The Health Careers Opportunity Program: One Influence on Increasing the Number of Minority Students in Schools of Health Professions

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SYNOPSIS

Certain U.S. racial and ethnic minority groups traditionally have been underrepresented in the health professions. There have been significantly smaller proportions of health professionals who are blacks, Hispanics, and American Indians than members of those groups in the population at large. In the 1960s and 1970s various pieces of legislation were passed that were intended to increase the total number of health professionals and address the underrepresentation of minorities and other disadvantaged persons. The Special Health Careers Opportunity Grant (SHCOG) Program and its successor, the Health Careers Opportunity Program (HCOP) have had, as their specific charge, responsibility for awarding funds to undergraduate colleges, health professions schools, and other entities to increase the number of minority students admitted to, and graduated from, health professions schools.

Since 1972, during the existence of the SHCOG and HCOP Programs, the number of black students in health professions schools has risen from 4,099 to nearly 6,000. The number of Hispanic students has doubled to more than 2,360 and that of American Indian health professions students has increased from 125 to 355.

Minority student applicants to medical school have improved their scores on the medical college admission test (MCAT) and their mean grade point average (GPA) at a higher rate than nonminority students. Students from HCOP-supported schools had higher acceptance rates—even with lower MCAT and GPA scores—than students from schools lacking HCOP support.

HISTORICALLY, CERTAIN RACIAL AND ETHNIC minority groups have been underrepresented in the health professions. Before 1970, the training of black health professionals was concentrated in a few predominantly black institutions. These schools were Meharry Medical College, Howard University, Florida A & M University, Texas Southern University, Xavier University, and Tuskegee Institute. In 1971, approximately 28 percent (582) of the nation's black medical students and 55 percent (346) of its black dental students were enrolled in Meharry Medical College and Howard University; more than half (353, or 57 percent) of the nation's black pharmacy students were enrolled in Howard, Florida A & M, Texas Southern, and Xavier Universities; and 80 percent (77) of the black veterinary medicine students were enrolled in Tuskegee Institute.

Mexican Americans, mainland Puerto Ricans, and American Indians were also severely underrepresented in the health professions. In 1971, only 252 Mexican Americans, 76 mainland Puerto Ricans, and 42 American Indians were enrolled in United States medical schools; 67 Mexican Americans, 26 mainland Puerto Ricans, and 8 American Indians were enrolled in schools of dentistry.

Overall, enrollments of underrepresented minorities in health professions schools ranged from a high of 5.6 percent in medicine to a low of 2.0 percent in optometry in 1971. For each of the six fields—medicine, dentistry, optometry, pharmacy, podiatry, and osteopathy—black students were the largest minority group.

This report presents a brief legislative history of the Federal Government's major effort, beginning in 1971, to increase the representation of minorities in the health professions through institutional grants designed to motivate and assist such persons to undertake and complete education in a health profession (*1*); a description of the kinds of activities conducted by the institutions; information on the

numbers and characteristics of students participating in the program; and some insight into the impact the program has had on the overall trend in the enrollment of minority persons in health professions schools.

Background

Prior to 1963, Federal support for the education of health personnel was limited. In the early 1960s, the Congress, recognizing that the nation was then faced with a severe shortage of health personnel in almost every professional category, enacted the Health Professions Educational Assistance Act of 1963 (Public Law 88–129), which was designed to increase the aggregate numbers of health professionals. The passage of the act, and subsequent legislation, started a process that resulted in a rapid increase in enrollments in health professions schools in the mid 1960s and early 1970s; a moderate increase in the number of practitioners in the 1970s; and, concomitantly, a marked increase in the number of practitioners in relation to the population (*2*).

Although significant increases were achieved in the total number of health professions students and practitioners, the representation of minorities in the health professions remained extremely low despite the student loan and scholarship provisions of the 1960s legislation, which had the potential of increasing the participation of minorities. In the late 1960s, educational institutions and the Federal Government, responding to the moral and social implications of a decade of change and to the realization that financial assistance was necessary but not sufficient, attempted to correct the inequities in access to health careers by removing the cultural, educational, and other discriminatory barriers that historically discouraged minorities from pursuing health careers.

Health professions schools throughout the nation reexamined their policies and redefined their goals concerning the admission, not only of minority students, but also of all persons from all ethnic backgrounds and social strata. The Federal Government enacted legislation to stimulate and assist minorities and other persons from disadvantaged backgrounds in undertaking and completing education for careers in health professions (*3*).

Legislative History

The major legislation addressing the underrepresentation of minorities and other disadvantaged persons in the health professions was the Special Health Career Opportunity Grant (SHCOG) Program, which was implemented in fiscal year 1972 under Section 774(b) of the Health Manpower Education Initiative Awards (HMEIA) component of the Comprehensive Health Manpower Training Act of 1971 (Public Law 92–157). Funding for this program was determined by a formula that designated a minimum of $5 million, but not more than 15 percent of the total HMEIA appropriation, for the SHCOG Program. The HMEIA legislation would have expired in fiscal year 1974; however, the program was operated on a continuing resolution until fiscal year 1976.

From 1972 through 1976, under the HMEIA component of the 1971 legislation, the amount of money allocated to and obligated by the SHCOG Program fluctuated. It ranged from a low of $5 million in 1972 to a high of $7 million in 1974. The percentage of the HMEIA appropriation allocated to the SHCOG program during those years was the maximum allowed under law—15 percent.

In October 1976, the Health Professions Educational Assistance Act of 1976 (Public Law 94–484) was enacted. This act extended the existing HMEIA authority without change through fiscal year 1977. Under the extension, approximately $9 million were allocated to and obligated by the SHCOG Program in 1977—15 percent of the HMEIA appropriation.

Public Law 94–484 also set up a new authority, Section 787, for a 3-year period, FYs 1978–80, with the same basic eligibility requirements to carry out the objectives of the SHCOG Program. Section 787 was given a separate authorization and appropriation, and it was no longer based on a formula. Under Section 787, referred to as the Health Careers Opportunity Program (HCOP), $20 million was authorized for each of the 3 fiscal years, 1978–80. In fiscal 1978 and 1979, $14.5 million and $18 million, respectively, were appropriated and obligated. Although there was no appropriation bill for fiscal 1980, $19.6 million was appropriated and obligated under a continuing resolution based on a House-Senate general conference agreement.

The Omnibus Budget Reconciliation Act of 1981, (Public Law 97–35), authorized $20 million, $21.5 million, and $23 million for fiscal years 1982, 1983, and 1984, respectively, for HCOP. For fiscal 1982, $16.9 million was appropriated under a continuing resolution.

The Omnibus Budget Reconciliation Act expanded the law to include the allied health professions, which were formerly supported under Section 798 of Public Law 94–484, and added a provision

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stating that no less than 80 percent of the funds appropriated in any fiscal year shall be obligated for grants or contracts to institutions of higher education and no more than 5 percent of such funds may be obligated for grants or contracts whose primary purpose is to inform persons about the existence and general nature of health careers.

Objectives of the Program

Under the Health Careers Opportunity Program and its predecessor, the Special Health Careers Opportunity Grant Program, funds were awarded to health professions schools and public or nonprofit private health or educational entities to (*a*) identify, recruit, and select persons from disadvantaged backgrounds for education and training in a health profession; (*b*) facilitate the entry of these persons into a health professions school; (*c*) provide counseling or other services designed to help them complete their education successfully at a health professions school; (*d*) provide, for a period before their entry into a regular course of education of a health professions school, preliminary education designed to help them successfully complete the regular course of education at a health professions school, or refer these persons to institutions providing this preliminary education; and (*e*) publicize existing sources of financial aid available to students at health professions schools or to persons who are undertaking the training necessary to qualify them to enroll in these programs. Health professions for which increased minority participation is supported by HCOP funding are medicine, optometry, dentistry, veterinary medicine, pharmacy, podiatry, public health, and allied health.

Target Population

For purposes of this program, a person from a disadvantaged background is defined as a person who (*a*) comes from an environment that has inhibited the person from obtaining the knowledge, skills, and abilities required to enroll in and graduate from a health professions school or from a program providing education or training in an allied health profession or (*b*) comes from a family with an annual income below a level based on low-income thresholds according to family size.

Program participants over the years have included racial and ethnic minorities (blacks, Hispanics, American Indians, Alaska Natives, Asian Americans, and Pacific Islanders), socioeconomically disadvantaged whites, and women.

Project Activities

"OHRO Digest" contains brief summaries of each currently active project in the Health Careers Opportunity Program (*4*). The summaries specify the target health discipline and the population, the primary objectives, major activities, the educational level of the participants, and the project period.

Identification, recruitment, and selection. Projects addressing these objectives are designed to convey accurate information and career expectations to persons from disadvantaged backgrounds to motivate and stimulate their interest in pursuing a health career, identify interested persons through the development and application of detailed selection criteria, guide them through the educational pathway, and reduce or eliminate problems that these students may encounter in the admission and enrollment processes in preprofessional or professional schools.

Facilitate entry. These projects to facilitate entry are designed to develop liaison between the students and the schools to which the students are seeking admission and to assist them in entering a health professions school by updating and strengthening the basic skills necessary to compete successfully for admission. Activities focus on improving the students' performance on admissions tests such as the medical college admissions test (MCAT) and dental admissions test (DAT) by providing training in

problem solving and quantitative skills, oral and written communication, and study and test-taking skills, and by offering enrichment and reinforcement programs in the physical, biological, and other health sciences.

Retention. Retention projects provide an array of supportive services to matriculated students in health and allied health professions schools to reduce delays in the regular course of study. Activities are designed to improve academic performance, to assist students in adjusting to an unfamiliar and alien environment that is sometimes stressful because of cultural, socioeconomic, and other background differences, and to reduce financial burdens.

Preliminary education. Projects designed to provide preliminary education prior to entry into a health professions school focus on providing supportive and complementary services aimed at improving the students' likelihood of successfully completing the academic requirements needed to enter and graduate from a health professions school. Enrichment and reinforcement courses in math and the basic sciences including physics, biology, and chemistry are offered, as well as instruction in laboratory techniques, problem solving, and other learning and study skills strategies.

Information on sources of financial aid. Projects addressing this objective give high school seniors and undergraduate students information on the academic requirements needed to enter and graduate from health professions schools, the concomitant financial resources needed, and potential sources of financial support.

Some Measures of Scope

The Health Careers Opportunity Program and its predecessor, the Special Health Career Opportunity Grant Program, represent 10 years of continuous effort by the Division of Disadvantaged Assistance, Public Health Service, to improve access to health careers for the disadvantaged. During this period, fiscal years 1972 through 1981, approximately $109 million was awarded to 254 institutions and organizations to support 300 projects that assisted more than 40,000 persons participating in structured summer and academic year remedial, reinforcement, enrichment, exposure, and skills development projects. Also, thousands of others benefited from the general recruitment, counseling, and information dissemination efforts. The amount of funds awarded between 1972 and 1981 increased from $5 million to $19.2 million, the number of projects from 42 to 155, and the number of persons participating in structured projects from 1,000 to 13,500.

Geographic distribution. In fiscal year 1981, 155 projects were funded in 43 States, the District of Columbia, Puerto Rico, and the Trust Territories of the Pacific Islands. Although there were no projects in seven States, project participants were recruited throughout the nation. For example, one project in North Dakota served American Indians in a five-State area including two States without projects, South Dakota and Wyoming; Massachuetts' five projects served as the focal point for the New England States. The 1981 activities represented a substantial increase over 1972, when only 42 projects were funded in 21 States and the District of Columbia. In fiscal 1972, the 42 projects were primarily along the East Coast and in the southwestern United States.

Although the HCOP addresses inequity in access to health careers for the nation as a whole and disburses funds on the need for and technical merit of a project, rather than on a regional or State basis, the distribution of funds by Public Health Service (PHS) region is reasonably correlated with the distribution of minority populations in the United States. Regions with a large number of minorities received proportionately more projects and dollars than regions with small minority populations. For example, PHS Region IX, which includes California, received 17.9 percent of the funds in 1981 and had 17.1 percent of the minority population groups that are underrepresented in the health professions; Region IV, which covers the Southeast, received 18.5 percent of the funds and had 22.1 percent of the minority population according to 1980 Census data.

Institutions funded. The FY 1981 distribution of projects by type of participating institution and organization included most of the health professions schools in the United States. There were projects in schools of medicine, optometry, dentistry, veterinary medicine, pharmacy, podiatry, public health and allied health. In addition, Division of Disadvantaged Assistance funds went to colleges, universities, community organizations, and professional associations. In 1972, 13 medical schools participated in the program in contrast to 52 in 1980. Dental schools increased from 2 to 5, schools of pharmacy from 3 to 10, and health sciences schools from only

1 to 12. In 1972, there were no projects in schools of optometry and only one in public health. In 1980, there were four in optometry and two in public health. Participating colleges and universities increased from 10 to 34, and community organizations and professional associations from 8 to 29.

Over the 10 years approximately 30 percent of the health professions schools in the nation participated in the program. However, the participation rate varied considerably among the disciplines, with medicine being the dominant profession. The participation rate for schools of medicine was 48 percent, optometry 50 percent, dentistry 16 percent, veterinary medicine 29 percent, pharmacy 22 percent, podiatry 80 percent, and public health 14 percent. No school of osteopathic medicine participated in the program. Although the rate for schools of podiatry was 80 percent in contrast to 48 for medicine, it should be noted that there are only 5 podiatry schools, compared with 126 medical schools.

Of the total funds awarded from 1972 through 1981—$109 million—health professions schools received $52 million, 41 percent. Schools of medicine were awarded $33 million, 30 percent of the total funds and 64 percent of the funds awarded to health professions schools. The remaining health professions schools accounted for slightly less than 17 percent of the total funds awarded, with schools of dentistry and pharmacy receiving approximately 3 percent each. These statistics do not include those organizations which conduct programs impacting on the various health professions schools such as the National Optometric Association or the American Association of Colleges of Osteopathic Medicine, nor do these figures accurately reflect the proportion of funds awarded to support a particular discipline since some institutions, particularly undergraduate institutions and community organizations, address multiple disciplines.

Of the remaining $57 million, undergraduate colleges and universities received $25 million, or 23 percent of the total funds; community organizations received approximately $24 million, or 22 percent; and professional associations $8 million, or 7 percent.

Program participants. From 1972 through 1981 more than 40,000 persons participated in formally structured programs. However, complete data are available on the characteristics of the students only for 1979 through 1981.

In fiscal 1981 approximately 13,500 participated in summer, transitional, and academic year projects with highly structured components in contrast to 10,000 in 1979 and less than 1,000 in 1972. These 13,500 were in projects of specified length and had a specifically designed curriculum or set of activities in which they were required to participate and complete. Most trainees who were required to relocate for the duration of the program received assistance to defray living expenses while participating in the formally structured components of the project. Some examples are 6- to 8-week summer courses; courses to improve trainees' test taking skills; academic enrichment and reinforcement courses in the physical, biological, and health-related sciences; and courses designed to improve the students' performance on admissions tests such as the MCAT and DAT by providing training in problem solving, quantitative skills, and oral and written communication.

Participants represented a variety of groups from disadvantaged backgrounds—black Americans, American Indians and Alaska Natives, Hispanic Americans, Asian Americans and Pacific Islanders, and economically disadvantaged whites. Of the 13,500 participating in structured activities in 1981, approximately 62 percent were women. About 70 percent were blacks; 11 percent, Hispanics; 6 percent, American Indians or Alaska Natives; 2 percent, Asian Americans or Pacific Islanders; and 11 percent, economically disadvantaged whites. Also, in 1981 an additional 16,000 persons were provided substantial counseling, tutorial, or other services on a one-to-one basis with some followup services. Thousands of others were given information about the academic requirements needed to enter and graduate from health professions schools, as well as financial needs and potential sources for obtaining funds.

Data show that since its inception in 1972, despite rising costs, the program has increased the number of persons participating in it proportionately more than its dollar support, achieved greater geographic spread, increased the number and diversity of participating institutions and health disciplines, and provided opportunities to a broad range of students who might not have had an opportunity to pursue a health career.

Impact of the Programs

Many factors have an impact on the participation of minorities in the health fields—social, cultural, economic, temporal, legislative, and policy. To date, there has been no systematic evaluation of the implications of these factors on the current and future

participation of minorities in the health fields. Many factors are qualitative, interactive with each other and therefore, extremely difficult to measure. HCOP is only one factor. In addition, no viable methodology has been developed for projecting the supply of minority health professionals and, consequently, there is no standard for comparison. Analysis is further complicated since data must be compiled from several sources that use diverse definitions and methods of data collection. These data may not be comparable from source to source and year to year.

Because the Program's objective is to increase the number of minority persons completing an education in the health professions, we can, however, at least examine the overall distribution and trends in preparation and enrollment of students from HCOP-supported schools and other schools. Even this extremely restrictive analysis has additional complications. For example, the amount of HCOP support and its duration vary among schools. In addition, it is impossible to measure the impact that community organizations and participating undergraduate feeder institutions have had on all health professions schools. The ensuing discussion is not intended to demonstrate cause and effect, but simply to point out the changes that have occurred since the program was implemented in 1972.

Traditionally black institutions. As noted before, prior to 1970, the training of black health professionals was concentrated in a few institutions. Since then notable gains have been made, not only in the total number of blacks enrolled, but in their distribution among all health professions schools. The percentage of the nation's black medical students enrolled in Meharry Medical College and Howard University declined from 28 in 1972 to 22 in the fall of 1980. Similarly, the proportion of the nation's black dental students enrolled in these two schools decreased from 55 to 35 percent in the same time period. Significant gains were also achieved in the other health professions schools. The percentage of the nation's black pharmacy students enrolled in the traditionally black institutions decreased from 57 to 38 and that of veterinary medicine students, from 80 to 74.

Overall trends among minority students. Since 1972, when HCOP funding was first provided, all minority groups have increased their representation in all types of health professions schools. Medical, dental, pharmacy, and optometry schools have the largest numbers of minority students, and they increased their proportions 68, 75, 49, and 58 percent, respectively, between 1972 and 1980. There were also twice as many minority osteopathic students in 1980 as in 1972 and three and one-half times more podiatry students.

The total number of black students in the six types of health professions schools described rose from 4,099 to nearly 6,000 (table 1). The number of Hispanic students more than doubled, to 2,360, and that of American Indian health professions students increased from 125 to 355. The total rate of increase for these minority students between 1972 and 1981 was 68.9 percent.

The most significant gains for minorities were those made by Hispanic and Indian medical and dental students; students of those minority groups together increased by 211 percent between 1972 and 1980. Black students in medical, dental, and pharmacy schools increased by about 40 percent. Among the lesser represented schools (optometry, podiatry, osteopathy) only the black and Hispanic optometry

Table 1. Number and percentage increase in enrolled minority students, by type of health professions school and minority group, 1972–73 to 1980–81

Type of health professions school	Black			Hispanic			American Indian			Total		
	1972–73	1980–81	Percent increase	1972–73	1980–81	Percent increase	1972–73	1980–81	Percent increase	1972–73	1980–81	Percent increase
Medical	2,582	3,708	43.6	451	1,280	183.8	69	221	220.3	3,102	5,209	67.9
Dental	765	1,022	33.4	132	519	293.2	14	53	278.6	911	1,594	75.0
Optometry	38	56	47.4	43	67	55.8	5	13	160.0	86	136	58.1
Pharmacy	659	958	45.4	254	410	61.4	29	36	24.1	942	1,404	49.0
Podiatry	23	110	378.3	10	39	290.0	2	6	200.0	35	155	342.9
Osteopathy	32	100	212.5	18	45	150.0	6	26	333.3	56	171	205.4
Total	4,099	5,954	45.0	908	2,360	160.0	125	355	184.0	5,132	8,669	68.9

SOURCE: Unpublished data of the Division of Disadvantaged Assistance, Health Resources and Services Administration.

Table 2. Improvement in mean medical college admission test (MCAT) scores for minority and nonminority medical school applicants, 1973–74 to 1977–78

Period of comparison and MCAT test	Minority applicants	Nonminority applicants
1973–74 to 1977–78[1]		
Quantitative ability	[2]7.6	4.5
Science	[2]8.6	7.3
1978–79 to 1980–81[3]		
Biology	6.8	0.0
Chemistry	10.5	2.3

[1] Applicant studies, 1974–78, of the Association of American Medical Colleges were the sources for the data.
[2] Minority students are blacks, Mexican Americans, American Indians, and mainland Puerto Ricans.
[3] Action reports, 1979–81, of the Association of American Medical Colleges were the sources of the data.

students experienced an increase over the 8 years of less than 150 percent.

American Indians gained appreciably in all health professions schools except pharmacy (table 1). The Hispanic increase was greatest in dental and podiatry schools and least in optometry and pharmacy. Blacks showed a greater percentage increase in schools in which they previously were least represented—podiatry and osteopathy; in all others their progress ranged from 33 to 47 percent.

Other associated indicators of progress were improvements in the medical college admissions test scores and the grade point averages. Minority applicants to medical schools improved their mean science MCAT score by 8.6 percent and their mean quantitative ability score by 7.6 percent between 1973 and 1977, compared with 7.3 and 4.5 percent for nonminority applicants over the same period (table 2). For medical school acceptees, the difference between minority and nonminority student improvement was even more pronounced. Minority students accepted to medical schools increased their mean scores in the science examination by 10.7 percent and in quantitative ability by 8.8 percent. Nonminority accepted students improved by only 7.5 percent and 1.8 percent in the same examinations.

After the MCAT test was changed in 1978, minority students continued to improve at a higher rate than nonminority students in important MCAT subjects. Between 1978 and 1980 minority applicants increased their mean score in biology by 6.8 percent and in chemistry by 10.5 percent. Nonminority applicants maintained exactly the same biology score and increased their chemistry score by only 2.3 percent.

Nonminority students have had significantly higher scores and they still score appreciably higher than minority students, but the improvement level of minority students is a promising sign. Grade point averages of minority students accepted to medical schools have also increased at a more rapid rate than those of nonminority men and women—7.0 percent compared with 2.9 percent between 1973 and 1980 (table 3).

Comparison of HCOP and Non-HCOP supported schools. The only comparative data currently available are those which show differences in acceptance rates to medical school for students from HCOP and non-HCOP undergraduate institutions for 1978–79 and 1979–80. (A special tabulation made by the Association of American Medical Colleges in March 1982 and provided to the Division of Disadvantaged Assistance, Health Resources and Services Administartion, is the source of these statistics.) For both years, minority students in HCOP supported undergraduate schools have appreciably higher rates of acceptance to medical schools than minority students in other undergraduate schools. For example, in 1979–80, 60 percent of black students applying to medical school from HCOP–supported undergraduate schools were accepted, compared with 39.7 percent in non-HCOP schools. Hispanic students had rates of 75 percent (HCOP) compared with 57 percent (non-HCOP). The apparent impact of HCOP is qualified somewhat by the fact of comparably higher rates of acceptance for nonminority students in HCOP schools. From these data it would seem either that HCOP programs have a spillover effect on students not in the HCOP pro-

Table 3. Improvement in mean grade point averages (GPA) of minority and nonminority medical school acceptees, 1973–74 to 1980–81

Year	Minority GPA	Nonminority GPA
1973–74	2.86	3.43
1974–75	2.90	3.50
1975–76	2.95	3.52
1976–77	2.99	3.55
1977–78	3.04	3.57
1978–79	3.04	3.56
1979–80	3.07	3.56
1980–81	3.06	3.53
Percent change 1973–74 to 1980–81	7.0	2.9

SOURCES: Applicant studies, 1974–78, and final admission action reports, 1979–81, of the Association of American Medical Colleges.

gram or that HCOP-supported undergraduate schools are more successful at placing students in medical schools, or both statements are true.

Other data from the file of the same 2 academic years show the acceptance advantage of being in HCOP-supported schools for students with specific MCAT and grade point average (GPA) scores. The following table shows the acceptance rates for students with both medium MCAT scores (5–9) and medium GPAs (2.6–3.5).

Year and group	*HCOP*	*Non-HCOP*
1978–79		
Minority	67.9	59.3
Nonminority	46.1	26.8
1979–80		
Minority	83.3	61.7
Nonminority	60.9	28.7

SOURCE: Special data tabulation provided to the Division of Disadvantaged Assistance by the Association of American Medical Colleges.

These data show that even when MCAT scores and GPAs are controlled, students from HCOP schools are more successful at gaining entry to medical school. Again, this observation is true for both minority and nonminority students.

Conclusions

Since 1972, when the Health Careers Opportunity Program was initiated, there has been a significant increase in the numbers of minority students enrolled in health professions schools, a widening of the distribution of minority students in all types of health professions schools and into more predominantly white schools, and improvement in both MCAT scores and GPA scores for minorities.

- The numbers of minority students in health professions schools rose between 1972 and 1980 from 5,132 to 8,669, an increase of about 70 percent. The numbers of each minority group in health professions schools have increased markedly.
- The preponderance of black students in traditionally black health professions schools has begun to decline. The percentage of all black medical students in the United States enrolled in Meharry and Howard fell from 28 percent in 1971 to 22 percent in 1979, as black and other minority undergraduate students have gained greater acceptance in predominantly white medical schools. In the Meharry and Howard dental schools the same proportion dropped from 55 percent to 30 percent between 1971 and 1981.
- Minority students improved their MCAT scores and GPAs at an appreciably higher rate than did nonminority students between 1972 and 1981.
- The acceptance rate to medical school for students in HCOP-supported undergraduate institutions has been, for the last two years for which there are data, greater than for students in non-HCOP schools when MCAT scores and GPAs are held constant.

It is difficult to attribute these improvements to any single cause or program, such as HCOP, but where it is possible to compare HCOP with non-HCOP schools, the HCOP institutions appear to have had a positive impact.

There is still a continuing disparity between representation of minorities in health professions schools and their numbers in the general population. For example, 11.7 percent of the U.S. population in 1980 was black, but only 5.7 percent of the medical students were black. There are several reasons why this is so.

1. Many minority students are prepared for college in inadequate grade schools and high schools. This handicap cannot be easily overcome in college even when there are academic augmenting programs like HCOP.
2. Minority students are less likely than nonminority students to be able to afford the high costs of health professions schools, particularly medical schools. The better minority students are therefore more likely to seek training in alternate professions.
3. At the time in the late 1960s and early 1970s that disadvantaged minorities began to increase their representation in health professions schools, women also began to apply and be accepted in greater numbers. Women were only 10.9 percent of all applicants to medical schools in 1970, but by 1980 they comprised almost 30 percent of applicants. The effect for racial and ethnic minorities is that the competition has stiffened, and acceptance has become more difficult even as they have improved GPAs and entrance examination scores.

References

1. 42 U.S.C. 292, *et seq.*
2. Stambler, H. V.: Health manpower for the nation—a look ahead at the supply and the requirements. Public Health Rep 94: 3–10, January-February 1979.
3. Wellington, J. S., and Montero, P.: Equal educational opportunity programs in American medical schools. J Med Educ 53: 633–639 (1978).
4. Office of Health Resources Opportunity: OHRO digest. DHEW Publication No. (HRA) 80–624. Hyattsville, Md., February 1980.