

Editorial Views

A Demographic Dilemma

MANY OF THE FACTORS that influence physicians to practice in various locations equally influence members of all occupations. The disproportionate aggregation of physicians in urban and suburban sites reinforces the assumption that the practice of medicine provides occupational mobility that equals or even exceeds mobilities in most other endeavors. Both lay and professional media have been glutted with reports concerning the maldistribution of physicians not only geographically but also by specialty. As the cost of health care continues to match or exceed the inflationary spiral, it is a small wonder that government seeks to become involved in an attempt to institute remedies.

Section 15 (c) of the Social Security Act Amendments of 1973 (Public Law 93-233) directed the Secretary of Health, Education and Welfare to arrange for studies concerning: 1) equitable methods for the reimbursement of physicians under Titles XVIII and XIX (Medicare and Medicaid) in hospitals with teaching programs; 2) the extent to which funds expended under these Titles are supporting the training of medical specialties determined to be in excess supply; 3) how such funds could be expended in ways that support more rational distribution of physician manpower both geographically and by specialty; 4) the extent to which such funds support or encourage teaching programs that tend to attract foreign medical graduates dispropor-

tionately. The Institute of Medicine (IOM) of the National Academy of Sciences was commissioned to undertake these studies. In order to determine how Medicare and Medicaid funds could be used to achieve objective 3, it was necessary to determine the current geographic and specialty distribution of the nation's physicians, to make value judgments about what constituted an appropriate specialty mix, and to develop criteria that might define "over-supply."

The IOM study¹ included a detailed analysis of specialty and geographic distribution in three states, one each in the northeast, northwest and southeast. With the exception of primary-contact physicians, no pattern of demand could be demonstrated. For example, two small cities at opposite ends of the northeastern state had a three-fold discrepancy between the numbers of practicing orthopedic surgeons. Although the skiing is equally good (and difficult) in both areas, the orthopedists were equally busy in both cities. Without belaboring the point, "demand" has proven to be a spectral influence at the present time.

In an attempt to establish "need" criteria, three groups of various medical specialists and experts in the health care field (one for each state) were empanelled to "model" each area according to the individual perceptions of each expert. Again, except for general agreement about the perceived need for more primary-contact physicians, there was

little agreement among the experts within or between groups as to how the specialty mix should be restructured.

In March 1976, the final report of the IOM study was submitted to Congress. One of the recommendations made the headlines: "With the exception of the category of contact physicians defined as family practice, general internal medicine, and general pediatrics, the number of all other postgraduate specialty training slots available as of July 1977 should be held at the level of residency positions filled as of July 1, 1975." On the heels of this recommendation, the Senate, in the early summer of 1976, resoundingly defeated (72 to 3) for the second successive year, a bill containing an amendment that would have empowered a Federal agency to mandate the residency mix in the nation's postdoctoral training programs.

While the IOM study was in the works, and, indeed, three months before the final report was to be submitted, the General Accounting Office, an investigatory arm of Congress, asked each specialty board, residency review committee and specialty society for detailed input concerning numerous aspects of specialty and geographic distribution. The American Board of Anesthesiology, the American Society of Anesthesiologists and the Residency Review Committee for Anesthesiology were asked to supply information or to comment about: 1) whether there was an over-, under or sufficient supply of anesthesiologists today, 2) what would constitute a reasonable ratio of anesthesiologists to population, 3) what would happen to this ratio if a national health insurance program were enacted, and 4) the role that each respondent might play in determining the adequacy of the supply of anesthesiologists and their geographic distribution. Comparable organizations in each specialty were asked to provide input concerning how best to achieve a more equitable geographic distribution and for suggestions as to which organizations or sectors (public, private, or both) might most appropriately regulate specialty mix (the number of resident slots in each specialty) and geographic distribution.

The IOM study had recommended that the Coordinating Council on Medical Education

play an active role in planning both specialty and geographic distribution. The studies col-
lated a volume of variables in attempting to determine the factors responsible for the mal-
distribution of the nation's physicians. To
many, most surprising was the inability to
relate physician income either to choice of
specialty or to practice location. It was less
surprising to find that "demand" was not an
important factor since the assumption that a
plethora of physicians in a specialty would
result in a "trickle down" migration to less
urban centers has not proven to be the case.

In the course of the IOM study, it was deter-
mined that the single most significant factor
that influenced a physician to select a practice
location was the site of his residency training
program. Other important factors included
prior knowledge of an area, the degree of pro-
fessional satisfaction, the quality of life, good
schools, cultural and shopping facilities (and
so forth), and access to preferred recreational
facilities.

In this issue of *Anesthesiology*, Orkin has
identified significant determinants in the dis-
tribution of anesthesiologists that are com-
parable to those for all specialties. The most
important of these factors was, as in the IOM
study, the location of the residency training
program. The importance of a satisfying pro-
fessional life and the availability of consumer
services were also comparable to those in
other studies. A major determinant not found
for other specialties with a related allied
health field, however, was the reciprocal
relationship between the distributions of
anesthesiologists and nurse anesthetists. Such
reciprocal distribution is especially disquiet-
ing at a time when the "anesthesia care
team concept" has been so recently reaffirmed
by the Board of Directors of the American
Society of Anesthesiologists² as an operative
model of growing significance. It would be of
great interest to determine whether this is a
growing or diminishing trend.

Using multiple regression, Orkin has clearly
isolated the hierarchy or variables responsible
for the geographic distribution of anes-
thesia personnel. Some of the results, how-
ever, are clearer in the light of historical
perspective. It hasn't been more than 30 years
since many anesthesiologists encountered

difficulty in finding practice opportunities in parts of the country where such services were provided by nurse anesthetists. As the demand for anesthesiologists began to outstrip their availability following World War II, a geographic redistribution occurred, with anesthesiologists migrating to areas for reasons already cited. Such areas, in turn, began to witness a decreasing job market for nurse anesthetists. While Orkin includes, in table 3, urbanization as an important determinant for anesthesiologists, the figures depicting distribution by state do not adequately reflect the disproportionately urban distribution of anesthesiologists within each state.

Much of the preceding commentary has dealt with specialty mix in the population of American physicians rather than physician distribution in general, and the specific distribution of anesthesiologists. The two—practice location and specialty choice—are, however, inseparable. If, as it now seems, physicians can create their own demand, and needs are difficult, if not impossible, to determine, the maldistribution of anesthesiologists is compounded by a failure of more American medical graduates to choose anesthesiology as their specialty.

It is most important to recognize that Orkin has analyzed why anesthesiologists are where they are and not why they are what they are. Efforts to construct composite personality traits for various specialties in medicine have

been unproductive. The most significant single factor that constantly recurs in exploring the mechanisms of specialty choice is contact with a peer model in that specialty who has had a profound and positive influence. If the amount of time that has been spent on de-liberating and agonizing over methods for recruiting American graduates into anesthesiology had been, instead, spent in contact between anesthesia faculty and medical students, the problems might be less acute.

At a time when both the public and private sectors will surely respond to a documented need for more primary-contact physicians, the attitude of most medical school curriculum committees toward time blocks in anesthesiology might turn from apathy to downright opposition. The resulting decrease in the number of American graduates entering anesthesiology would serve to magnify the maldistribution Orkin has reported.

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References

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