

Separating Fad from Fact: Family Medicine, Primary Care, and the Role of Health Services Research

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Family practice must come to terms with its sudden popularity. There is no mistaking the signs. The 1996 match rate for family practice residency programs was the highest it has been in many years. Graduating family practice residents are finding themselves inundated with recruitment offers that range from urban health maintenance organizations (HMOs) to rural clinics. From the chambers of Congress, the boardrooms of Wall Street, and even from some medical school lecture halls emanate voices singing the praise of primary care physicians as saviors for the ills of the US health care system, while castigating specialists as culprits in a system run amok. This is all heady stuff for a specialty that has been described by its founders as a counterculture in rebellion against the medical status quo.

What explains this dramatic turn of events? It is tempting to believe that the merits of primary care and family medicine are self-evident and that the United States has finally come to its senses. The beguiling vapors of subspecialization have suddenly blown away, leaving the public in clear-eyed appreciation of the humble virtues of family practice. An alternative view is that this shift in policy consciousness is the product of a long campaign to educate the public and policymakers about primary care. One ingredient in this campaign has been the advocacy of individuals and organizations in family practice and other generalist fields. Whether quietly setting the example by serving as role models for patients, students, and colleagues, or by broadcasting the message through newspaper advertisements about "physicians who specialize in you," these advocates have been spurred on by a deeply held conviction of the value of primary care. Another key ingredient in this educational effort has been health ser-

vices research. Although one should be equally cautious about crediting scientific evidence with being the paramount influence on either health policy or clinical practice, it is important to acknowledge the valuable role of research in enhancing the status of primary care in this country.

Among the most influential work have been studies showing that the costs of medical care are lower when care is provided by family physicians and other generalist physicians with a primary care orientation. The most noteworthy of these studies is the Medical Outcomes Study,¹ a large project that carefully adjusted for differences in case mix such as disease severity in its comparison of family physicians, general internists, and medical subspecialists serving as the principal physician for their patients. The Medical Outcomes Study found that family physicians and general internists used significantly fewer resources in caring for similar patients. A subsequent publication from the Medical Outcomes Study reported that patient outcomes and quality of care were equivalent across specialty groups, ie, generalist physicians provided a more efficient mode of care that achieved comparable patient outcomes.² The results of the Medical Outcomes Study are consistent with prior studies. Several excellent review articles have summarized this research literature.^{3,4}

Two articles in this issue of *The Journal of Family Practice* are welcome additions to this literature. Mark and colleagues⁵ examined the association between the supply of physicians in different specialties and Medicare expenditures for physician and related professional services. In contrast to the approach of the Medical Outcomes Study that examined individual patients and physicians, Mark et al performed an "ecological" study using urban counties as the unit of analysis. They found that counties with more family physicians per capita had lower Medicare Part B expenditures per Medicare beneficiary. Conversely, areas with a greater supply of non-generalist physicians had higher Medicare expenditures. Areas with a higher proportion of general internists relative to non-

Submitted, May 16, 1996.

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generalist physicians also had lower Medicare expenditures. Unlike family physicians, however, general internists tend to locate their practices in the same counties as non-generalist physicians. Consequently, counties with a high supply of general internists also tend to have a high supply of non-generalist physicians. Overall, Medicare costs were higher in these areas because the impecunious influence of the more populous non-generalists overrode the efforts of general internists.

The methods of Mark et al⁵ draw from several previous analyses of the association between physician supply and resource use for Medicare beneficiaries across geographic areas. These analyses have found the same inverse relationship between the proportion of generalist physicians and resource use.⁶⁻⁸ Mark et al⁵ have provided an additional degree of refinement in their research design by scrutinizing each individual primary care specialty and by more carefully controlling for potential confounding variables, such as community sociodemographic characteristics that may be associated with both generalist physician supply and medical expenditures.

Why does the presence of more generalist physicians correspond to lower Medicare expenditures? Mark et al⁵ offer several hypotheses, including a potential role for early and effective primary care interventions to prevent expensive hospitalization from advanced or poorly controlled disease, better coordination of care to reduce unnecessary use of specialty referrals, and lower prices typically associated with generalists compared with specialists for similar care. One intriguing finding of the study is that the supply of general practitioners was associated with higher Medicare costs rather than lower costs as with family physicians and general internists. This finding raises the possibility that generalist physicians with less extensive training may be less effective in delivering primary care that is economically efficient.

Although the results of Mark et al⁵ are provocative, they need to be interpreted with the caution deserved by any observational study of small area variation. One cannot conclude with confidence that a policy that redistributed physician supply from specialists to generalists would necessarily produce the savings implied by the data in this study. The lower expenditures in areas with more family physicians may not be the direct effect of family physician supply. Rather, family physicians may be drawn to areas that for unmeasured reasons are less disposed toward medical care expenditures in the first place, whether this tendency is due to underlying population characteristics or the presence of other health system factors, such as managed care.

The article by Forrest and Starfield⁹ takes a different approach to analyzing costs. Unlike Mark et al,⁵ who focus on the issue of *who* is providing care, Forrest and

Starfield examine the matter of *how* care is being provided. Barbara Starfield, one of the article's coauthors, has a distinguished record of performing research that probes the process of primary care. Her book *Primary Care—Concept, Evaluation, and Policy* is an authoritative synthesis of theory and evidence about the ingredients comprising good primary care services.¹⁰ Among the essential attributes of primary care are first-contact care (including accessibility), continuity, comprehensiveness, and coordination. Whether care is being provided by a family physician, a cardiologist professing to be the "primary care physician" to his or her patients, a nurse practitioner, or a health care team, the quality of the primary care delivered may be judged against these essential attributes.¹¹

One of the challenges for researchers has been to document that care satisfying these primary care elements offers a better product than does a model of care that lacks comprehensiveness, coordination, and other primary care attributes. There is relatively little published research documenting the beneficial outcomes of a process of care that features the specific elements of primary care. Among the published research in this area are studies demonstrating that patients who receive continuity of care experience fewer hospitalizations than patients without good continuity of care,¹² and that patients whose overall care fits a primary care model are more likely to receive appropriate preventive care services.¹³

In the study reported in this issue of *The Journal*, Forrest and Starfield⁹ analyzed a nationally representative sample of physician encounters to investigate whether costs for an episode of care were lower when patients initiated first-contact care with their regular physician. The authors found that for a variety of acute and preventive care episodes, ambulatory care costs were about 50% lower when the episode of care began with the patient's identified primary care physician rather than with a different provider. From a policy perspective, the observed differences in costs would be most compelling if they indicated that the actual delivery of care is more efficient when a patient initiates care from a clinician familiar with that particular individual. That is, the findings could be interpreted as evidence that continuity of care promotes efficiency because physicians can be more selective or accurate in their use of diagnostic tests and treatments or more willing to rely on watchful waiting when prior experience in caring for a patient allows a richer context for interpreting new symptoms.¹⁴

Unfortunately, a myriad of alternative explanations may account for the cost differences observed in this study. The research design allows little opportunity to test these alternative hypotheses. For example, it is quite likely that the more urgent the medical problem, the more difficult it was for patients to conveniently schedule an

appointment with their regular physician. The greater the severity of the illness, the more likely the higher costs and the lower likelihood of initiating care with their regular physician. The data used by the researchers do not provide any insights into severity of illness. In addition, it is unclear whether the variation in costs was primarily explained by differences in the actual use of services or simply by differences in charges for a similar package of services. Did patients who used alternative sources of care such as emergency departments or specialist physicians actually consume more "real" resources such as tests and procedures, or did they simply incur higher costs because these other providers charge more for the same types of services? The latter explanation leads to much less interesting policy conclusions. That is, it is hardly surprising to learn that specialists and emergency departments charge more than primary care physicians. A recent study even suggested that emergency department charges may severely overstate the true marginal resource costs of providing primary care services in the emergency department.¹⁵ Finally, in addressing the *how* question, the study avoids the *who* question. We know nothing about whom patients identified as the "particular doctor they usually see." Some of these physicians are probably subspecialists who serve as the "usual" doctor for many patients. It is possible to interpret the results of the study as indicating that a patient who initiates care from her "regular" cardiologist may incur lower costs than a patient who initiates care with a family physician who is not the patient's personal continuity provider but is covering for another family physician in the same office.

Despite these limitations, these studies add to the accumulating literature indicating that a primary care model of care delivered by family physicians and other generalists results in more economical care. The key challenge for health services researchers will be to document that this economy does not come at the expense of quality. Neither Mark et al⁵ nor Forrest and Starfield⁹ examined clinical outcomes in their studies. Although, as noted above, some research has shown that quality of care is comparable across specialties, research must continue to link analysis of costs with analysis of meaningful health outcomes. Recent studies presented at conferences, but not yet published in peer-reviewed journals, have suggested that generalist physicians are less adept than specialists in managing patients with conditions such as coronary artery disease and congestive heart failure.¹⁶ A colleague of mine has dubbed these studies as "The Em-

pire Strikes Back" literature defending the role of specialists. Research that demonstrates the unique contributions of generalists and specialists to patient care and highlights the type of teamwork among clinicians that might produce optimal outcomes would be most productive.

In coming to terms with its hard-won popularity, family medicine must guard against complacency. The medical marketplace is fickle: today's hero is tomorrow's villain. Health policy is too often driven by fads rather than by facts. Research that carefully documents the important contributions of family medicine and primary care will help to assure a more lasting appreciation of the value of family practice.

References

1. Greenfield S, Nelson EC, Zubkoff M, et al. Variations in resource utilization among medical specialties and systems of care. *JAMA* 1992; 267:1624-30.
2. Greenfield S, Roger W, Mangotich M, et al. Outcomes of patients with hypertension and non-insulin-dependent diabetes mellitus treated by different systems and specialties. *JAMA* 1995; 274:1436-44.
3. Franks P, Nutting PA, Clancy CM. Health care reform, primary care and the need for research. *JAMA* 1993;270:1449-54.
4. Bowman MA. The quality of care provided by family physicians. *J Fam Pract* 1989; 28:346-55.
5. Mark DH, Gottlieb MS, Zellner BB, Chetty VK, Midtling JE. Medicare costs in urban areas and the supply of primary care physicians. *J Fam Pract* 1996; 43:33-9.
6. Welch WP, Miller ME, Welch G, Fisher ES, Wennberg JE. Geographic variation in expenditures for physicians' services in the United States. *N Engl J Med* 1993; 328:621-7.
7. Escarce JJ. Explaining the association between surgeon supply and utilization. *Inquiry* 1992; 29:403-15.
8. Dor A, Holahan J. Urban-rural differences in Medicare physician expenditures. *Inquiry* 1990; 27:307-18.
9. Forrest CB, Starfield B. The effect of first-contact care with primary care providers on ambulatory expenditures in the United States. *J Fam Pract* 1996; 43:40-8.
10. Starfield B. Primary care—concept, evaluation, and policy. New York, NY: Oxford University Press, 1992.
11. Donaldson MS, Yordy KD, Vanselow NA, eds. Defining primary care: an interim report. Washington, DC: National Academy Press, 1994.
12. Wasson JH, Sauvigne AE, Mogielnicki RP, et al. Continuity of outpatient medical care in elderly men: a randomized trial. *JAMA* 1984; 252:2413-17.
13. Bindman AB, Grumbach K, Osmond D, Vranizan K, Stewart AL. Primary care and receipt of preventive services. *J Gen Intern Med* 1996; 11:269-76.
14. Hjortdahl P, Borchgrevink CF. Continuity of care: influence of general practitioners' knowledge about their patients on use of resources in consultations. *BMJ* 1991; 303:1181-4.
15. Williams RM. The costs of visits to emergency departments. *N Engl J Med* 1996;334:642-6.
16. Anonymous. Rate of heart attack survival differs by type of doctor used. *New York Times* 1995 Nov 15; Sect C:19.