diagnosis and treatment of conditions that were beyond the immediate expertise of the primary care physician. Inappropriate referral, however, may lead to unnecessary testing and a cascade of increasingly expensive, invasive, and risky procedures in an often futile search for diagnostic certainty.^{4,5}

Although studied extensively in the United Kingdom, we know very little about the process and results of consultation and referral practices in the United States. The article by Neil Calman and his co-workers in this issue⁶ raises interesting questions about the current consultation patterns in family practice. Although based on the practices of one group of six family physicians and two nurse practitioners, the study results are consistent with data from the literature suggesting great interphysician variation in frequency of consultation and referral. Calman et al also found that there was substantial intra-physician variation by specialty consulted, and that this variation correlated with diagnostic specificity in the referral letter. The results are similar to a British study,⁷

also involving only one practice, which concluded that physicians with greater expertise had higher referral rates.

These apparently counterintuitive results are intriguing. Does increased knowledge result in increased referrals because of a better assessment of patient need? Or, does the higher referral rate simply reflect the greater interest or curiosity that a physician has as manifested by his or her increased knowledge? Alternatively, is increased knowledge one response to a physician's intolerance of uncertainty, which is also manifested in an increased referral rate? Studies have suggested that physicians who are willing to tolerate more uncertainty generate less intense services, including laboratory testing⁸ and referral.⁹ The finding that referral decisions vary by problem domain is consistent with Elstein's work describing physicians' problem-solving strategies, which indicates that physicians' strategies are not similar across all content areas.¹⁰

In their article, Calman et al do not clearly distinguish between consultation and referral. Though these terms are used interchangeably by many authors, there is an important distinction based on the transfer of responsibility for the patient.¹¹⁻¹³ A *consultation* involves another physician performing a specific diagnostic or therapeutic task, without transfer of responsibility for the patient's care or even for ongoing management of the problem. *Referral*, on the other hand, involves sending a patient to another physician for ongoing management of a specific problem with the expectation that the patient will continue to see the original physician for coordination of total care.

Consultation and referral comprise a spectrum. At one extreme is the informal "sidewalk consult." At the other extreme, full responsibility for coordinating patient care is referred to another physician, as in the care of patients with end-stage renal disease. In between the extremes are varying levels of interaction between the primary care physician and consultant, which may result

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in improved care for the patient, or in misunderstanding, duplicate testing, or inadequate care.

More research is needed if physicians are to understand the consultation and referral process and improve their ability to effectively consult with and refer patients to specialists. In particular, research is needed in four areas: describing the pattern of consultation and referral; understanding the components of the consultation and referral decision; describing the costs and outcomes of consultation and referral; and developing better strategies for consultation and referral.

Consultation and referral patterns. Most of the research on consultation and referral patterns comes from the United Kingdom, where there is evidence of a great deal of variation.¹⁴⁻²¹ The most common factor that influences referral rates is the availability of qualified consultants.¹⁶ Little correlation has been found between referral rates and the quality of referrals,²²⁻²⁴ and most of the observed variation remains unexplained.¹⁴ Some evidence points to variation in consultation and referral patterns among primary care physicians in the United States as well.^{6,11,25,26} There are few data to explain variation in the United States, although patient characteristics,^{11,12,25,27} physician specialty,²⁸⁻³⁰ length of training,³¹ and reimbursement plan^{11,28,32} appear to be important.

The decision to consult and refer. Consultation and referral decisions are firmly embedded in general clinical decision-making processes. There is, however, little understanding of the clinical decision processes that govern consultation and referral practices, although some work has been done to develop theoretical models.^{12,18,20,30}

Several authors in the United Kingdom^{20,33-36} and the United States^{31,37,38} have examined physicians' reasons for consultation and referral. These include diagnosis or confirmation of diagnosis; diagnosis and treatment recommendations; advice on treatment; treatment of a previous condition; reassurance of patient, relative, or referring physician; specific investigations or specialty procedure; routine specialty examination; referring physician's education; specific request by patient; and medical-legal reasons.

The results of Calman et al suggest the need for a complex model to account for the variability of the decision-making process in consultation and referral. Additional research is needed on the psychological determinants, including perception and tolerance of ambiguity, perception of role and competence of both primary physician and consultant, fear of exposing lack of knowledge, fear of losing the patient, effect on the doctor-patient relationship, and the role of the patient.^{12,25}

The challenge of understanding the decision-making processes of physicians and their patients with regard to

consultation and referral is immense. This may be an ideal area for application of qualitative research methods. Dowie's work,²⁰ based on in-depth interviews of 65 British general practitioners, is an important start in the right direction. She demonstrated the complexity of the referral decision-making process and identified three sets of variables that drive the process: professional attributes, knowledge of the health care system, and personal style.

Cost and outcomes of consultation and referral. Mounting evidence for dramatic variation in use of high-cost diagnostic and therapeutic services has led to a major federal research initiative on outcomes and medical effectiveness research. There is little work, however, examining the extent to which such variations are explained by variations in referrals from primary care. The variation that has been observed in consultation and referral practices suggests that both underreferral and overreferral may be prevalent. Both have significant cost and outcomes implications. Research strategies must consider that the appropriateness and timing of a consultation and referral will vary by the interests and capabilities of primary care physicians, the availability of qualified consultants, and the characteristics of the practice setting.

Most studies of the outcomes of consultation and referral have used intermediate outcomes, such as services provided, the adequacy of the answer to the referring physician's request, and patient satisfaction, as well as the perception of the value of the consultation and referral held by the patient, the referring physician, and the specialist. Research is needed as well that examines outcomes in terms of measurable changes in health and functional status.

Consultation and referral strategies. The components of the consultation and referral include the following: (1) the primary care physician and the patient recognize the need for consultation and referral; (2) the primary care physician communicates the reason for the consultation and referral along with relevant clinical information to the specialist; (3) the specialist evaluates the patient's condition; (4) the specialist communicates the findings and recommendations to the primary care physician; and (5) the patient, primary care physician, and specialist understand their responsibilities for continuing care.^{26,37} Problems in the consultation and referral process, however, have been identified at every step,²⁶ many of them attributed to failures in communication and discordant expectations.

Research is needed to develop and test strategies for improving communication among the three parties and establishing clear expectations regarding responsibility. The use of computer and communications technology may provide opportunities to facilitate the consultation process. Enhanced communication could also encourage preconsultation testing and avoid wasteful duplication.

Strategies for teaching techniques of consultation and referral need to be developed, tested, and incorporated into the medical school and continuing education curricula for primary care physicians and subspecialists. Finally, the potential of consultation and referral to contribute to the continuing education of practicing physicians needs further development.^{37,39,40}

In summary, we have outlined a research agenda for consultation and referral. This area is of enormous policy relevance, particularly at a time when most health care reform proposals assume a central role for primary care physicians in ensuring coordination of care for all Americans. Consultation and referral are the major avenues through which family physicians bring to bear the considerable capacity of the health care system on the care of their patients. A better understanding of and more effective strategies for consultation and referral, therefore, will have an important beneficial impact on the cost and quality of care that patients receive. Ultimately, this body of research will demonstrate the key role of primary care physicians in providing optimal care for all patients.

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