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Fragmentation in US Medical Education, Research, and Practice:

The Need for System Wide Defrag

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On December 2, 2012, the plenary address for the annual meeting of the North American Primary Care Research Group was delivered by T.R. Reid, the American reporter whose work inspired the 2008 PBS Documentary "Sick Around the World"[1] and who authored *The Healing of America: A Global Quest for Better, Cheaper, and Fairer Healthcare*.[2]

Reid described four basic systems of health care used by nations across the world. He noted that all nations, except one, had systems of care based substantially on one of the four models. In an uncoordinated fashion, the United States (the exception), combines elements of all four of these models: (1) Medicare and Medicaid—the Canadian-type government payment to private providers, (2) Military, Veterans Affairs, and the Indian Health Service—the British-type government payment to government specialists and private generalist physicians, (3) Private health insurance—the German-type payment to private providers from private insurers, whose premiums come jointly from employers and employees, and (4) The uninsured—the Third World-type out-of-pocket payments to providers from those without insurance.

Reid noted that other nations of the world choose one of these four basic models and stick with it, minimizing hybridization. Use of all four basic models in the United States has resulted in a dramatic fragmentation of care and payment, and, compared to the rest of the rich nations of the world, a more complicated, more expensive, less effective, more unfair type of care that is ripe for fraud and provides little incentive for prevention, primary care, and public health.

A day before the NAPCRG address by Reid, I had the pleasure to attend the Conference on Practice Improvement, jointly sponsored by the American Academy of Family Physicians and the Society of Teachers of Family Medicine. As usual, there were many impressive presentations of practice innovations, and I was struck by the local nature and difficulty in the generalization of many of the innovations. In the area of rapid synthesis and deployment of effective new practice models, the United States suffers again from a significant fragmentation problem.

Indeed, fragmentation is pervasive in all facets of American medicine and health care, including systems of medical education and research, health care delivery, and practice transformation. Fragmentation results from a lack of national and regional health care planning, an absence of a unified vision for social accountability and moral imperative, and a deficiency of financial incentive for a cohesive system of care with a balanced health care workforce.

In this and subsequent presidential columns, I will make comments about the various areas of fragmentation and make recommendations for the necessary systemic changes. For a scholarly review of the fragmentation of

medical practice, I refer you to the writing of Kurt Stange, MD, PhD, published in the *Annals of Family Medicine* in 2009.[3] In related articles, Stange provides the generalist solution for such fragmentation.[4,5] The content of these articles remains relevant, but the recommendations have largely not been implemented.

Fragmentation in the Continuum of Medical and Health Care Education

The continuum of medical education in the United States is characterized by a disjointed set of educational steps. There is no governing authority or consultative organization that minds the transitions from pre-professional student to medical student to resident physician to fellow to practicing professional. Students suffer from poorly standardized entry requirements, meager systems of personal support at the times of transition, and curricula that place too little emphasis on personal professional growth, practice management, the science of health systems, and leadership development.

Likewise, there is a paucity of attention paid to inter-professional health care education and early clinical inter-professional educational experiences. The culture of the training programs in the various health professions continues to promote misunderstanding of roles and capabilities and inhibits the development of the health care models needed for more efficient and effective health care delivery.

We now struggle with numerous accreditation standards for medical schools and residency programs that were seemingly developed in a vacuum and have serious impact on the continuum of education. In response, there is now discussion of the band-aid approach of lengthening the duration of residency training to ease the ills of a badly broken continuum. It is likely that the continuum can be improved only by the two things that are most likely to alter the behavior of leaders of medical education institutions: (1) changes in financial incentives or (2) changes in criteria for accreditation, licensure, and certification. I will devote an upcoming column specifically to the moral underpinnings of the continuum of medical education and the need for bodies of accreditation, certification, and licensure to develop common missions of social accountability for better health and health care for the populations served by the institutions.

Fragmentation in the Performance and Dissemination of Research

The financial incentives applied to research and scholarly activity are out of balance. Basic science bench research has received the bulk of the research funding in the United States, and an impressive body of scientific discovery has resulted. However, the funding for translation of this research has been sporadic and misapplied, and, in relative terms, financial support for population-health science and primary care research has been paltry.

Translational research involves two different strategies, often called T1 and T2 research. T1 research focuses on the transfer of knowledge from the laboratory or bench to clinical trials and the establishment of scientific evidence of the effectiveness of a given intervention. T2 research is practice and community-oriented translational research that focuses on strategies for effective dissemination and adoption of evidence-based guidelines, new technologies, practice redesign, novel and effective models of care, development of partnerships between community organizations and practices, and population-based health outcomes and cost.[6] Both types of translational research are important for better health care.

The Clinical and Translational Science Awards (CTSAs) provide an example of well-intentioned planning that did not ease fragmentation. For the last 6 years, the NIH National Center for Research Resources has awarded large CTSA grants for translational research. Unfortunately, the results of these projects have been for the most part disappointing. Few institutions that emphasize primary care and biopsychosocial thought met criteria for the awards. Some of the awards went to institutions without departments of family medicine. Routinely, T1 research was given more emphasis than T2 research, and the opportunity to balance the research agenda was missed.

Fragmentation of Practice Improvement Discoveries

There is no longer any question about the effectiveness of the patient-centered medical home (PCMH) delivery model.[7] The four foundational principles are now well known, and along with high functioning systems of data management and care coordination, implementation and further study has begun. But this implementation and study has been fragmented, and progress in system-wide

implementation of these advances has been slow. Over 100 new advances in practice innovation were presented at the STFM/AAFP Conference on Practice Improvement referred to above. But because of funding mechanisms unique to local and state programs, and because of a lack of prospective, capitated payments for family medicine practices, many of us will struggle to quickly implement these advances in our practices.

Practice innovators in family medicine, while often working at the local level, have the opportunity as a body to help spur a broader application of their work. As they consider the broader implementation, these things should be kept in mind:

1. Consumer Engagement. In the practice of family medicine, we have a long way to go to optimize the foundational and corollary principles of the PCMH most closely related to the consumer engagement—first-contact access, integrated care, community orientation, and cultural competence. People must be attracted to the PCMH, and they must want us to be their usual source of comprehensive, longitudinal care. When this happens, our patients will become our best advocates, and when that occurs, appropriate financial incentives for good care and rapid dissemination of new models of effective care will not be far behind.

2. Health Information Technology and Data Management. As a nation, the United States has made some progress in this area, but we are not nearly as advanced as needed. Researchers and innovators who use electronic technologies for point-of-service decision support, quality improvement programs, registries, and health information exchange need to put their collective feet on the accelerators. Data management will drive widespread dissemination of practice innovations.

3. Care of Women of Childbearing Age and Children. With the rapid demographic changes in aging and obesity, one might think that this recommendation would be "Chronic Disease Management and Metabolic Syndrome." That topic is important, but in the United States, health outcomes for women of childbearing age and children is the worst segment of US health care performance. If we are to have any hope of the proper system-wide practice transformation, we cannot leave one segment of the population behind. Family medicine must lead the way in practice innovation for women and children.

4. Payment Reform. This is the most important topic on this list. If a pervasive network of PCMHs is to be developed, there must be payment that provides the proper incentives. Two things are of utmost and fundamental importance. First, to incentivize care coordination and integrated care, there must be substantial prospective, capitated payments to family medicine practices. There are some payment schemes like this, in some state Medicaid systems and from a few insurers in various locales, but they are fragmented payment schemes. The Resource-based Relative Scale Value (RBRVS) Update Committee has already calculated the value for care coordination in a Level 3 National Committee for Quality Assurance NCQA PCMH (about $14 per Medicare beneficiary per month).[8] Across-the-board nationwide payments of this kind must be implemented now. Second, to incentivize quality care, we must have payments for elegant, efficient performance measurement. Family medicine innovators should develop these systems, which should be based on prevention, function, and resiliency from illness and should not be too cumbersome for small practices. Consistent, national mechanisms for payment will spur integration of new models.

5. Advocacy. Advocacy with lawmakers, regulators, institutional representatives, and business partners will allow us to turn fragmented opportunity into reality. Partnerships and coalitions with these groups will allow rapid synthesis and dissemination of our work. They can give us great help in turning our local projects into national phenomena.

Summary

No other nation in the world exhibits the degree of fragmentation in medical education, research, and practice that is found in the United States. The discipline of family medicine holds some of the most important keys to defragmentation. T.R. Reid ended his presentation to the NAPCRG convention with these words: "Basic health care cannot be a for-profit endeavor. The design of a health care system is a moral decision and is a fundamental moral commitment on the part of a nation. If Americans find the political will to care for all, the

other rich countries can show us the way." We have examples of systems that do not suffer from fragmentation. The will to change is an obligation. Knowing the heart of family medicine educators, I am sure that we will pursue this obligation.

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