

# AFFIRMATIVE ACTION IN MEDICAL EDUCATION AND ITS EFFECT ON HOWARD AND MEHARRY: A STUDY OF THE CLASS OF 1975

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During the decade of the 1970s, affirmative action programs were introduced in US medical schools for the purpose of increasing the number of black and other minority medical students and of improving the medical care resources for black and other minority communities. Having for many years served as the main sources of black physicians in the US, Howard University College of Medicine and Meharry Medical College School of Medicine were also affected by affirmative action. No previous studies have compared the black graduates from Howard and Meharry with black and other minority graduates from the other US medical schools.

The purpose of this study was to compare these medical school graduates in terms of actual choice of specialty, patient characteristics, practice location, and specialty board certification, using the graduating class of 1975. A greater proportion of black graduates from Howard and Meharry chose primary care specialties than did black graduates from other schools, though this difference was not statistically significant. Black graduates from Howard and Meharry had signif-

icantly greater proportions of black patients compared with black graduates from other schools, but the same proportion of Medicaid patients.

Though not statistically significant, black graduates from Howard and Meharry were less likely to be found practicing in federally designated underserved areas. Black graduates from Meharry were significantly less likely to have achieved specialty board certification, compared with graduates from Howard or the other medical schools. These results illustrate the experience of Howard and Meharry during the era of affirmative action and generally support their critically important role in producing black physicians and enhancing medical care resources in the black community.

Affirmative action programs in US medical schools were introduced because of the recognition that blacks, Mexican-Americans, mainland Puerto Ricans, and Native Americans were vastly underrepresented in the population of US physicians. Other objectives were to increase the physician manpower resources for black and other minority communities and to increase the number of primary care physicians.

Numerically, affirmative action has been quite effective; the number of black and other minority physicians has doubled over the past decade.<sup>1,2</sup> Until recently, the impact of affirmative action in terms of

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specialty choice, patient characteristics, practice location, and specialty board certification of recent graduates has not been studied.<sup>3,4</sup>

The role of the Howard University College of Medicine and the Meharry Medical College School of Medicine in producing black physicians has long been recognized; before the era of affirmative action, nearly three quarters of all black physicians in the US were graduates of Howard and Meharry.<sup>5-9</sup> Few studies, though, have examined the practices and the patient characteristics of recent graduates from Howard and Meharry, and none have compared them with graduates from other US medical schools.

A survey of graduates from selected classes from 1955 to 1975 of the Howard University College of Medicine found higher proportions of black graduates practicing the primary care specialties, caring for low-income patients, and located in urban, low-income areas.<sup>10</sup> A more recent survey of Howard graduates found that black patients were disproportionately highly represented in the surveyed physicians' patient populations, with greater black patient representation among the practices of more recent graduates.<sup>11</sup> Also, recent alumni were less likely to be individual practitioners and less apt to have entered private practice, compared with older alumni.

To assess the outcomes of affirmative action, the authors undertook a study comparing choice of specialty, practice location, patient characteristics, and specialty board certification among recent minority and nonminority US medical school graduates.<sup>3,4</sup> A comparison of the black graduates from Howard and Meharry with black and other graduates from the other US medical schools with reference to these outcomes is the subject of this report.

## METHODS

A detailed description of the methodology appears elsewhere.<sup>3,4</sup> Briefly, the medical school class of 1975 was chosen because it is one of the latest cohorts for which stable information on specialty, practice location, patient characteristics, and specialty board certification was available. Of the 13,428 physicians who received their degrees from US medical schools between July 1, 1974, and June 30, 1975, the Association of American Medical Colleges (AAMC) provided data on 12,065, including 715 physicians from the underrepresented minority groups: 574 blacks, 36 Native Americans, 78 Mexican-Americans, 25

mainland Puerto Ricans, and 2 Puerto Ricans from the Commonwealth of Puerto Rico. Another 9,686 graduates—9,467 white and 219 Asian Americans—were considered nonminorities. Those graduates whose race or ethnic group was listed as other or unknown were excluded.

A total of 109 students graduated from the Howard University College of Medicine in 1975; 70 of these were black. A total of 86 students graduated from the Meharry Medical College School of Medicine in 1975; 74 of these students were black.

Demographic data provided by the AAMC included name, sex, self-identified ethnic group; parents' education and occupation; medical school attended, and premedical school performance data, which included grade point averages and scores on the Medical College Admissions Test. Using the premedical school performance data, a performance index was calculated. This index had been developed by regression analysis to predict scores on the Part II examination of the National Board of Medical Examiners.<sup>12</sup> Parents' education and occupation were combined to create a socioeconomic status (SES) index, using a slightly modified version of the Hollingshead two-factor index of social position.<sup>13,14</sup>

For this study, the entire population of minority graduates was analyzed. A stratified sample of nonminority graduates was chosen for study to increase their comparability in terms of the performance and SES indices with the minority population. Overall, 11 percent of the nonminority population was included in the nonminority sample, a total of 1,862.

Despite efforts to improve the comparability of the nonminority cohort with minority cohorts in general and blacks in particular, marked differences persisted in terms of the performance (Table 1) and SES (Table 2) indices. For the performance index, black graduates from Meharry had a significantly lower mean than did those from Howard ( $P < .001$ , two sample  $t$  test). Comparing black graduates from Howard and Meharry to black graduates from other schools, the difference was not significant. Comparing black graduates from Howard, Meharry, and all other schools with nonminorities from other schools, the difference in the distribution of the performance index was significant ( $P < .001$ , one-way ANOVA). For the SES index, differences in the distribution between Howard and Meharry graduates were not significant. But Howard and Meharry graduates had lower SES scores than black graduates from other schools ( $P < .05$ , two sample  $t$  test), and all black graduates had lower scores

**TABLE 1. DISTRIBUTION IN PERCENTAGES ACROSS PERFORMANCE CATEGORIES FOR SAMPLES OF PHYSICIANS**

Performance Category	Blacks from			Nonminority
	Howard	Meharry	Other Schools	
300-399	18.0	58.1	31.4	2.3
400-449	50.0	30.2	41.5	18.7
450-499	24.0	9.3	19.7	39.4
500-549	8.0	2.4	5.6	29.5
550-650	0.0	0.0	1.8	10.1

**TABLE 2. DISTRIBUTION IN PERCENTAGES ACROSS SOCIOECONOMIC STATUS (SES) CATEGORIES FOR SAMPLES OF PHYSICIANS**

SES Category	Blacks from			Nonminority
	Howard	Meharry	Other Schools	
1 (Upper)	35.0	23.5	23.1	36.3
2 (Middle)	37.5	32.4	25.4	42.6
3 (Lower)	27.5	44.1	51.5	21.1

than did the nonminorities from other schools ( $P < .001$ , two sample  $t$  test).

Information on primary and secondary specialty, primary office address, and specialty board certification was obtained from the American Medical Association Physician Masterfile. The minority and nonminority graduates were mailed a survey to confirm or revise the information from the Physician Masterfile and to provide information on the percentages of black, Mexican-American, Native American, mainland Puerto Rican, and white patients, and the percentage of Medicaid patients in their practices. Nonrespondents were contacted by telephone to obtain this information. Response rates were 77 and 80 percent, respectively, for the minority and nonminority cohorts. The response rates among the black graduates from Howard and Meharry were 71 and 58 percent, respectively.

Family or general practice, general internal medicine, general pediatrics, and obstetrics-gynecology were defined as primary care specialties. Primary practice addresses obtained from the surveys were used to determine whether a physician was located in a federally designated health manpower shortage area.<sup>15</sup> Information on specialty board certification was obtained from the AMA Physician Masterfile. No information was available, however, on whether uncertified physicians had attempted board certifi-

cation, and this information was not included as an item in the survey because it might have yielded biased responses.

Results are presented comparing black graduates from Howard and Meharry, black graduates from the other US medical schools, and nonminority graduates from the other US medical schools. For simplicity, most results are presented in tables of unadjusted means or percentages.

## RESULTS

### Specialty

The percentage of black graduates from both Howard and Meharry practicing the primary care specialties of family or general practice, general internal medicine, general pediatrics, or obstetrics-gynecology was greater than among black graduates from other US medical schools (Table 3), although this difference was only marginally significant ( $P = .07$  chi-square).<sup>\*</sup> Compared to nonminority graduates from other US medical schools, more black graduates of Howard and Meharry entered the primary care specialties ( $P < .001$ , chi-square). Howard

<sup>\*</sup> For chi-square tests on  $2 \times 2$  tables (1 df),  $P$  values are based on Fisher's exact test.

**TABLE 3. DISTRIBUTION IN PERCENTAGES ACROSS SPECIALITY CATEGORIES FOR SAMPLES OF PHYSICIANS**

Speciality	Blacks from			Nonminority
	Howard	Meharry	Other Schools	
Family or general practice	10.0	13.9	14.2	11.6
General internal medicine	18.0	16.3	17.3	15.6
General pediatrics	12.0	11.6	9.1	6.9
Obstetrics-gynecology	24.0	23.3	13.3	7.4
Primary care subtotal	64.0	65.1	53.9	41.5
Internal medicine subspecialties	6.0	9.3	12.4	11.2
General surgery	2.0	7.0	5.2	6.3
Surgical subspecialties	16.0	11.6	11.8	15.8
Other specialties	12.0	7.0	16.7	25.2
Nonprimary care subtotal	36.0	34.9	46.1	58.5

and Meharry graduates were more highly represented in obstetrics-gynecology and less represented in internal medicine subspecialties and all other specialties, such as psychiatry and pathology, than were blacks from other schools.

### Practice Location

A lower proportion of black graduates from Howard (4.65 percent) or Meharry (8.11 percent), compared with black graduates from other schools (11.15 percent), were found to be practicing in federally designated health manpower shortage areas (Table 4), but this difference did not attain statistical significance. Black graduates from Howard, Meharry, and all schools including Howard and Meharry were much more likely to be located in shortage areas than were nonminority graduates ( $P < .001$ , chi-square).

### Patient Characteristics

In the practices of the black graduates from Howard and Meharry, the proportion of black patients was 59.4 and 68.9 percent, respectively (Table 4). Together, these proportions are significantly greater than those for black graduates from other schools ( $P < .05$ , *t* test) and those for the nonminority graduates from other schools ( $P < .001$ , chi-square). Black graduates from Howard, Meharry, and other schools were also caring for a significantly larger proportion of Medicaid patients (Table 4), compared with their nonminority counterparts ( $P < .001$ , chi-square).

### Specialty Board Certification

Black graduates from Meharry were significantly less likely to have attained board certification in their respective specialties (Table 4) than were black graduates from Howard ( $P < .05$ , chi-square) or other schools ( $P < .01$ , chi-square). In addition, all black graduates in the class of 1975 were significantly less likely to have achieved board certification compared with nonminority graduates ( $P < .001$ , chi-square). Lower premedical school academic achievement of most black graduates, especially those from Meharry (Table 1), explains some but not all of these differences.<sup>3,4</sup>

### DISCUSSION

Affirmative action in the US medical schools can be viewed as successful from at least two perspectives. In the space of a decade, it greatly increased the numbers of black and other minority students who were admitted to medical school, graduated, and completed residency training. Affirmative action also succeeded from the perspective of its impact on medical care resources and on the larger health policy goals of increasing the number of physicians in primary care and practicing among the poor.

The black and other minority physicians of the medical school class of 1975 chose the primary care specialties, chose to practice in health manpower shortage areas, and chose to care for ethnic minority and Medicaid patients to a greater extent than did their nonminority counterparts. Thus, as a group,

TABLE 4. PRACTICE CHARACTERISTICS

Characteristics	Blacks from			Nonminority
	Howard	Meharry	Other Schools	
Percentage of black patients	59.4	68.9	54.2	13.6
Percentage of Medicaid patients	30.3	30.6	30.9	13.8
Located in shortage areas	4.6	8.1	11.2	6.1
Specialty board certified	42.0	20.9	47.8	79.4

these graduates promoted the federal health policy goals of the 1970s. These findings should reaffirm and strengthen the justification for affirmative action in US medical schools and stimulate renewed efforts to prepare minority students for medical education and to increase their proportions of medical school enrollment.

The career patterns of recent black graduates from Howard and Meharry, the two historically black medical schools, seem as much or more in accord with federal health policy goals than those of other black and nonminority medical school graduates. The 1975 graduates of Howard and Meharry are practicing the primary care specialties, caring for high proportions of black and Medicaid patients, and locating in health manpower shortage areas, which underscores the importance of these two institutions as national resources. In light of current discussions about reducing medical school class size and possibly closing a few medical schools, this information on the graduates from Howard and Meharry is both timely and important.

Notwithstanding these positive findings on the effects of affirmative action, the lower proportions of specialty board certification among black graduates from Howard, Meharry, and other schools should be a great concern. A few studies have demonstrated a relationship between physicians having achieved specialty board certification and their quality of care.<sup>16-19</sup> In this study relationships were found between premedical school performance, the physician's patient population, and achievement of specialty board certification. These relationships, however, cannot fully account for the difference in certification rates between minority and nonminority medical school graduates.

The lower rate of achieving board certification for 1975 graduates from Meharry is of special concern. Some of the difference may be explained by the lower premedical school performance measures of the

graduates or by less emphasis in the early 1970s on standardized examinations in their medical school curriculum. In any case, the significantly lower rate of specialty board certification among Meharry graduates of 1975 is cause for further examination and remedial action by that school.

## CONCLUSIONS

The career pattern of black graduates of the class of 1975 from the Howard University College of Medicine and the Meharry Medical College School of Medicine seems in accord with multiple national health policy goals. Their disproportionately high representation in the primary care specialties, among those practicing in health manpower shortage areas, and in caring for black and Medicaid patients, underlines the importance of these institutions. The lower rates of specialty board certification should provide a stimulus for the educational system to improve the academic preparation of minority students entering medical school, and for all medical schools to stress the importance of achieving board certification to their students and physicians-in-training.

The results of this study demonstrate the successes of the early phase of affirmative action in promoting national health policy objectives and underscore areas in which improvement is needed.

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