

Practice-Based Research: Laboratories for Health Care Reform

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The necessity for practice-based research has long been evident to family medicine researchers. The efforts of researchers from the Ambulatory Sentinel Practice Network (ASPN) and other networks have left little doubt that research carried out in practice settings can have immediate relevance to daily clinical practice. The provision of care by generalists is expected to be the linchpin in the current reconfiguration of the United States health care delivery system. This reorientation toward generalism will occur regardless of whether legislation is built on the current market-based system—now in the midst of a frenetic restructuring—or on a more regulated approach. The “rediscovery” of generalism by policymakers provides a unique opportunity for practice-based researchers.

Why Practice-Based Research?

In this environment, practice-based research has the opportunity to make a significant contribution to improving health care for Americans. We consider practice-based research to include research conducted in settings where individuals seek care. Possible settings include one or more practitioners' offices, group practices, clinics, or health maintenance organizations. Our focus here is the networks of practitioners who investigate common primary care problems seen in their practices. There continues to be a great need to develop the knowledge base of primary care. The rationale for much of the care provided by generalists in office settings is either empirically based

or derived from specialty-oriented studies in which conditions were carefully controlled and inclusion criteria narrow. Such traditional biomedical studies are not necessarily appropriate for informed decision-making by primary care providers for several reasons: (1) Most studies conducted in specialty and subspecialty centers focus on a single disease or disease process in order to minimize confounding from other conditions, whereas primary care often involves management of undifferentiated symptoms and comorbid conditions. (2) Such studies are done in highly selected referral populations on subjects who are often homogeneous in age and are highly compliant. (3) Most traditional research is designed to evaluate single interventions rather than the combinations of interventions that are more characteristic of primary care practice. (4) Standard outcomes, such as death and physiological variables, are usually the focus of such studies, whereas quality of life and functional status are of greater concern in community-based practice. (5) Studies performed in the tertiary care environment often systematically exclude environmental factors, such as the patient's physical and psychosocial environment, the patient-physician relationship, and the multiple effects of factors inherent in the organization, delivery, and financing of health care in the United States.^{1,2}

Properly designed studies performed in practice settings on unselected patients by primary care physicians can overcome the shortcomings of biomedically oriented studies. Research performed in practice or community-based settings is now needed to provide insight and understanding of the clinical spectrum of illness as it affects most of the people most of the time.^{3,4} Providing universal access to appropriate health care for all Americans at an affordable cost will require an enhanced understanding of how and why people seek care and how to provide needed services in a cost-effective manner. Patient- and physician-friendly policies must be based on the realities of the day-to-day practice rather than on models of what should happen.

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Health Care Reform and Research

Health care reform will be subjected to innumerable changes as it passes through the congressional process.⁵ It is expected, however, that the emphases on prevention, effectiveness, cost, quality, and access inherent in health services research will endure. Successful efforts to increase the number of primary care practitioners must include research that supports a sound scientific basis for clinical decision-making, based on the unselected patient populations.

Academic institutions and independent research enterprises have been the traditional recipients of grants from the National Institutes of Health and the Agency for Health Care Policy and Research. Practice-based research networks can enhance the quality of health care by providing a mechanism to link the delivery of care with the ongoing development of knowledge. The importance of performing research beyond the walls of tertiary care centers to enhance the generalizability of research is increasingly understood by federal funding resources. For example, AHCPR's medical effectiveness research program was established to study the broader range of outcomes seen in average patients in typical practice settings. Practice-based research networks can serve as an effective mechanism to link researchers, practitioners, and patients, and play an important role in the movement to study the effectiveness of alternative strategies for diagnosing and treating common clinical conditions. However, lack of financial support for existing practice-based networks has been a formidable barrier to achieving this linkage.¹ A substantial portion of research is funded through investigator-initiated projects that may not be conducive to establishing the requisite infrastructure to build a critical mass of researchers in nonacademic settings. Development of innovative arrangements among public, academic, and professional organizations will be required to maintain the vitality of practice-based research networks.

The accent on effectiveness and outcomes research, in particular, should survive the iterations through which health care reform passes, for many see this approach to research as being the key to improved cost efficiency and quality in the health care delivery system. Improvements in clinical practice will be most likely if the questions addressed by that research are relevant to the problems confronting patients and practitioners in most practice settings. The involvement of practicing clinicians in articulating and defining the research questions of greatest interest is ideally suited to identification of the common conditions for which appropriateness and effectiveness of various management strategies have not been elucidated.

For instance, a recently published study⁶ performed

in an ad hoc network of over 100 practices, several of which were family practices, showed that routine use of prenatal ultrasound screening did not improve perinatal outcome as compared with selective use of ultrasound guided by clinical judgment. This practice-based study, which was led by a family physician researcher, is of great relevance not only to clinical practice but also to health care policy formulation because of its significant cost-savings and quality implications.

Policy-Relevant Opportunities in Practice-Based Research

There are several general topical areas in which practice-based primary care research may be particularly timely and policy-relevant:

1. Studies on the processes of consultation and referral in primary care and their impact on patient outcomes and cost are needed. Inappropriate timing and volume of referrals are both likely to result in increased costs to the health care system. The organizational features of different forms of care delivery influence referral patterns with various incentives and sanctions. Furthermore, referral patterns of nonphysician providers have not been studied extensively. Practice-based research networks that have heterogeneous practice organizational structures and midlevel practitioners as well as physicians can serve as exemplary research laboratories for examination of these issues.^{7,8}
2. Studies of variations in practice patterns and how practice variation can be changed are of great relevance to primary care practice because of the vast amount of information primary care providers must take in and process. Significant personal and financial resources are being invested in the development of practice guidelines with the expectation that incorporating them into practice will minimize variation, decrease costs, and improve quality. Little is known, however, about how practitioners adopt new information into their practices. Again, practice networks, with their rich variety of practitioners, geographic locations, and practice arrangements, are uniquely situated to study various issues and questions in this domain.⁸
3. Most health care reform efforts embrace managed care organizations as the route to increased access, greater control of cost, and improved quality. The alphabet soup of managed care arrangements, however, includes a disparate array of practice settings, management structures, and corporate cultures. Research is needed on the organizational attributes of these organizations that strengthen primary care outcomes. Moreover, given the

structure and system changes currently occurring at the local and state levels, studies on the effect of the essential primary care elements of coordination, continuity, comprehensiveness, and accessibility, and their relative impact on access, cost, and quality, are critically important. Not only do managed care organizations have the patients, data, and providers needed for practice-based research, but also the current environment instills a competitive need for research to provide answers to clinical questions of cost-effectiveness and improved patient outcomes.⁹

Conclusions

Policymakers at all levels of government and in the private sector are embracing primary care as the answer to concerns about access to and cost and quality of our health care system. In response to the challenge of being an essential part of the solution to the nation's health care problems, primary care leaders must ensure that sufficient attention and resources are directed toward research that scientifically addresses the knowledge on which primary care practice is based. Practice-based research offers great opportunities for the study of health and health care phenomena as they present in the nation's pluralistic cultural and practice settings. Research on health care delivery has been termed the "basic science" for health

care reform, and the most important laboratory for this science is primary care practice settings.

References

1. Bland CJ. Putting research into practice: report of the Task Force on Building Capacity for Research in Primary Care. Springfield, Va: National Technical Information Service, August 1993.
2. Nutting PA, Clinton JJ. Primary care and the public's health: population-based perspectives on research in primary care. Presented at United States-Israel binational conference, Washington, DC, March 26, 1992.
3. Clinton JJ. From the Agency for Health Care Policy and Research. *JAMA* 1993; 270:1405.
4. Nutting PA, Clancy CM, Franks P. The need for expanded capacity in primary care research. *JAMA* 1993; 270:1449-53.
5. Iglehart JK. Health care reform. The labyrinth of congress. *N Engl J Med* 1993; 329:1593-6.
6. Ewigman BJ, Crane JP, Frigoletto FD, LeFevre ML, Bain RP, McNellis D, the RADIUS Study Group. Effect of prenatal ultrasound screening on perinatal outcome. *N Engl J Med* 1993; 329:821-7.
7. Primary care and health care reform. Rockville, Md: Agency for Health Care Policy and Research, 1993. Publication No. 93-0059.
8. Nutting PA. Practice based research: laboratories for outcomes and effectiveness research. In: Hibbard H, Nutting PA, Grady M, eds. Primary care research: theory and methods. Rockville, Md: Agency for Health Care Policy and Research, 1991. AHCPR publication No. 91-0011.
9. Wagner EH, Cherkin DC. Effectiveness management and research: the scientific contribution of health maintenance organizations. In: Hibbard H, Nutting PA, Grady M, eds. Primary care research: theory and methods. Rockville, Md: Agency for Health Care Policy and Research, 1991. AHCPR publication No. 91-0011.

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