Young physicians and the future of the medical profession

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The medical profession appears to be undergoing profound changes that promise to shape its future. Some of these changes, such as the increasing physician supply, the expanding proportion of women entering the profession, and the declining numbers of medical school applicants, have been well documented, although their causes and consequences are debated. Other changes may be detected in anecdotal comments that reflect an emerging malaise within the profession, a sense that something may be fundamentally wrong. Changes in the organization and technology of medical practice also appear to be altering traditional expectations of physicians’ roles. While the implications of these changes for the future of medicine are uncertain, many analysts would agree that an important transformation is under way. These changes are likely to have their greatest impact upon young physicians who recently have completed their training. It is these physicians who are making decisions that will shape the profession for the next several decades.

In this DataWatch, we report on initial findings from a survey of young physicians. The survey, performed by the American Medical Association’s (AMA’s) Education and Research Foundation and funded by The Robert Wood Johnson Foundation, sought to examine young physicians’ specialty choices, the extent of their service to vulnerable populations, and their ability to establish stable practice arrangements despite growing economic and competitive pressures. Equally important, the survey was intended to explore physicians’ perceptions of current satisfaction with medicine, where medical practice seemed to be headed in the future, and what they expected their roles to be.

Study methods. The survey was designed to be representative of the population of 68,351 young physicians in the United States during 1987, based upon the AMA Physician Master-file. “Young” physicians were
considered to be those under age forty who had been in practice more than one but fewer than seven years after completing residency and/or fellowship training. Most graduated from medical school between 1974 and 1984. The eligible survey sample contained 10,352 physicians, consisting of a simple random sample of 8,651 physicians and an oversample of 1,692 black and Hispanic physicians. During the field period, we could not reach or obtain telephone numbers for just over 10 percent of the sample. Telephone interviews were completed between April and November 1987 with a total sample of 5,865 young physicians (63.3 percent); 3,398 physicians (36.7 percent) refused or did not complete the interview. The survey results we present have been statistically adjusted to compensate for nonresponse bias associated with respondents’ race/ethnicity, age, country of medical school graduation (U.S. or foreign), specialty, and AMA membership status; they are also limited to young physicians who reported working at least twenty hours per week in patient care (more than 90 percent of all young physicians).

To compare young physicians with older, more experienced physicians, we use results from the AMA Socioeconomic Monitoring System Spring 1987 Survey. We categorize physicians not defined as “young” into two groups: “prime” and “senior” (labels commonly employed by the AMA in describing such physicians). Midcareer or “prime” physicians are at least age forty or have been in practice seven to twenty-four years; “senior” physicians have been in practice twenty-five years or more. We also use the terms “white” and “black” physicians to denote, respectively, white non-Hispanic and black non-Hispanic individuals; “other” physicians include Asian/Oriental, Pacific Islander, American Indian, or Alaskan Native. Educational debt figures reported here have been adjusted for inflation and are stated in 1989 dollars.

**Characteristics Of Young Physicians In Patient Care**

**Demographic composition.** Despite aggressive admissions policies aimed at increasing minority enrollment, blacks and Hispanics are still underrepresented in medicine. Blacks, for example, constitute 12 percent of the U.S. population but only 4 percent of the young patient care physician pool. Hispanics make up 8 percent of the U.S. population, but only 4 percent of young patient care physicians.

Although the percentage of young physicians who are women (21 percent) is markedly higher than either midcareer female physicians (10 percent) or senior female physicians (4 percent), women-who comprise 51 percent of U.S. college graduates-still only represent less than one-quarter of the young physician population in practice. The propor-
tion of women entering medical school, however, has been rising, so that one may expect their representation among young physicians to rise accordingly in coming years.  

**Representation in primary care.** Young female physicians specialize in primary care more often than their male counterparts (Exhibit 1). Higher percentages of young black and Hispanic physicians choose primary care specialties than either white or other young physicians. Three-quarters of all young black female physicians practice a primary care specialty, compared to 57 percent of young white female physicians.

Although a lower proportion of young physicians practice in a primary care specialty than in a nonprimary care specialty (45 percent compared to 55 percent), young physicians in our sample selected primary care specialties more frequently than midcareer physicians (36 percent). However, a slightly higher percentage of senior physicians (48 percent) specialize in primary care. This probably reflects the large number of senior general practitioners who trained in an era before specialized graduate medical education became the norm.

**Incomes of young physicians.** Primary care physicians earn significantly lower incomes than other physicians. Annual median income ranges from $60,000 for family/general practitioners and pediatricians to $110,000 for anesthesiologists (Exhibit 2). Only primary care specialists in obstetrics/gynecology earn above the median of $75,000. In contrast, all but one of the nonprimary care specialties earn above $75,000 yearly.

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**Exhibit 1**

*Percentage Of Young Physicians Specializing In Primary Care*

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>42</td>
<td>50</td>
</tr>
<tr>
<td>Black</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Hispanic</td>
<td>48</td>
<td>48</td>
</tr>
<tr>
<td>Other</td>
<td>39</td>
<td>39</td>
</tr>
<tr>
<td>White</td>
<td>57</td>
<td>76</td>
</tr>
<tr>
<td>Black</td>
<td>67</td>
<td>67</td>
</tr>
<tr>
<td>Hispanic</td>
<td>53</td>
<td>53</td>
</tr>
</tbody>
</table>

*Source: American Medical Association 1987 (AMA) Young Physician Survey.*
Income differentials also exist between men and women, with the median income of young female physicians $19,000 per year less than the median income of young male physicians. These income differences are due, in part, to specialty and employment setting choices. However, even after controlling for specialty, employment setting, years in practice, and hours worked per week, women still earn, on average, approximately $15,000 per year less than men.

**Employment status.** More than half (54 percent) of all young physicians are self-employed, in solo or group practice. Of physicians in the second year of practice, 44 percent are self-employed, compared to 62 percent in the sixth year. Employment in public settings and in arrangements with other physicians tends to drop with each year of practice. In contrast, the percentages of physicians employed in health maintenance organizations (HMOs), university settings, and private hospitals do not change markedly among cohorts in the early years of practice.

Unlike other racial/ethnic groups, the majority of black physicians (57
percent) are employees. They are more likely than their peers to be employed by HMOs, public institutions, and private hospitals and to work in two or more practices. Although only 14 percent of all young physicians work in multiple practices, 19 percent of young black physicians practice in two or more arrangements. Physicians who work in multiple arrangements have higher educational debt, earn lower income, and are more often employed by others in their principal practice.

**Educational debt at graduation.** Educational debt at graduation, in 1989 dollars, ranges from none to more than $200,000. Over half (57 percent) of all young black physicians carry over $25,000 in educational loans at graduation, far exceeding the proportions of white (41 percent), Hispanic (36 percent), and other (14 percent) young physicians with high debt levels. The low debt status of other young physicians may be easily explained by the high percentage (75 percent) of “alien” foreign medical graduates in this category. Only within this “other” category do gender differences exist, with women in less debt than men.

The percentage of physicians with no educational debt at graduation has decreased over time, from 33 percent for the oldest cohort in the sample to 25 percent for the cohort completing training most recently. In addition, the percentage of physicians with greater than $25,000 in inflation-adjusted debt at graduation has increased over time, from 32 percent who completed training in 1982 to over 46 percent who completed training in 1985.

**Populations served by young physicians.** An examination of the percentage of black and Hispanic patients served by young physicians suggests that black and Hispanic physicians may serve disproportionately in their respective communities. One-half of all patients seen by young black physicians are black, compared to 16 percent of young white physicians’ caseloads (Exhibit 3). Similarly, Hispanic patients constitute 28 percent of young Hispanic physicians’ caseloads, compared to 8 percent for young white physicians. Young physicians appear to care for a higher percentage of poor patients in their practices (26 percent) than either midcareer (20 percent) or senior (19 percent) physicians.

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**Young Physicians’ Perspectives On The Medical Profession**

A concise way to measure the career perspective of young physicians is to ask, “Given what you now know about medicine as a career, if you were in college today, would you go to medical school?” Overall, 40 percent of young physicians reported that they would not or were not sure that they would select a career in medicine (Exhibit 4). There is considerable variation in levels of career satisfaction, as expressed in answers to
this question, by gender and among groups with different racial/ethnic backgrounds. Among white women, for example, almost half (44 percent) responded negatively to the question. On the other hand, Hispanic women responded negatively the least often (32 percent). These observed
differences might emanate from disparate expectations about careers in medicine among groups that only recently have had opportunities to enter the profession, or from diverse practice patterns and opportunities among the groups.

Young physicians report regret slightly less often than their older counterparts; midcareer physicians are four percentage points more likely to say “no” or “not sure” when asked if they would become physicians; and the corresponding figure for senior physicians is seven percentage points. These differences might be explained, in part, by the relatively greater difficulty that older physicians experience in adapting to the rapidly changing practice environment. On the other hand, the new practice arrangements that increasingly are available to physicians entering practice today may offer more alternatives for young physicians to find satisfying work arrangements.

Young physicians who are employees are slightly less likely to report career dissatisfaction than those who are self-employed, although for whom an employed physician works also makes a difference. The physicians reporting regret most often are either self-employed but not part of a group (44 percent) or employed by another physician (45 percent). At the other end of the spectrum, fewer than one-third of physicians working for private hospitals (30 percent) or for government agencies (32 percent) report that they would not elect careers in medicine.

There is greater variation in career perspectives among specialties. At the extreme, nearly half of anesthesiologists would not select a career in medicine, compared to fewer than one-third of pediatricians. Physicians earning less than $26,000 were less likely to express regret than their higher-income colleagues (32 percent versus 40 percent). It is also noteworthy, but not surprising, that physicians with high educational debt at graduation (over $25,000) are more likely to express regret about their decision to attend medical school (42 percent) than those with lower debt (39 percent). Finally, those few physicians working in multiple practices report regret less often (35 percent) than those working in one practice (41 percent). This finding does not support the hypothesis that working in multiple practices is an indicator of greater stress on young physicians. It appears that answers to this question are affected, at least in part, by young physicians’ feelings about their current practice(s); 28 percent of those reporting “no” or “not sure” said they were likely to change practices soon, compared to 20 percent of those reporting “yes.”

Future outlook. A young physician’s outlook on the future of the profession may also reflect his or her career perspective. The survey asked about the young physician’s outlook over the next five years regarding specialty income, the malpractice climate, and the influence of third-
party payers on medical practice. Ninety percent of respondents expected the influence of third-party payers to increase; young physicians’ expectations on future income and the malpractice climate were more varied.

The survey took place before the Harvard University report on the resource-based relative value scale (RBRVS) recommended a recalibration of physician fees under Medicare. The RBRVS recommendation, which has been adopted by Congress, would reduce fees for procedure-intensive practice (such as surgery and diagnostic tests) to increase rewards for time actually spent with patients and for the cognitive work of diagnosis and treatment. The three specialties that most often reported an expectation of lower incomes in the future are among those that stand to gain the most from the RBRVS plan (Exhibit 5). Likewise, the specialties that least often expected lower fees in five years are among those that stand to lose the most ground as the new plan is implemented during the early 1990s.

Young physicians are pessimistic about the future medical malpractice climate; nearly two-thirds report that it will be no different or worse in five years. Minority physicians are somewhat more pessimistic than

<table>
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<tr>
<th>Exhibit 5</th>
<th>Physicians' Predictions Of Typical Physician's Income Within Five Years, By Specialty</th>
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<tr>
<td></td>
<td>Lower</td>
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<tr>
<td>All physicians</td>
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<td>Pediatrics</td>
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<td>Family/general</td>
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<td>Psychiatry</td>
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<td>Emergency</td>
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<td>Other specialties</td>
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<tr>
<td>Obstetrics/gynecology</td>
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<tr>
<td>Specialty internal</td>
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<td>General internal</td>
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<td>Pathology</td>
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<td>General surgery</td>
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<td>Specialty surgery</td>
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<td>Anesthesiology</td>
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<td>Radiology</td>
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</table>

Source: AMA 1957 Young Physician Survey
whites. Seventy-eight percent of black and Hispanic physicians report that, in five years, the malpractice climate will be the same as or worse than it is today, compared to 62 percent of whites. Some specialties at high risk of malpractice claims, not surprisingly, report greater pessimism. Sixty-four percent of obstetricians, for example, report that malpractice concerns will grow over the next five years.

The Future Of The Medical Profession

The survey results are simultaneously reassuring and unsettling. In the aggregate, young physicians in our 1987 sample (1) appeared to enter primary care practice in proportionately larger numbers than their midcareer counterparts; (2) appeared able to build their medical practices without great difficulty, attaining self-employment generally within a few years following completion of training; and (3) did not appear to be overly stressed by economic conditions in the marketplace. Each of these conclusions, however, warrants closer examination.

The higher proportion of young physicians, compared to midcareer physicians, who entered practice in family medicine, general internal medicine, pediatrics, and obstetrics/gynecology seems reassuring. However, data from the Association of American Medical Colleges (AAMC) Medical School Graduation Questionnaire suggest that the next generation of young physicians may choose to enter primary care specialties less frequently. Black and Hispanic physicians, especially women, are more likely to enter primary care practice and to serve predominantly black and Hispanic populations. It is unclear, however, whether they have made these choices because of professional aspirations and altruistic motives or because they may have experienced either overt or subtle forms of discrimination that have effectively limited their opportunities.

The apparent ability of young physicians, in general, to earn reasonable personal incomes (median income of $75,000 per annum) and to become self-employed (either in solo or group practice) after only a few years of practice may dispel some of the concern that economic forces in the environment are impeding their progress in practice building and forcing some to leave medicine entirely. The fact that no more than 14 percent of young physicians felt a need to seek multiple practice arrangements actually augurs well for the profession. However, this observation must be tempered with the knowledge that individuals with more than $25,000 in inflation-adjusted educational debt at the time of graduation were more likely to engage in multiple practice arrangements than their peers with lower debt levels.

Our survey does reveal some warning signs for particular segments of
the physician population. With incomes generally below the median income for all young physicians, many more primary care physicians (especially black physicians) may be in danger of encountering economic stress in the near future. Potential reform of physician payment systems, such as the recently adopted Medicare RBRVS method, would likely benefit these physicians. However, implementation of this system is likely to take some time, and it is unclear whether higher Medicare payments to physicians will, by themselves, be sufficient to offset the demands of an increasing debt burden for young physicians.

Perhaps most alarming is the finding that the youngest cohorts of young physicians (that is, the most recent graduates) have higher proportions of individuals with real debt in excess of $25,000 than do older cohorts. This suggests that, unless potential remedies are devised (for example, enhanced financial aid packages, reduced medical school expenses, and so on), the increasing concentration of real educational debt may prove to be a barrier to entry into the profession and may work counter to the desired goal of increasing minority representation in medicine.

Finally, the finding that 40 percent of all young physicians claim that they would not, or are not sure that they would, go to medical school is disconcerting. This suggests that young physicians may become disenchanted with medicine relatively early in their careers. In light of the general decline in medical school applications over the past fifteen years (notwithstanding the most recent data showing a one-year increase), a discomfort level of 40 percent should not be taken lightly. As with any survey involving self-reports, the findings here should be interpreted cautiously, and further analysis of the data will be necessary to explore the relationships between educational debt and young physicians’ practice patterns. But lest these findings portend the future of medicine, medical educators would do well to note the relatively gloomy outlook held by many young physicians and to take appropriate steps to ensure that positive gains, such as those in minority enrollment, are not eroded in the changing climate of the 1990s.

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NOTES


3. The survey was conducted as part of the Study of the Practice Patterns of Young Physicians, supported through grants from The Robert Wood Johnson Foundation to the American Medical Association Education and Research Foundation. The public use data tape from this survey is available through the Inter-University Consortium for Political and Social Research (ICPSR #9277), Ann Arbor, Michigan.


5. Primary care is defined as family/general practice, general internal medicine, pediatrics, and obstetrics/gynecology. Although some analysts might exclude obstetrics/gynecology from this definition, it is included here because these specialists often provide primary care to their patients. In addition, inclusion of these specialists allows for comparisons with AMA data. If obstetrics/gynecology were excluded from the definition, the percentage of women specializing in primary care falls to 53 percent, compared to 39 percent of men.


7. Ibid.


11. These data do not allow an assessment of the extent to which young physicians may be joining practice arrangements that care for vulnerable populations in “underserved” geographic areas. See American Medical Association Education and Research Foundation, “Physician-to-Population Ratios: What, if Anything, Do They Measure?” Study of the Practice Patterns of Young Physicians, Final Report (26 July 1989).