
PERSPECTIVE

Iconoclasm And Physician Workforce Research

The field moves ahead.

by **Fitzhugh Mullan**

SPECIATION OR BIOLOGICAL DIVERSITY has been held by Charles Darwin and his scientific followers to be the hallmark of evolutionary strength. Many species make for many genes, infinite evolutionary possibilities, and good insurance against the vicissitudes of the environment. The same is not usually said about biological science itself, which relies on reductionist principles, replication of findings, and standardization of concepts to enunciate scientific truths. What are we to think, then, of the papers by Gary Hart and colleagues and by Kevin Grumbach and colleagues that depart smartly from previously established positions in the catechism of physician workforce policy?¹ Is this evidence of a field robust in the diversity of its ideas or one hobbled by the frailty of its science? There is something to be said for both interpretations.

Hart and colleagues make the cogent case that a careful count of all physicians providing services under the aegis of two well-established staff-model health maintenance organizations (HMOs) produces a physician-to-population ratio of 180 per 100,000 patients—a figure far higher than previous analyses and extrapolations have produced for other HMOs.² This issue is of more than academic interest, of course, because the recent rapid increase in the percentage of Americans cared for in one or another form of managed care has made the physician needs of these organizations central to the debate about the number

of physicians we should be training. A number of studies reporting HMO staffing in the range of 120–150 physicians per 100,000 patients have added heft to the argument that we are on the way to a major physician surplus. The Hart figure of 180 is right at our current national practicing physician-to-population ratio and is almost 50 percent higher than the previously reported HMO staffing requirements. What is going on here?

There can be little argument that Hart and colleagues exercised a high level of specificity and thoroughness in their examination of the two HMOs, Group Health Cooperative of Puget Sound in Seattle and Group Health, Inc. (GHI) of HealthPartners in the Minneapolis area. They were vigilant in their efforts to count not only staff physicians in the HMOs but also all contract and consulting physicians. The authors identified and deleted administrative time and analyzed the impact of the demographics of the plans' members as well as their out-of-plan use. No doctor stones were left unturned, and the result was the surprisingly high physician-to-population ratio reported. Does this mean that the previous studies were insufficiently thorough, or is the Hart team studying a different species?

■ **An atypical model.** The Hart team has established a gold standard in methodological thoroughness, but they have done it with a peculiar and increasingly rare species: the staff-model HMO. Many features of staff-

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model HMOs suggest that they might be somewhat more physician-“heavy” than other forms of managed care. By definition, these are “mature” organizations whose staffing patterns were established at a time when the system as a whole was less cost-conscious than it is today and with physicians whose work is contractually defined. The HMOs studied here count 2,088 hours a year, or 45.4 hours per week for forty-six weeks, as a full-time position—a figure that would be considered on the low side by many physicians today. The authors acknowledge that staffing ratios were at their peak at the time data were collected and have since declined, so that the 180 figure was probably the high-water point in staffing for one type of HMO that is, arguably, atypical of the developing HMO market.

■ **The typical model.** The preponderant, fastest-growing form of managed care today is the individual practice association (IPA). IPA physicians practice in their own offices, under contract with various health plans to provide services at established rates to the plans’ beneficiaries. In IPA plans patient denominators can be determined easily enough, but physician numerators are extremely difficult to calculate because only a fraction of any physician’s time is devoted to patients from a given plan. The work of Hart and colleagues is valuable in elucidating part of the picture of managed care physician requirements, but to establish the full range of physician use by the various forms of managed care, workable techniques for making accurate, composite calculations of physician-to-population ratios in IPAs need to be developed.

■ **Physician-to-population ratios.** As noted, the figure of 180 physicians per 100,000 population is similar to the current national ratio, which prompts the authors to “caution” that recent proposals to cut back on the number of physicians in training may not be warranted. However, the problem is that the national figure is not static. We remain in a phase of rapid growth for the U.S. physician workforce—growth that is locked in by the doubling of the size of the annual graduating

class of medical students during the 1970s combined with continued high rates of importing doctors trained abroad. If current levels of training continue, we will have almost 220 physicians per 100,000 by 2010—well above the current 180 figure—which suggests that some limitation in training incentives or positions would be the most prudent course for educators and policymakers.³

■ **Access to care.** Grumbach and colleagues tackle a different aspect of physician workforce policy: access to care as related to physician supply. After a long debate in the post-World War II period concerning a growing physician shortage, Congress passed the Health Professions Education Assistance Act in 1963, initiating a decade of legislation and a cascade of programs designed to put more doctors to work across the country. Production (numbers of physicians) and distribution (practice location) were the twin girders on which the strategy of the 1960s was built—principles that, to a considerable degree, remain in effect today.

The work of Grumbach and colleagues challenges the notion that the physician supply in a given area (“distribution”) is, in fact, the real determinant of patients’ access to services. Examining data from urban regions in California, they conclude that the immediate geographical proximity of a physician is less a factor for a patient in obtaining services than are insurance status and income. The Grumbach team concludes that “a more geographically equitable distribution of physicians in the United States is unlikely to compensate for a less-than-egalitarian system of health insurance.” It is hard to argue with the eloquent simplicity of this data-driven conclusion—one that brings to mind the much traveled throw-away line, “White follows green,” meaning that doctors practice where the money is. The corollary, demonstrated here, would be that “green follows white”: Patients with “money” find their way to doctors.

■ **Policy implications.** What, then, is the import of this research for thirty years of public policy designed to draw physicians and

other providers into underserved American communities in which they would not otherwise have worked? First, there is nothing in these observations that suggests that the current federal, state, and municipal interventions are not essential to maintaining access, such as it is, in poor communities. The community health center program by itself serves an estimated 8.1 million persons a year in underserved areas.⁴

Second, new forms of coverage, including Medicaid managed care and state-based programs designed to expand coverage of the uninsured, are creating new incentives for plans to enroll persons living in traditionally underserved areas. One unintended and untoward effect of this development may be that the facilities in poor urban communities (community health centers and public hospitals) will be left with an ever-increasing burden of uninsured patients, threatening their viability. The well-being of the "safety-net" institutions that do exist in areas of poor physician supply must be a focus of community leaders and policymakers as we move further into this era of privatization.

Third, it is important to note that the Grumbach team's analyses and conclusions are confined to urban areas, where absolute distance to service is less a factor than is the case in rural areas. Although a patient in an inner-city community may not have a physician in his or her immediate neighborhood, there certainly are physicians (frequently in large numbers) not far away. Money or insurance can, plausibly, overcome this barrier to care. The same cannot be said for many persons who live in rural areas for whom distance by itself constitutes a barrier.

Finally, one can only applaud the authors' invitation to health services researchers to design more sophisticated measures of physician effectiveness than simple geographical presence or absence. Distributional tracking has never been more than a crude proxy for real measures of impact and usefulness. The ubiquity of the computer and growing interest in the cost and effectiveness of physicians

would seem to create an environment in which more refined measures of physician/population interactions will be developed.

■ **Where to from here?** Both studies take persuasive issue with previously established positions in the field. Hart and colleagues have refined and improved existing methods for counting clinical staff in HMOs, while Grumbach and colleagues have developed and applied a new approach to measuring the impact of physician supply on access. These are important contributions, yet the magnitude of the departures that these studies take from previous positions in the field suggests that the science of workforce research is still in a developmental phase. Much remains to be done in designing measurement and tracking techniques, developing conventions for apportioning education and practice costs, and applying the increasingly robust tools of health services research to the important arena of the health care workforce.

The cup is half full, and the cup is half empty.

NOTES

1. L.G. Hart et al., "Physician Staffing Ratios in Staff-Model HMOs: A Cautionary Tale," *Health Affairs* (January/February 1997): 55-70; and K. Grumbach, K. Vranizan, and A.B. Bindman, "Physician Supply and Access to Care in Urban Communities," *Health Affairs* (January/February 1997): 71-86.
2. J. Weiner, "Forecasting the Effects of Health Reform on U.S. Physician Workforce Requirement: Evidence from HMO Staffing," *Journal of the American Medical Association* 272, no. 3 (1994): 222-230; and J.E. Wennberg et al., "Finding Equilibrium in U.S. Physician Supply," *Health Affairs* (Summer 1993): 89-103.
3. Council on Graduate Medical Education, *Patient Care Physician Supply and Requirements: Testing COGME Recommendations* (Rockville, Md.: U.S. Public Health Service, Health Resources and Services Administration, July 1993), 7.
4. U.S. Department of Health and Human Services, "Justification for Estimates for Budget Committees, Fiscal Year 1997" (Rockville, Md.: HRSA, 1996).