Access to the Medical Profession in Colorado by Minorities and Women

—A report of the Colorado Advisory Committee to the United States Commission on Civil Rights prepared for the information and consideration of the Commission. This report will be considered by the Commission, and the Commission will make public its reaction. In the meantime, the findings and recommendations of this report should not be attributed to the Commission but only to the Colorado Advisory Committee.

June 1976

ACCESS TO THE MEDICAL PROFESSION IN COLORADO BY MINORITIES AND WOMEN

--A report prepared by the Colorado Advisory Committee to the U.S. Commission on Civil Rights

ATTRIBUTION:

The findings and recommendations contained in this report are those of the Colorado Advisory Committee to the United States Commission on Civil Rights and, as such, are not attributable to the Commission.

This report has been prepared by the State Advisory Committee for submission to the Commission, and will be considered by the Commission in formulating its recommendations to the President and the Congress.

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LETTER OF TRANSMITTAL

COLORADO ADVISORY COMMITTEE
TO THE U.S. COMMISSION
ON CIVIL RIGHTS
June 1976

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Sirs and Madam:

The Colorado Advisory Committee, pursuant to its responsibility to advise the Commission concerning civil rights problems in this State, submits this report on the accessibility to the medical profession in Colorado by minorities and women. Through its investigation the Advisory Committee concludes that in recent years much progress has been made in the admission of minorities and women to the University of Colorado (C.U.) School of Medicine. The Committee found, however, that barriers remain in the State's educational institutions, and in society, which deny these groups the same opportunities as white males to enter the profession.

The Committee examined four main areas where minorities and women traditionally encountered obstacles because of their minority status and/or sex: academic preparation at the preprofessional level and recruitment to a medical career, admission to medical school, learning opportunities in medical school, and appointment to residency programs and medical faculty positions.

Through interviews with students, faculty, and community persons and from the examination of statistical data, the Committee found that minorities and women are severely underrepresented in the medical profession in Colorado, and that underrepresentation in institutions of higher education

limits the number of students available to apply for medical school.

All through the educational process which leads to a medical career the Advisory Committee was able to identify barriers confronted by minorities and women in gaining access to the medical profession. Of particular concern to the Committee are the following:

-- The failure of schools to provide adequate education and the acquisition of skills at the lower academic levels which would prepare minority students to enter medical school.

-- Inadequate counseling and different treatment at an early stage in their education which discourages minorities and women from seeking a medical career.

-- Poorly defined and subjective criteria used for admission to medical school which frequently place minority and women students at a disadvantage.

-- Poor communication, unsatisfactory supportive programs, and sexist attitudes in medical school which deny minorities and women optimum participation in learning experiences.

-- The paucity of women and minority faculty and residents at the C.U. School of Medicine which has serious consequences for the quality of education received by minority and women medical students.

The majority of the recommendations resulting from the study are directed to State and Federal agencies responsible for assuring that minorities and women are provided equal educational opportunity. They concern such areas as the quality of education provided for minorities, adequate counseling, civil rights compliance reviews by the U.S. Department of Health, Education, and Welfare (DHEW), admissions criteria, and decisionmaking and hiring practices in medical school.

We ask you to concur in these recommendations. In particular, we urge you to continue to press DHEW to issue adequate guidelines detailing the responsibilities of institutions of higher education in conforming with civil

rights statutes and Executive orders, and to conduct regular, indepth compliance reviews of Colorado's institutions of higher learning.

Respectfully,

/s/

GAY E. BEATTIE
Chairperson

ACKNOWLEDGMENTS

The Colorado Advisory Committee wishes to thank the staff of the Commission's Mountain States Regional Office, Denver, Colorado, for its help in the preparation of this report.

The investigation and report were the principal staff assignment of William Muldrow, with writing and review assistance from William Levis and Rebecca Marrujo, and support from Esther Johnson and Phyllis Santangelo. The project was undertaken under the overall supervision of Dr. Shirley Hill Witt, director, Mountain States Regional Office.

Final production of the report was the responsibility of Cheryl Banks and Deborah A. Harrison, supervised by Bobby Wortman, in the Commission's Publications Support Center, Office of Management.

Preparation of all State Advisory Committee reports is supervised by Isaiah T. Creswell, Jr., Assistant Director for Field Operations.

THE UNITED STATES COMMISSION ON CIVIL RIGHTS

The United States Commission on Civil Rights, created by the Civil Rights Act of 1957, is an independent, bipartisan agency of the executive branch of the Federal Government. By the terms of the act, as amended, the Commission is charged with the following duties pertaining to denials of the equal protection of the laws based on race, color, sex, religion, or national origin, or in the administration of justice: investigation of individual discriminatory denials of the right to vote; study of legal developments with respect to denials of the equal protection of the law; appraisal of the laws and policies of the United States with respect to denials of equal protection of the law; maintenance of a national clearinghouse for information respecting denials of equal protection of the law; and investigation of patterns or practices of fraud or discrimination in the conduct of Federal elections. The Commission is also required to submit reports to the President and the Congress at such times as the Commission, the Congress, or the President shall deem desirable.

THE STATE ADVISORY COMMITTEES

An Advisory Committee to the United States Commission on Civil Rights has been established in each of the 50 States and the District of Columbia pursuant to section 105(c) of the Civil Rights Act of 1957 as amended. The Advisory Committees are made up of responsible persons who serve without compensation. Their functions under their mandate from the Commission are to: advise the Commission of all relevant information concerning their respective States on matters within the jurisdiction of the Commission; advise the Commission on matters of mutual concern in the preparation of reports of the Commission to the President and the Congress; receive reports, suggestions, and recommendations from individuals, public and private organizations, and public officials upon matters pertinent to inquiries conducted by the State Advisory Committee; initiate and forward advice and recommendations to the Commission upon matters in which the Commission shall request the assistance of the State Advisory Committee; and attend, as observers, any open hearing or conference which the Commission may hold within the State.

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I. INTRODUCTION

REPRESENTATION OF MINORITIES AND WOMEN IN HIGHER EDUCATION, THE PROFESSIONS, AND MEDICAL SCHOOLS

It is axiomatic in American society that the level of educational attainment correlates positively with the opportunity for the achievement of success. Also, few would question the view that lasting progress toward the improvement of the economic and social status of any group depends in large measure upon their ability to develop a "critical mass" of well-educated and professional persons.

Numerous studies of elementary and secondary school systems by the U.S. Commission on Civil Rights and its State Advisory Committees have demonstrated that minorities in our country continue to be denied equal educational opportunity by discriminatory practices.[1] Until 1972, due to the lack of jurisdiction over matters pertaining to sex discrimination, little had been done by the Commission to analyze the problems women face in acquiring educational opportunities equal to those afforded men. Nor had research undertaken by the Commission focused on difficulties confronted by minorities and women in gaining access to higher educational levels leading to professional careers. Work force and educational statistics indicate that present problems of underrepresentation of minorities and women may be the result of race and sex discrimination at these higher levels.

There is serious underrepresentation of minorities in undergraduate schools, a situation which reaches more alarming proportions at the graduate level. Data in table 1 show that though minorities comprise 16.8 percent of our national population, they are only 10.6 percent of undergraduate school enrollment and 5.4 percent of graduate school student population. Unfortunately, data classified by sex categories for minority groups are not yet available on a national scale. However, women of all ethnic and racial groups, who make up 51 percent of the total population, comprise 45 percent of enrollment at the undergraduate level and 44.3 percent at the graduate level.

The data for Colorado show a slightly better representation of some minority groups in institutions of higher learning than is true for the nation generally. Still, the situation is bleak. Minorities constitute 16.9

Table 1

Student Representation by Minority Status and Sex in Institutions of Higher Education, Colorado and the United States

	U.S. Public and Private Institutions, 1970			Colorado Public Institutions, 1974		
	Percent in U.S. Population	Percent undergraduate	Percent graduate	Percent in Colorado Population	Percent undergraduate	Percent graduate
Blacks	11.1%	6.9%	3.1%	3.0%	3.1%*	2.2%
Female					1.1	0.9
Male					1.9	1.3
Native American	0.4	0.5	0.1	0.4	0.8	0.4*
Female					0.4	0.1
Male					0.4	0.2
Spanish Origin	4.6	2.1	0.5	13.0	6.2	2.4
Female					2.3	0.7
Male					3.9	1.7
Total Above Minorities	16.1	9.5	3.7	16.4	10.1*	5.0*
Female					3.8	1.7
Male					6.2	3.2
Asian American	0.8	1.0	1.7	0.5	1.1	1.2
Female					0.5	0.4
Male					0.6	0.8
Total Above Minorities	16.8	10.6	5.4	16.9	11.2	6.1*
Female					4.3	2.1
Male					6.8	4.0
White and Other	83.2	89.4	93.9	83.1	88.8	94.0
Female					38.4	30.0
Male					50.4	64.0
Total All Students		100.0	99.3*		100.0	100.1*
Female		45.0	44.3		42.8	32.1
Male		55.0	55.7		57.2	68.0

*Because of rounding subtotals may not equal larger total and grand totals may not equal 100%.

Note 1. Nationwide data on minority student populations classified by sex are not available.
Note 2. Data on Native Americans are considered unreliable because of wide disparity between figures submitted by the Bureau of the Census and the U.S. Department of Health, Education, and Welfare (DHEW), Office for Civil Rights. Both sources were used in the Ford Foundation report mentioned below.
Source: Data for student enrollment in the United States were taken from Minority Enrollment and Representation, Institutions of Higher Education (New York: Urban Education Inc.-Ford Foundation, 1974), pp. 17, 186. Information on the total proportion of men and women enrolled was provided by Vance Grant, DHEW, Office of Education, National Center for Education Statistics, Washington, D.C., in a telephone interview, Sept. 23, 1975. Colorado data on student enrollment were compiled from information submitted to DHEW/Office for Civil Rights by all 27 State institutions of higher education in the fall of 1974. Total enrollment for these schools was 71,179 undergraduate and 6,780 graduate students.

percent of the State's population but make up only 11.2 percent of undergraduate and 6.1 percent of graduate school enrollment. Persons of Spanish origin, the largest ethnic group in the State (13.0 percent of the population), have less representation than any other ethnic group. Their proportion is only 6.2 percent of the students in undergraduate schools and 2.4 percent at the graduate level. As might be expected, women are more severely underrepresented than men in each minority category.

Data on Native Americans, which in some cases indicate parity or overrepresentation, are suspect for reasons given in the footnote to table 1, and also because of variations in the definition of "Native American."

Research into the reasons for underrepresentation of minorities and women in higher education is greatly needed. This report, which results from a study conducted by the Colorado Advisory Committee to the U.S. Commission on Civil Rights, will explore some of the issues involved in higher educational opportunities. Its main purpose, however, will be to investigate the accessibility of the medical profession tc women and minorities.

After reviewing statistics on the proportion of ethnic minorities and women in institutions of higher learning, the degree to which they are underrepresented in professions traditionally dominated by white males is no surprise. A few examples will suffice to document the situation.

In 1974 the estimated representation of racial or ethnic minorities and women in the engineering profession was as follows: women, 1.6 percent; blacks, 1.2 percent; persons of Spanish origin, 1.6 percent; Native Americans, 0.2 percent; Asian American and other minorities, 2.9 percent. The proportion of engineers who are minority women is unknown, but in 1973-74 only 14.5 percent of the total minority enrollment in engineering schools were women.[2] Among almost 207,500 science and engineering Ph.D.s in the United States labor force, 93.4 percent are white and 92.1 percent are male. Only 0.8 percent are black, 0.6 percent of Spanish origin, and 0.04 percent Native American. Asian Americans, however, who make up only 0.7 percent of the U.S. population, comprise 5 percent of science and engineering Ph.D.s.[3]

In 1972 the representation of blacks amounted to 4.0 percent in law, 3.6 percent in dentistry, 4.0 percent in architecture, and 2.5 percent in communications. In 1973 women comprised 4 percent of the lawyers, 9 percent of the engineers and scientists (physical, life, and social sciences), and 9 percent of physicians and dentists combined.[4]

Medicine and law are two of the more prestigious professions. Their members are generally publicly visible, command a high level of income, and provide basic human services. Because of these attributes, adequate representation in these two professions is extremely important to women and minorities in their attempts to gain equality and justice. A Colorado Advisory Committee study parallel to the present one has analyzed some of the problems faced by these groups in gaining entrance to the legal profession.[5]

The United States has virtually the worst record in the Western world for training and employing women physicians. At the present time women in the United States make up 39 percent of the labor force but comprise only 9 percent of the nation's physicians.[6] By way of contrast, in 1965 women were 65 percent of all physicians in Russia, 30 percent in Poland, 20 percent in Germany, and 13 percent in France.[7]

Much has been said about the increase in the number of women physicians, yet progress is slow. The percentage of medical school graduates who are women climbed from 5.9 percent in 1960 to 9.1 percent in 1973, an increase of only 3.2 percentage points in 13 years.[8] In Colorado available statistics show a decrease in the proportion of women physicians from 1970, when they were 9.7 percent of the total (366), to 1973, when they were 6.8 percent (281).[9] Figures such as these indicate that there are factors in our society which to a significant extent prevent women from entering the profession.

The U.S. Bureau of the Census reports that in 1970, though blacks made up 11.1 percent of the total population, they represented only 2.17 percent of the nation's physicians. Within this group 17.2 percent were women and 82.8 percent were men. In Colorado there are 30 licensed black physicians (0.8 percent of the State's total) and of these 4 are women.[10]

The Bureau of the Census lists 10,293 physicians of Spanish heritage in the United States, accounting for 3.7 percent of all physicians. Of these 946 (9.2 percent) are women. This figure includes persons of Mexican American, Puerto Rican, Cuban, and Central or South American origin.[11] The National Chicano Health Organization (NCHO) estimates that there are only 250 Mexican American physicians, born and trained in the United States--or only 0.005 percent of the total 5 million Mexican Americans (2.4 percent of the United States population).[12] It is not known how many physicians of Spanish origin are in Colorado. Bureau of the Census figures, which indicate that Colorado had 135 physicians of Spanish heritage in 1973, including 34 women, are thought to be grossly inaccurate by the DHEW regional Office of Health and other health organizations. DHEW's estimate ranges from 20 to 30 physicians of Spanish origin in the State. Physicians with Spanish surnames who were contacted by MSRO staff in Colorado did not know of a single woman physician of Spanish origin in the State.

The Association of American Indian Physicians, Inc., has identified a total of 60 Native American physicians in the United States. They represent 0.02 percent of the physician population, although Native Americans constitute 0.5 percent of the total population. Of the 60 physicians only 9 are women. There are no Native American physicians in Colorado,[13] although there are 8,836 Native Americans residing in the State.[14]

The drastic underrepresentation of minorities and women in the physician population may not only be an indication of discriminatory practices and related social problems but may also result in a lower quality of health care for large segments of our population. The Health Manpower Development Program estimates that more than 40 million blacks, Chicanos, Native Americans, Puerto Ricans, and poor whites are unable to obtain adequate health care. Not only is there a shortage of physicians to serve in the "ghetto" areas, but economic, social, and cultural differences between these physicians and members of minority groups of different backgrounds create serious barriers in communication with patients which affect the quality of medical care.[15] The Health Manpower Development Program believes that only by significantly increasing the percentage of minority representation in the health professions can the health care delivery crisis be alleviated.[16]

Table 2

Proportion of Minorities and Women Enrolled in Schools of Medicine in the United States, 1968-69 through 1974-75

	1968-69	1969-70	1970-71	1971-72	1972-73	1973-74	1974-75
Asian American	1.2%	1.2%	1.4%	1.5%	1.5%	1.7%	1.8%
Black American	2.2	2.8	3.8	4.7	5.5	6.0	6.3
Mexican American	0.2	0.2	0.4	0.6	0.8	1.0	1.2
Native American	N/A	N/A	0.04	0.1	0.1	0.2	0.3
Puerto Rican (Mainland)	N/A	0.1	0.1	0.2	0.2	0.2	0.3
Total Minority	3.6	4.3	5.7	7.0*	8.3*	9.5*	9.9
White & Other	96.4	95.7	94.3	93.0	91.7	90.5	90.1
Total Men	91.2	91.0	90.4	89.2	87.2	84.6	82.0
Total Women	8.8	9.0	9.6	10.8	12.8	15.4	18.0

*Percentages do not add to subtotal due to rounding.

Source: U.S., Department of Health, Education, and Welfare, Minorities and Women in the Health Fields (Washington, D. C.: 1974), pp. 14-15; and Dario Prieto, Director of Minority Affairs, Association of American Medical Colleges, letter to William F. Muldrow, MSRO, Feb. 13, 1975, MSRO files.

James Lopez, of the National Chicano Health Organization, underscored this point in testimony at the Committee's informal hearing on May 10, 1975, in Denver.

> ...for Chicanos to receive adequate health care, they want to be able to deal with Chicano doctors, with Chicano nurses. The health delivery [system serving] us presently is not adequate because Chicanos are not part of that health delivery.
>
> We...Chicanos have constantly been set in the role of [receiving] emergency health care. We only go to the hospitals, we only go to the clinics, when we're in pain, when it hurts, when there is an emergency (p. 29).[17]
>
> ...if Chicanos could become health professionals our people would then better understand preventive health [measures] because there would be Chicanos there...people who could relate to them, speak their same language, understand them culturally and in other ways (p. 30).

During a 12-month period in 1972 the Denver General Hospital treated 6,363 Spanish-surnamed patients, 38.9 percent of the total patient load.[18] Many of these spoke little or no English and several medical students interviewed stated that during their period of training there they spent a considerable amount of their time translating for doctors who spoke no Spanish. Other aides and janitors are also used as translators.

The proportions of women and minorities in medical school have been steadily increasing during the last several years. Women enrolled in medical schools throughout the United States increased from 8.8 to 18.0 percent in the past 7 seven years (table 2). During the same period total minority enrollment nearly tripled, increasing from 3.6 percent in the 1968-69 school year to 9.9 percent in 1974-75. This is a dramatic increase, but it still does not compare favorably for women and minorities with either their proportion in the general population, or with their enrollment in United States universities and colleges. It will take intensive effort to erase inequities accrued for years since 1849 when Elizabeth Blackwell received the first medical degree granted to a woman in the United States.

Table 3

Enrollment by Minority Status and Sex at the University of Colorado School of Medicine, Academic Year 1974-75

	No.	%
Black American	22	4.1
Female	11	
Male	11	
Native American	11	2.1
Female	2	
Male	9	
Spanish Origin	29	5.5
Female	9	
Male	20	
Total Above Minorities	62	11.7
Female	22	
Male	40	
Asian American	12	2.3
Female	4	
Male	8	
Total Above Minorities	74	13.9*
Female	26	
Male	48	
White and Other	458	86.1
Female	85	
Male	373	
Total All Students	532	100.0
Female	421	20.9
Male	111	79.1

*Percentages do not add to subtotal due to rounding.

Source: University of Colorado Medical Center, April 1975.

From its establishment in 1873 until 1970 the University of Colorado (C.U.) Medical School graduated only 7 blacks and 14 Mexican Americans. (Statistics for Asian Americans are not available for this period.) That record has improved considerably in the last several years. In the 1974-75 school year, of the 532 students enrolled, 74 were minorities (table 3). Ten minorities (1 Asian American, 4 blacks, 1 Native American, and 4 Mexican Americans) graduated with the senior class in 1975. Of these, four were women (two blacks, one Native American, and one Mexican American).[19]

The number of women admitted to the University of Colorado School of Medicine has also shown a dramatic and steady increase in the last several years, from 9 (7.8 percent) in 1968 to 37 (29.6 percent) in 1974. Dr. Harry Ward, dean and acting vice president of the school of medicine, estimates that by 1980, 50 percent of the entering class will be women (p. 122).

THE COLORADO ADVISORY COMMITTEE'S STUDY

Because of the financial assistance it provides to medical schools, it is appropriate for the Federal Government to be concerned with the representation of minorities and women in the health professions. Currently, the Government bears about half of the $12,650 per year training cost for medical students. Several billion dollars ($946 million in fiscal year 1973 alone) have been provided in grants and subsidies to U.S. medical schools. This includes an annual grant of $1,700 per student to every medical school (the so-called capitalization grant).[20] At the C.U. School of Medicine the annual cost per student was $13,750 in 1975, of which $6,000 was contributed by the Federal Government.[21] The faculty received $17.5 million in Federal grants and contracts that same year.[22]

This report results from a study conducted in the spring of 1975 by the Colorado Advisory Committee to the U.S. Commission on Civil Rights to investigate accessibility to the medical profession in Colorado by minorities and women. The field investigation included a total of 94 interviews with students, faculty, and staff from the University of Colorado School of Medicine, as well as representatives from numerous community agencies concerned with the health profession. With few exceptions, as charted below, men and women from each minority and monminority

category were included in the interview process. Members of the Advisory Committee appreciate the cooperation provided by the various institutions in furnishing data requested. Further information was gathered at an informal hearing conducted by the Advisory Committee on May 10, 1975.[23]

Notes to Chapter I

1. For example see, U.S., Commission on Civil Rights, Toward Quality Education for Mexican Americans (1974); Para Los Ninos--For the Children (1974); Twenty Years After Brown (1974); The Federal Civil Rights Enforcement Effort--1974, Vol. III, To Ensure Equal Educational Opportunity (1975); and Racial Isolation in the Public Schools (1967).

2. Betty M. Vetter and Eleanor L. Babco, Professional Women and Minorities (Washington, D.C.: Scientific Manpower Commission, 1975), pp. 312, 326, 855 (hereafter cited as Professional Women and Minorities).

3. Betty M. Vetter, "Women and Minority Scientists," Science, vol. 189 (1975), p. 855.

4. Ibid., pp. 86, 109.

5. Colorado Advisory Committee to the U.S. Commission on Civil Rights, Access to the Legal Profession in Colorado by Minorities and Women (1976).

6. Carolyn S. Pincock, "New Horizons for the American Medical Women's Association," Journal of the American Medical Women's Association, vol. 17 (1975), pp. 9-10.

7. American Medical Association, Directory of Women Physicians in the U.S., 1973 (Chicago: AMA, 1974), p. vii.

8. Vetter, "Women and Minority Scientists," p. 82.

9. Statistics for 1970 are from U.S., Department of Commerce, Bureau of the Census, Detailed Characteristics, Colorado (1972); 1973 statistics are from American Medical Association, Directory of Women Physicians in the U.S., 1973 (Chicago: 1975).

10. Statistics furnished by Dr. John F. Bookhardt, president of the Mile High Medical Association. This association is a branch of the National Medical Association, which was founded by black physicians at a time when they were not admitted to the American Medical Association.

11. U.S., Department of Commerce, Bureau of the Census, United States Census of Population: 1970, Detailed Classifications: United States Summary (1973).

12. NCHO Newsletter, January 1974. The major purpose of the National Chicano Health Organization, which is in part federally funded, is to increase substantially the number of Chicano health professionals.

13. Don Jennings, Executive Director of the Association of American Indian Physicians, letter to William F. Muldrow, U.S. Commission on Civil Rights, Mar. 12, 1975, MSRO files. The Association of American Indian Physicians was established in 1971 and assists in the recruitment of students for the medical profession.

14. Health Manpower Development Program, Health Care for the Forgotten Fifth--II, Progress Report July 1970-October 1973 (Washington, D.C.), p. 5.

15. M. Alfred Haynes, "Influence of Social Background in Medical Education," Journal of Medical Education, vol. 48 (1973), pp. 45-48.

16. Health Manpower Development Program, Health Care for the Forgotten Fifth, Progress Report July 1970-December 1971 (Washington, D.C.), p. 7.

17. Page numbers in parentheses cited here and hereafter in the text refer to statements made to the Colorado Advisory Committee at its open meeting May 10, 1975, as recorded in the transcript of the meeting.

18. Data supplied by the Denver General Hospital to the DHEW Regional Office for Civil Rights, Aug. 29, 1972.

19. Table 6 shows that 26 minority students were admitted for the 1974-75 academic year.

20. "National Health Needs and New Physicians," New York Times, Jan. 15, 1973.

21. "C.U. to Charge States Full Medical School Cost," Rocky Mountain News, Mar. 27, 1975.

22. "C.U. Ranks Among the Best in the Nation," Denver Post, Mar. 23, 1975.

23. Number and categories of persons interviewed are shown in the following table:

	Students	Sch. of Med. Fac. & Staff	Reps. of Community Agencies
Asian American			
Male		2	
Female			
Black			
Male	6	4	5
Female	5	1	2
Mexican American			
Male	7	3	7
Female	3	1	
Native American			
Male	2		2
Female	1		
White			
Male	3	15	2
Female	7	11	5

Community agencies consulted included the American Association of Medical Colleges, American Indian Physicians Association, American Medical Association, American Women's Medical Association, Colorado Commission on Higher Education, the Colorado Comprehensive Health Planning Agency, Colorado Department of Health, C.U. Medical Center, Colorado-Wyoming Regional Medical Program, Colorado Medical Society, Faculty Women's Association of the C.U. Medical Center, DHEW/Office for Civil Rights, Indians Into Medicine (INMED), the Latin American Research Association (LARASA), Mile High Medical Society, National Chicano Health Organization, Project 75, Urban League, and the Western Interstate Commission for Higher Education.

A draft copy of this report was sent to Harry P. Ward, dean of the C.U. School of Medicine, for review. His comments have been considered and where appropriate incorporated into the report.

II. PREPARATION AND RECRUITMENT

THE MOTIVATION AND DECISION TO ENTER MEDICINE

Admission to medical school is the culmination of many decisions and years of preparation for the student. The C.U. School of Medicine has developed a comprehensive list of courses considered to provide excellent educational preparation for students interested in medicine.[1] To undertake this vigorous course of study it is necessary to complete outlined requirements, which include intense course concentration in science and mathematics and require a student to achieve a high degree of motivation and make important career decisions at a very early stage in the educational process.

Responses to a questionnaire from 1,933 students who applied for but had not been accepted to medical school revealed that 57 percent of the men and 61 percent of the women had made their decision before they were 17 years old.[2] These statistics and similar findings from a survey of high school seniors, conducted by the Educational Testing Service, point out that decisions to enter medicine tend to be made before any experience with higher educational institutions. Nevertheless, 25 percent of the women and 34 percent of the men decided on a medical career during college years, which suggests that advisors and recruitment efforts in college are important.[3]

Dr. Janet Weston, associate director of the Student Advisory Office at the C.U. Medical Center, emphasized the necessity for those contemplatating a career in medicine to begin preparation at the junior high school level.[4] Dr. Bruce Pollock, director of health sciences advising at the University of Colorado, indicated that major problems related to recruiting minorities and women students for medical school during college years could be avoided by efforts made at the grade school and high school levels (p. 43). From these observations, it seems apparent that effective efforts to recruit minorities and women would require influencing them during the early years of their education. But less than one-third of the minority medical students interviewed indicated that they had made such a decision below the college level. A considerable number of minority students made their decision to try a medical career after they had finished college and worked for a number of years.

Several studies have attempted to identify factors which prevent minority students from choosing to prepare for a medical career. Identified factors include insufficient financial resources for the high cost of a medical education, an incorrect perception of opportunities, the feeling that their educational preparation is inadequate, lack of proper counseling, and a lack of identification with medicine because of the elitist aura surrounding the profession.[5]

Only one of the men and none of the women minority students interviewed indicated that they had been given counseling which encouraged them to enter medicine, or positively reinforced their decision once it was made. Several flatly stated that they had never seen a counselor in high school. A typical preparatory pattern of those interviewed seemed to be a mosaic of courses in high school and college until finally some friend or teacher who showed special interest in them suggested certain courses which would prepare them for admission to medical school.

One Mexican American medical student, a woman, stated that she had not known, for a long time, that there was a premedical advisor at her college. When she contacted him he discouraged her from taking premedical courses, "because of her poor academic background." A minority man, admitted to medical school for the 1975-76 academic year, said that his counselor in junior high school refused to allow him to take basic academic courses because his aptitude test showed he would make a good refrigerator mechanic. After a period of service in the armed forces, he entered college and was encouraged by his biology teacher to consider medicine. These examples typify experiences of many minority students interviewed.

Two students, a Native American man and a Mexican American woman, indicated that their early motivation to become physicians had resulted from a desire to meet personally the medical needs evidenced in their communities. Both indicated that they had not prepared for a medical career until many years later because they had considered their professional aspirations to be completely unrealistic.

Staff at the Minority Student Affairs Office of the C.U. Medical Center also indicated that undergraduate counseling for minorities was very inadequate. James Lopez, regional coordinator for the National Chicano Health

Organization, stated that a major problem in the recruitment of Chicano medical students is the lack of positive reinforcement from counselors and faculty members. "...[Chicano] medical students are constantly being bombarded," he said, "with the fact that this is an area where they really don't fit" (p. 28).

A dean at Howard University has outlined elements he believes should be in an effective recruitment program for minorities. These include identifying academic potential, reinforcing motivation, giving financial aid, describing opportunities available, building a professional image, modifying mistaken attitudes or impressions, and giving a clear description of career goals.[6]

Special Problems Faced by Women

Largely because of the stereotyped roles our society has set for them, women face different problems than minority students in achieving the motivation and preparation required for admission to medical school. The profile of characteristics for women in medicine was perceived by Florence Nightingale as that of a nurse who "provided wifely support to the physician, motherly devotion to the patient, and firm but kind discipline to the attendants and auxiliaries."[7] This role definition frequently is perpetuated in the media by television programs such as "Marcus Welby," where the M.D.s are thoughtful, upper-class men, with nurses who are nice, sweet females and appendages to the physician.[8]

The preoccupation of counselors with this image affects the advice given to women interested in a medical career. A previously mentioned study gives the following interesting statistics in this regard. Twenty-four percent of the men, but 38 percent of the women, who sought advice as undergraduates regarding a medical career were discouraged from applying to medical school by at least one source. Sixty-one percent of the women who were discouraged from applying, as opposed to 8 percent of the men, were told that medicine was too demanding a career to allow for a family. Fully one-fifth of the women reported that they had been advised to give up their career ambitions altogether and devote themselves to raising a family.[9] On the other hand, 80 percent of the men who were discouraged from entering medicine were given reasons related to poor academic

performance as opposed to 43 percent of the women who were discouraged for the same reason.[10]

These figures dramatically confirm Lopate's contention that men and women receive different feedback at various stages in the career process.[11] The effect of such counseling, which perceives an incongruity in the demanding role of medical practice and the stereotypic feminine role in our society, discourages substantial numbers of women from entering medicine. There is no evidence that parallel discouragement is offered to men.[12] There is no doubt that the kind of counseling women receive in school, combined with role expectations of society, has a direct effect upon the choices they make regarding their career plans. In 1973 only 3.4 percent of women in their first year in college indicated a choice of a medical or dental career, compared with 8.1 percent of the men.[13]

Minority women must overcome a triple set of obstacles if they pursue a medical career. These obstacles include not only their minority and sexual status in American society but may also relate to cultural patterns within their own communities. James Lopez pointed out that, "...culturally we have a thing called machismo within the Chicano community. Our culture...played a role in the Chicana not going into health careers." (p. 28) He added that he feels the situation is reinforced by the white community and its role expectations for minority women, whereas the Chicano community is breaking away from traditions and encouraging Chicanas to enter the professions.

ACADEMIC PREPARATION AT THE LOWER EDUCATIONAL LEVELS

Poor preparation at the lower academic levels has frequently been pointed to as another barrier confronting minorities seeking to enter medicine. This concern has not been unique to minorities. A recent editorial termed the 1975 test results of the College Entrance Examination Board, "shocking, dismaying, and disturbing."[14] Test scores had dropped for the 12th consecutive year, an average of 10 points in verbal skills and 8 points in mathematical skills during the 1974-75 academic year. The blame for this "disaster" was placed squarely upon the educational establishment in the newspaper editorial.

Ethnic minorities are affected more adversely than other groups by the poor quality of many educational institutions. Numerous studies have demonstrated that ethnic minority students have a heritage plagued by poverty, attendant evils of poor education, and lack of equal opportunity arising from racial prejudice.[15] A 1971 report on the school system of New York City revealed that 48 percent of the black and Puerto Rican students drop out of high school before their senior year, compared with 21 percent for white students.[16] The New York Medical College asserts that, typically, minority college students desiring to become physicians:

- had less-than-average educational preparation and environmental reinforcement in the sciences and mathematics;
- had less-than-average preparation in study skills, such as reading, writing, vocabulary, and test taking;
- had not been counseled or had been misinformed with respect to preparation needed for admission and completion of medical school;
- had a low self-image resulting from a lifetime of exposure to discrimination.[17]

A 5-year study by the U.S. Commission on Civil Rights documented the failure of schools to educate Mexican Americans, as measured by reading achievement levels, school holding power, grade repetition, "overageness," and participation in extracurricular activities.[18]

In 1969 the Senate Subcommittee on Indian Education reported that achievement levels of Native American children were 2 to 3 years below those of white students. Native American children fell progressively behind the longer they were in school and their dropout rates were twice the national average in public and Federal schools. Some school districts had dropout rates approaching 100 percent for Native American pupils. Only 18 percent of the students in Federal Indian schools go to college, compared with the national average of 50 percent. Nearly one-third of the Navajo Nation is functionally illiterate in English.[19]

Since our professional education system is based on a certain level of academic achievement, the quality of education available to minority students must be considered

in any plan to remove barriers to their entry into a medical career.

Not all minority students are recipients of inferior education at the lower levels. Four of the minority students interviewed (two black women, one Native American woman, and one black man) indicated that they had received an excellent education at the secondary and undergraduate levels. These were the exceptions, however, for many others felt there were deficiencies in their education which were a handicap to them now. Members of the faculty also observed that it was common for minority students to have academic deficiencies which made it difficult for them to compete in certain subject areas.

Donald Yamamoto, of the Minority Student Affairs Office, directs a skills reinforcement program designed to develop study, reading, and testing skills for minority students needing assistance. He describes his program as a "Bandaid" procedure because the problem really lies in the entire educational system and begins when the minority student first starts his education (p. 51). Mary Poppino, study skills specialist at Metro State College in Denver, feels that skill deficiencies of minorities often have a cultural basis. Traditionally, many Native Americans verbalize orally, rather than graphically. As a result their listening skills are highly developed and their writing skills may be deficient. Such students are handicapped by standardized testing procedures which rely heavily on a visual-graphic approach.[20]

THE RECRUITMENT OF MINORITIES AND WOMEN

There are a number of organizations in Colorado which attempt to attract minorities and women to the health professions. The National Chicano Health Organization counsels and recruits Chicano students. Project "75" seeks to discover, develop, and sustain interest in medicine among black, Chicano, Native American, and Puerto Rican students. In Colorado most of its efforts focus on black students. The American Women's Medical Association orients potential women candidates for medical school through lectures, seminars, and the provision of literature and role models. The Mile High Medical Association has attempted to identify and recruit potential black candidates for medical school.

A large number of students accepted by the C.U. School of Medicine are graduates from the University of Colorado. During the 1974-75 academic year 55 C.U. students were accepted into medical schools. (Of these 15 were females and 9 minorities, including 2 minority women.) About half of these were admitted to the C.U. School of Medicine.[21]

A primary function of the premed committee at C.U. is to interview students and supply letters of recommendation for them. Of the 13 members on the committee, none are women and only one is a minority person, an Asian American who is not a member of the faculty. Each committee member interviews two students. This means that a maximum of 65 are accommodated with letters of recommendation out of more than 300 who apply to medical school each year on the Boulder campus. The rest must obtain letters from faculty members as best they can. Pollock stated that many minority students are reluctant to seek advice from either this committee or from their counselors on campus. As a result they are seen infrequently by either group (p. 43).

The C.U. Medical Center established a Minority Student Affairs Office (MSAO) in March 1968 to meet the needs of recruitment, information, and program development for ethnic minorities and disadvantaged whites. The present staff consists of two black men, one of whom is the director; one Chicano man; one Native American woman; and one Asian American man. None of the staff has faculty status.

The entire recruitment effort of the School of Medicine centers in this office. Recruitment is accomplished through campus visits, individual referrals, and contracts with organizations, such as the National Chicano Health Organization, which have the same concerns. This office also conducts preliminary screening interviews with minority applicants and provides counseling services for those students who desire it.[22]

A major part of the recruitment effort is the preprofessional high school program established in 1969. This program exposes students at Denver's Manual, North, and West High Schools to the environment at the school of medicine in order to interest them in the profession. A one-semester course enables students selected on the basis of interest and achievement in science courses to participate in various classes and activities at the medical center. Through the spring of 1975 nearly 350 high school

students, most of whom were minorities, had participated in this program. As of 1974, 95 percent of the participants who finished high school went on to college and 85 percent of these majored in science, or in an area related to the health professions.[23]

Within the past 2 years the firing of one Mexican American recruiter and resignation of another caused considerable resentment among students of Spanish origin at the medical center. Interviews with students from this minority group revealed that many felt that MSAO did not meet the needs of students of Spanish origin. In a meeting with faculty representatives, a group of these students requested that either a separate office be set up to handle their affairs, or that a Chicano director be appointed for MSAO when the present director, a black man, leaves.[24]

Officials from the C.U. School of Medicine stated that there is no policy to recruit women. Douglas Clinkscales, director of MSAO, said, "Women are not a [special] concern of this office. We are concerned with those excluded from the mainstream of society because of race, income, or environment."[25] Dr. Conrad Riley, dean of admissions, said, "...we do not actively recruit women. We have a great and noble supply of women and we're happy with them." (p. 121) Dr. Harry Ward explained the rationale for this policy by relying upon a 1972 court case, Linda Emery v. The State of Colorado. "It was the feeling of the court that there was no evidence that women were educationally deprived in science, and our policy has been in fact not to specifically recruit women." (p. 121)

Statistics in table 4 show that the number of admission applications from minority students and women has been steadily increasing during the last 3 years. For the 1974-75 school year 22.4 percent of the total formal applications received were from women, an increase of 7.1 percent during the past 3 years. For the 1974-75 school year minority applications comprised 28.2 percent of the total, nearly double that of 3 years previous.

Table 4

Formal Applications to the University of Colorado School of Medicine by Minority Status and Sex, Academic Years 1972-73 through 1974-75

	1972-73		1973-74		1974-75	
	No.	%	No.	%	No.	%
Black	50	5.4%	77	8.1%	108	11.2%
Female	16	1.7	25	2.6	35	3.6
Male	34	3.7	52	5.5	73	7.5
Native American	9	1.0	19	2.0	34	3.5
Female	1	0.1	4	0.4	10	1.0
Male	8	0.9	15	1.6	24	2.5
Spanish Origin	53	5.7	59	6.2	94	9.7
Female	8	0.9	13	1.4	21	2.2
Male	45	4.9	46	4.8	73	7.5
Total Above Minorities	112	12.1	155	16.3	236	24.4
Female	25	2.7	42	4.4	66	6.8
Male	87	9.4	113	11.9	170	17.6
Asian American	28	3.0	26	2.7	37	3.8
Female	8	0.9	6	0.6	10	1.0
Male	20	2.2	20	2.1	27	2.8
Total Above Minorities	140	15.2*	181	19.1*	273	28.2
Female	33	3.7	48	5.1	76	7.9
Male	107	11.6	133	14.0	197	20.4
White & Other	782	84.8	768	81.0	694	71.8
Female	108	11.7	123	13.0	141	14.6
Male	674	73.1	645	68.0	553	57.2
Total All Students	922	100.0	949	100.0	967	100.0
Female	141	15.3	171	18.0	217	22.4
Male	781	84.7	778	82.0	750	77.6

*Because of rounding subtotals may not equal larger total and grand totals may not equal 100%.

Note: "Formal Applications" refer to all those received from Colorado residents, minorities, disadvantaged whites, and those submitted through the Western Interstate Commission for Higher Education. Applications from out-of-State whites are not included.

Source: University of Colorado Medical Center, April 1975.

Notes to Chapter II

1. Association of American Medical Colleges, Medical School Admission Requirements 1975-76 (Washington, D.C.: 1974), p. 106.

2. Office of Health Manpower, Career Patterns of Unaccepted Applicants to Medical School (Baltimore, Md.: The Johns Hopkins University, 1974), p. 54.

3. Ibid., p. 9.

4. Interview, Apr. 10, 1975.

5. Bernard W. Nelson, Richard A. Bird, and Gilbert M. Rodgers, "Educational Pathway Analysis for the Study of Minority Representation in Medical School," Journal of Medical Education, vol. 46 (1971), pp. 745-49. Diane Roberts and Robert A. Plunkett, "Selected Keys to Open the Door to Minority Student Participation in Health Careers," Journal of Allied Health (Winter 1974) pp. 40-49.

6. U.S., Department of Health, Education and Welfare, "Recruitment of Minorities for the Health Professions," Health Services Report, by Joseph L. Henry and Jeanne C. Sinkford, vol. 88 (February 1973), pp. 113-16.

7. Vincente Navarro, "Women in Health Care," The New England Journal of Medicine," vol. 292 (1975), p. 400.

8. Ibid., p. 401.

9. Office of Health Manpower, Career Patterns, pp. 64-83.

10. Ibid., p. 66.

11. Carol Lopate, Women in Medicine (Baltimore: Johns Hopkins Press, 1968), pp. 43-68.

12. Office of Health Manpower, Career Patterns, p. 83.

13. Vetter and Babco, Professional Women and Minorities, p. 23.

14. James L. Kirkpatrick, "Kids Today are Cheated on Education," The Denver Post, Sept. 12, 1975.

15. Frank G. Scarpelli, "Minority Admissions--A Realistic Assessment," The New England Journal of Medicine, vol. 292 (1975), pp. 860-61.

16. Carter L. Marshall, "Minority Students for Medicine and the Hazards of High School," Journal of Medical Education, vol. 48 (1973), p. 135.

17. Gilbert Ortiz and Karen S. Kendler, "The New York Medical College Summer Program: Remedial Education for Medical School Admission," Journal of Medical Education, vol. 49 (1974), pp. 694-95.

18. U.S., Commission on Civil Rights, Toward Quality Education for Mexican Americans (1974).

19. Madison L. Coombs, The Educational Disadvantage of the Indian American Student (Las Cruces, N. Mex.: Educational Resources Information Center, 1970), pp. 19-20.

20. Interview, Mar. 19, 1975.

21. Dr. Bruce M. Pollock, director of Health Sciences Advising at C.U., interview, Mar. 19, 1975.

22. Minority Student Affairs Office, Minority Student Affairs Program at the University of Colorado Medical Center (1974).

23. Carl Yee, director of the preprofessional high school program, interview, Apr. 24, 1975.

24. A man of Spanish origin was appointed as the director at the beginning of the 1975-76 school year.

25. Interview, Mar. 31, 1975.

III. ADMISSION TO MEDICAL SCHOOL

As long ago as 1970 it was evident that the number of medical school applicants was increasing rapidly, and that there was increasing diversity in their educational preparation and career plans. Various segments of society were demanding that more minorities be given a medical education.[1]

Today, admission policies and procedures of many medical schools are in a state of flux because of pressure for change both from within and outside of medical institutions. Governing boards are seeking a greater understanding of problems related to medical school admissions. However, medical schools tend to persist with a traditional approach to admissions which fails to meet adequately the dramatically altered conditions, opportunities, and demands.[2]

CONTROVERSY OVER TRADITIONAL CRITERIA

Traditionally, medical schools have relied upon a variety of indicators to determine an applicant's suitability for medical school, and ultimately the profession. These include cumulative undergraduate grade point average (GPA), science GPA, the senior year's GPA, Medical College Admission Test (MCAT) scores, the type of college attended, grade trends, letters of recommendation, and a personal interview which seeks to assess an applicant's personality, experience, and motivation. The use of these indicators to determine who will be admitted to medical school has been the subject of debate for some years.

Some 27 articles for the period 1955-72 dealt with the relationship of undergraduate grades to subsequent career performance. Data available on the subject failed to demonstrate that any correlation exists between academic performance in undergraduate school and performance in the medical and other professions after graduation.[3]

The Medical College Admission Test has been a focal point of contention. The present form of the exam--which includes scores in verbal, quantitative, and science knowledge, as well as understanding of modern society--has been in use since 1948. MCAT's emphasis is upon the testing

Table 5

GPA, MCAT, and National Board Examination Scores for the 1972-73 Entering Class at the University of Colorado School of Medicine

			MCAT Scores				National Board Examination Part I	
	No.	Cumulative GPA	Verbal Ability	Quantitative Ability	General Information	Science Ability	No.	Mean Score
Black	5	2.95	430	495	475	435	5	368.8
Female	2	2.85	410	415	455	385	3	375.0
Male	3	3.02	445	525	485	455	2	362.5
Native American	2	3.12	495	555	525	515	1	240.0
Female								
Male	2	3.2	495	555	525	515	1	240.0
Spanish Origin	7	2.92	480	525	485	505	7	356.4
Female	2	2.98	490	485	495	505	2	350.0
Male	5	2.90	475	535	475	505	5	359.0
Asian American	3	3.36	545	565	525	575	3	453.3
Female	1	3.60	495	585	485	615	1	435.0
Male	2	3.24	575	555	545	565	2	462.5
White & Other	108	3.45*	545	615	555	585	117	509.4
Female	14	3.44	575	585	575	575	15	438.3
Male	94	3.45*	535	615	555	595	102	519.8

*Data are missing for one person.

Source: University of Colorado Medical Center, April 1975.

of academic aptitude, knowledge, and intellectual skills that have been judged desirable for the prospective physician. It is intended to be used in conjunction with other information in making decisions about acceptance or rejection.[4]

The reported accuracy of MCAT predictability is far from uniform, for the extent to which MCAT scores predict medical performance varies a great deal from school to school and from year to year within a given school.[5]

There is some evidence to suggest that MCAT scores have limited performance predictability value when applied to the first 2 years of basic science courses in medical school but that they lose their predictability in clinical medicine.[6] Dr. Conrad Riley, dean of admissions at the C.U. Medical School, states that persons above the 40th percentile on the MCAT generally do well in the first 2 years of medical school (p. 120).

Students with lower MCAT and GPA scores admitted to the University of California School of Medicine at La Jolla under admission-variance criteria performed satisfactorily on Part I of the national board examination (taken after the second year of medical school), although slightly below the group admitted under regular criteria. Similar results were demonstrated at the Buffalo School of Medicine at the State University of New York.[7] The data in table 5 show that black and Spanish-origin students, from the 1972-73 C.U. Medical School entering class, performed satisfactorily on the same examination. The medical school expects students to have a score of at least 300. These students had been admitted with lower GPAs and MCAT scores than Asian American or whites.

The opinion of many professional educators is that, at best, the MCAT is of limited usefulness in the admissions process.[8] Serious questions have been raised about the validity of tests such as MCAT for assessing the potential of minorities from markedly different cultural patterns and backgrounds where such factors as sparse exposure to vocabulary-building and poorer early academic environments are common.[9] There is widespread feeling that verbal and general information subtests of the MCAT are biased against minority and nonurban applicants.[10] A large proportion of minority students interviewed at the C.U. School of Medicine felt that individual MCAT questions, or the testing

procedures, placed them at a disadvantage in the admissions process.

Beyond GPAs and MCAT scores, a third major set of criteria used in the selection of applicants for admission to medical schools is the so-called noncognitive characteristics. Noncognitive characteristics include such factors as motivation, leadership, ability to communicate, maturity, interpersonal relationships, ethical behavior, and compassion for others. These factors are assessed through letters of recommendation, questions on the application form, and personal interviews. Evaluation of these attributes generally is time consuming and is devoid of objectivity.[11]

The admissions interview itself can be a highly subjective and uncontrolled method of acquiring information and impressions. Topics covered vary widely. The personality and aggressiveness of the interviewee may control the impression-forming process, and the emotional reaction of the interviewer may bias his or her judgment.[12] Frequently, admissions committee members are untrained in interviewing methods or are not given guidance as to what questions to ask.

A survey of medical school admissions committees conducted in 1971, with 73 out of 124 institutions responding, revealed that blacks comprised 5 percent of total membership of the committees and Mexican Americans, 0.4 percent. There were no Native Americans represented and only 8 percent of members were women. Slightly less than half of the schools responding (45 percent) indicated that there was not a single minority member on their admissions committees.[13] Such a lack of representation by these groups raises the question of possible insensitivity to social and environmental differences, which may place minorities and women at a disadvantage in a personal interview.

THE DEVELOPMENT OF BROADLY-BASED ADMISSIONS CRITERIA

The obvious need for greater representation of minorities in the medical profession, the possibility of a culturally-biased MCAT, and the questionable predictive value of undergraduate academic achievement have resulted in pressure to develop a more broadly-based set of criteria for evaluating applicants.

It is no secret that objective data usually available on medical school applicants tend to portray most minority applicants as academically deficient and high-risk medical students. Numerous programs utilizing nonstandard admission criteria for socioeconomically disadvantaged minority and other students in medical schools across the country have shown encouraging results. Deemphasis on standard measurements of academic achievement and special attention to the unique backgrounds and experiences of each individual applicant have demonstrated that it is possible to educate increasing numbers of minority students without compromising standards of competency required by the faculty.[14]

Such special processing of minority admissions has raised legal questions with regard to reverse discrimination. A recent lawsuit[15] charged that the University of California (UC) Davis Medical School's Task Force program, which admitted 16 minority students last year out of a projected class size of 100, violated the equal protection clause of the 14th amendment and was the sole cause of complainant Bakke's rejection. Superior Court Judge Leslie Mentor held that the program was unconstitutional but ruled that Bakke would not necessarily have been admitted had the 16 places been available to white, nondisadvantaged students such as himself. The case is on appeal and the university has filed a countersuit for clarifiction of the program's constitutionality, but it is expected that a final decision may take years.

It has been pointed out that fine distinctions among students of increasingly higher academic quality are not useful in admission decisions. The use of more broadly-based admissions criteria and greater consideration of noncognitive factors should be made applicable to all applicants, not just minorities. This procedure would result in an admissions process that is more equitable than traditional procedures.[16]

Many medical schools will begin the use of more broadly-based admissions criteria in 1977 with the adoption of the Medical College Admissions Assessment Program (MCAAP) tests, developed under the direction of James L. Angel of the Association of American Medical Colleges. These tests, in the process of statistical and cultural validation, will attempt to rectify many of the concerns minority students had regarding MCAT. The primary goal will be to assess accurately the content and skill areas relevant to

performance in medical school and the profession.[17] Research is currently underway to develop means for assessing the noncognitive factors which would enable further evaluation of the student's ability to perform as a physician. Eight significant variables have been identified as being relevant to the prediction of success in medical school and later in the profession:[18]

1. Compassion and concern for human and societal needs
2. Interpersonal relationships
3. Interprofessional relationships
4. Ethical behavior
5. Coping capability
6. Decisionmaking
7. Orientation toward lifelong learning
8. Staying power stamina

SPECIAL ADMISSIONS PROBLEMS FOR WOMEN STUDENTS

There are two other factors mentioned in the literature which affect decisions made with regard to the admission of women to medical school: (1) certain stereotyped roles and personality characteristics expectations; and (2) admissions committees, which are predominately white male. The admissions committee at Duke University School of Medicine was shown to be favorably disposed toward women exibiting more conventional "feminine" traits such as nurturance and gentleness, and unfavorably disposed to females who are more assertive, independent, nonconventional, and less willing to conform;[19] i.e., characteristics considered desirable for males under the same circumstances.

Dr. Barbara Thulin, a former faculty member at the C.U. School of Medicine, also alluded to this problem in her testimony at the Committee's open meeting:

> ...when a nontraditional woman comes in for that interview, in which she's going to be thought of and approached by the biases of men who are considering her as

> a nontradtitional woman, it's very difficult for those men...to see her in roles other than an aggressive, very uncharitable, unbenign kind of role. And if you do this in an admission procedure, if you're a woman, you don't get accepted (p. 108).

Several of the women students interviewed at the C.U. School of Medicine indicated that during the interview process they had responded according to what they perceived to be expected from their male interviewers.

Somewhat related are results from a national study which indicated that 36 percent of the women applicants to medical school who were rejected felt that they had been discriminated against because of their sex. Twenty-one percent reported that they were advised to raise a family instead of undertaking a career.[20]

The failure of women to use their education has often been cited to justify reluctance to train them for medical careers. Frequently, questions on application forms and in interviews with women candidates relate to marriage and family plans and are based on the assumption that women will not be available for service in the profession as long as men.

The average time spent in practice for women physicians was found to be 32.6 years as compared to 35.8 years for men.[21] However, it has been shown that the labor market participation rate of women physicians was much greater than that of women in any other profession.

Almost all women physicians leave practice temporarily at some point in their careers, largely because of household and family responsibilities. During training this is most likely to occur in residency programs when their schedule is particularly demanding. A pilot study by the American Medical Women's Association found that, in addition to caring for the patients, most women doctors also have responsibility for child care, cleaning, and meal preparation in their own homes. When the burden becomes excessive most women give priority temporarily to the family. This is one problem which helps to perpetuate the attitude that women are less resourceful than men in their use of medical training.

Half of all women physicians are married to doctors and, therefore, have similar career responsibilities. A more equal division of family responsibilities would presumably increase the number of hours practiced by women physicians.[22]

THE C.U. SCHOOL OF MEDICINE'S ADMISSIONS PROCESS

Admission requirements for the University of Colorado School of Medicine state:

> Places are offered to the applicants who appear to the Admissions Committee to be the most highly qualified in terms of intellectual achievement, character, motivation, maturity and emotional stability. For this assessment, college grades, MCAT scores, recommendations from college instructors, and required personal interviews are used.[23]

The admissions committee, appointed by the dean, is composed of 12 faculty members and three students who are selected from nominations made by the sophomore, junior, and senior classes. Committee diversity is sought by including three Ph.D. faculty members who teach in the basic sciences and three M.D.s who teach in the clinical sections. The remaining members are M.D.s who have a variety of teaching, research, and patient-care responsibilities. There is a turnover of two or three members each year. Currently, among the faculty members on the committee there is one black male and two white females. The remainder are white males. Student representatives on the committee are two white females and one white male.[24] The lack of persons of Spanish origin and Native Americans on the committee has been mentioned as a source of concern by members of those minority groups (p. 62).

A minority subcommittee formed to interview minority applicants is composed of three members of the regular admissions committee--a black male, a white male, and a white woman. In addition, Dr. Feline A. Garcia, a community physician of Spanish origin, serves as a special interviewer for the subcommittee.

Applications for admission are submitted through the American Medical College Application Service (AMCAS), which

computerizes data and duplicates forms and supportive materials submitted by applicants. The applications are sent to as many as 10 institutions where students wish to be considered for admission. On the application form students are asked to state whether or not they wish to be considered as minority applicants and to describe the ethnic-racial category they wish to use for purposes of classification. At the University of Colorado a student's cumulative GPA and his or her last year's GPA and verbal, quantitative, and science MCAT scores are all combined by a formula into a single index figure and ranked by computer to identify students who are of little or no risk from an academic point of view. Dr. Riley stated that 707 applicants were in this category for the 1974-75 academic year. It was necessary to narrow the number of applicants down to 125 students who would fill the available spaces in the incoming class (p. 113). Information obtained from letters of recommendation and the interview process is used in the final selection. Basically, however, as Dr. Riley pointed out, "It certainly is a subjective process...when you have so many people that objectively look extremely acceptable the final selection is subjective." (p. 119)

Out of the 125 places approximately 100 are reserved for Colorado residents and 12 to 15 go to students from Western States without medical schools (Wyoming, Montana, Idaho, and Alaska) participating in the Western Interstate Commission for Higher Education (WICHE) program.[25] About 10 places are given to nonregional minority students. Other than through WICHE, white students are not admitted from out of State.

All applications from eligible students in the WICHE student exchange are forwarded to the C.U. School of Medicine where selection is made to fill the available places in the entering class. Entering WICHE students pay the same tuition charged Colorado residents, and each WICHE State provides a support fee subsidy to the school of medicine amounting to $6,000 per student.

As previously indicated, no numerical goals are set for women (p. 122). A goal of 25 to 30 percent admissions in the entering class has been set for minority students.[26] No formal goals are established for individual minority groups, but a staff member in the Minority Student Affairs Office indicated that informal goals are set for 12 to 15 Chicanos, 7 to 8 blacks, 4 to 5 Native Americans, and 4 to 5 Asian

Table 6

Formal Applications and Admissions to the University of Colorado School of Medicine by Minority Status and Sex, Academic Year 1974-75

	Applied		Interviewed		Offered		Accepted	
	No.	%	No.	%	No.	%	No.	%
Black	108	100%	33	30.6%	14	13.0%	5	4.6%
Female	35	100	12	34.3	5	14.3	2	5.7
Male	73	100	21	28.8	9	12.3	3	4.1
Native American	34	100	17	50.0	7	20.6	4	11.8
Female	10	100	4	40.0	2	20.0		
Male	24	100	13	54.2	5	20.8	4	16.7
Spanish Origin	94	100	44	46.8	25	26.6	11	11.7
Female	21	100	12	57.1	9	42.9	3	14.3
Male	73	100	32	43.8	16	21.9	8	11.0
Total Above Minorities	236	100	94	39.8	46	19.5	20	8.5
Female	66	100	28	42.4	16	24.2	5	7.5
Male	170	100	66	38.8	30	17.6	15	8.8
Asian American	37	100	13	35.1	7	18.9	6	16.2
Female	10	100	3	30.0	2	20.0	2	20.0
Male	27	100	10	37.0	5	18.5	4	14.8
Total Above Minorities	273	100	107	39.2	53	19.4	26	9.5
Female	76	100	31	40.8	18	23.7	7	9.2
Male	197	100	76	38.6	35	17.8	19	9.6
White & Other	694	100	344	49.6	123	17.7	99	14.3
Female	141	100	76	53.9	34	24.1	30	21.3
Male	553	100	268	48.5	89	16.1	69	12.5
Total All Students	967	100	451	46.6	176	18.2	125	12.9
Female	217	100	107	49.3	52	24.0	37	17.0
Male	750	100	344	45.9	124	16.5	88	11.7

Note: "Formal Applications" refer to all those received from Colorado residents, all racial-ethnic minorities, all disadvantaged whites, and all those submitted through the Western Interstate Commission for Higher Education (WICHE). Applications from other out-of-State whites are not included.

Source: University of Colorado Medical Center, April 1975.

Table 7

First Year Enrollment at the University of Colorado School of Medicine by Minority Status and Sex, Academic Years 1972-73 through 1974-75

	Total First Year Enrollment						State Population Proportion	First Year Enrollment Colorado Residents Only					
	1972-73		1973-74		1974-75			1972-73		1973-74		1974-75	
	No.	%	No.	%	No.	%	%	No.	%	No.	%	No.	%
Black	5	4.0	7	5.6	5	4.0	3.0	2	2.0	4	3.7	2	2.0
Female	2	1.6	4	3.2	2	1.6		1	1.0	2	1.9	1	1.0
Male	3	2.4	3	2.4	3	2.4		1	1.0	2	1.9	1	1.0
Native American	2	1.6	3	2.4	4	3.2	0.4	1	1.0	1	0.9	1	1.0
Female	0		2	1.6	0								
Male	2	1.6	1	0.8	4	3.2		1	1.0	1	0.9	1	1.0
Spanish Origin	7	5.6	8	6.3	11	8.8	13.0	4	4.0	4	3.7	6	5.9
Female	2	1.6	3	2.4	3	2.4		2	2.0			1	1.0
Male	5	4.0	5	4.0	8	6.4		2	2.0	4	3.7	5	4.9
Total Above Minorities	14	11.2	18	14.3	20	16.0	16.4	7	7.0	9	8.3	9	8.8
Female	4	3.2	9	7.1	5	4.0		3	3.0	2	1.9	2	2.0
Male	10	8.0	9	7.1	15	12.0		4	4.0	7	6.5	7	6.9
Asian American	3	2.4	2	1.6	6	4.8	0.5	1	1.0	1	0.9	6	5.9
Female	1	0.8	1	0.8	2	1.6						2	2.0
Male	2	1.6	1	0.8	4	3.2		1	1.0	1	0.9	4	3.9
Total Above Minorities	17	13.6	20	15.9*	26	20.8	16.9	8	8.0	10	9.3	15	14.2
Female	5	4.0	10	7.9	7	5.6		3	3.0	2	1.9	4	3.9
Male	12	9.6	10	7.9	19	15.2		5	5.0	8	7.4	11	10.8
White & Other	108	86.4	106	84.1	99	79.2	83.1	93	92.1	98	90.7	87	85.3
Female	14	11.2	18	14.3	30	24.0		9	8.9	16	14.8	29	28.4
Male	94	75.2	88	69.8	69	55.2		84	83.2	82	75.9	58	56.9
Total All Students	125*	100.0	126	100.0	125	100.0		101	100.0	108	100.0	102	100.0
Female	19	15.2	28	22.2	37	29.6		12	11.9	18	16.7	33	32.4
Male	106	84.8	98	77.8	88	70.4		89	88.1	90	83.3	69	67.6

* Because of rounding subtotals may not equal large totals.

Source: University of Colorado Medical Center, April 1975.

Americans. As with whites, no consideration is given to sex during the admissions process for minorities.

APPLICANT POOLS AND ACCEPTANCES TO THE ENTERING CLASS

Statistics in tables 4 and 6 indicate the proportions of students applying and admitted to the C.U. School of Medicine by minority status and sex categories. Table 4 indicates the number and proportions of applications submitted by each group during three successive academic years. Table 6 shows the number of formal applications made to the school and the proportion of these who were interviewed, offered places, and finally enrolled from each category for the 1974-75 academic year. As explained in a note to the table, applications from out-of-State whites are not included in the data. A much larger percentage of those who applied from the black, Native American, and Spanish-origin categories were offered places than actually accepted. This may reflect the fact that many applications were from out of State, and that there is keen competition among medical schools for well-qualified minority applicants. A higher proportion of the Asian Americans who applied were accepted than for any other ethnic group.

Of those who applied, 19.5 percent of the blacks, Native Americans, and persons of Spanish origin were offered places and 8.5 percent actually enrolled. For whites, 17.7 percent of those who applied were offered places and 14.3 percent actually enrolled. In each racial or ethnic category, except Native American, a higher proportion of women than men were enrolled from their respective applicant pools.

Table 7 shows the proportionate enrollment of the entering class for each category during the past 3 years, for both the total entering class and Colorado residents only. The total number and proportion of minorities and women in the entering class has shown a steady increase over the last 3 years. Women comprised 29.6 percent and minorities (including Asian Americans) constituted 20.8 percent of the entering class for the 1974-75 academic year. However, the statistics for Colorado residents in the entering classes reveal that, except for Asian Americans, over half of the minority students admitted were from out of State. Only two blacks, one Native American, and six persons of Spanish origin were admitted from Colorado during the last academic year.

Table 8

Applications and Admissions to the University of Colorado School of Medicine Through the Western Interstate Commission on Higher Education (WICHE) Academic Years 1972-73 through 1974-75

	Population in WICHE States		1972-73			1973-74			1974-75		
	No.	%	Ap.	Of.	Ac.	Ap.	Of.	Ac.	Ap.	Of.	Ac.
Black	16,039	0.8	1			2			2	2	1
Female									1	1	1
Male			1			2			1	1	
Native American	90,774	4.4	3	1		3	2	1	4		
Female						1	1	1	2		
Male			3	1		2	1		2		
Spanish Origin	51,661	2.5	5	2	1	9	3	1	6	2	
Female						1			1		
Male			5	2	1	8	3	1	5	2	
Total Above Minorities	158,474	7.6	9	3	1	14	5	2	12	4	1
Female						2	1	1	4	1	1
Male			9	3	1	12	4	1	8	3	
Asian American	7,628	0.4	5	2	2	3			4		
Female			1	1	1				1		
Male			4	1	1	3			3		
Total Above Minorities	166,102	8.0	14	5	3	17	5	2	16	4	1
Female			1	1	1	2	1	1	5	1	1
Male			13	4	2	15	4	1	11	3	
White & Other	1,904,812	92.0	251	17	10	236	12	8	212	21	12
Female			31	4	3	29	4	2	35	2	1
Male			220	13	7	207	8	6	177	19	11
Total All Students			265	22	13	253	17	10	288	25	13
Female			32	5	4	31	5	3	40	3	2
Male			233	17	9	222	12	7	188	22	11

(Ap. = Applied Of. = Offered Ac. = Accepted)
Note: The WICHE States with entering students are Montana, Wyoming, Idaho and Alaska
Source: University of Colorado Medical Center, April 1975.

Statistics in table 8 show the numbers of students who applied and were admitted through the WICHE program in the past 3 years. Few minorities and women apply for admission to the C.U. School of Medicine under this program. In the past academic year only 16 (7.0 percent) minorities, out of a total of 228 WICHE students, applied for admission and, of these, only one black woman was accepted. One white woman out of 40 who applied and 11 white males out of 177 were accepted.

ADMISSIONS-VARIANCE CRITERIA FOR MINORITIES

Minority students are admitted to the C.U. School of Medicine under different criteria from those used for nonminority candidates. MCAT scores and GPA are considered but tend to be lower than those of nonminority candidates. A broader evaluation of noncognitive qualities is used as the basis for their selection. (Dr. Conrad Riley, p. 114.) Asian American students are not considered to be educationally disadvantaged by C.U. Medical Center and compete for admission on the same basis as nonminority candidates.[27]

Tables 9 and 10 summarize grade point averages for entering classes of the past 3 years and MCAT scores for the 1974-75 academic year. Grade point averages for white students have increased steadily over the past 3 years, whereas there has not been a corresponding increase for those of minorities. Dr. Riley stated at the hearing that he felt the GPA of nonminority students accepted over the last few years has become ridiculously high, so high that it has become meaningless (p. 113). GPAs for white men and white women have been almost identical each year, while those of minority women were significantly higher than those of minority men in the 1974-75 entering class.

MCAT scores for all ethnic groups ranged from about 500 to slightly over 600, with those of white students averaging somewhat higher than those of minority students. Dr. Henry Cooper, a member of the admissions committee, feels that MCAT scores within the 400-600 range have little meaning. Below and above this range the scores do have some value in predicting academic performance. General information scores are given little weight in considerations affecting the admissions process.[28]

Table 9

Grade Point Averages for Students Accepted into the University of Colorado School of Medicine by Minority Status and Sex, Academic Years 1972-73

	1972-73 Grade Point Average			
	Number	Science	Last Full Year	Cumulative
Asian American	3	3.18	3.69	3.36
Female	1	3.56	3.79	3.60
Male	2	2.99	3.64	3.24
Black	5	2.90	2.95	2.95
Female	2	2.76	2.74	2.85
Male	3	2.99	3.09	3.02
Native American	2	3.03	3.09	3.12
Female	-	-	-	-
Male	2	3.03	3.09	3.12
Spanish Origin	7	2.80	3.10	2.92
Female	2	2.81	2.95	2.98
Male	5	2.79	3.16	2.90
White & Other	108	3.48*	3.59*	3.45*
Female	14	3.42	3.59	3.44
Male	94	3.49*	3.59*	3.45*
Total	125	3.40	3.53	3.39

*Missing data; number is one less.

Source: University of Colorado Medical Center, April 1975

(cont'd)

Table 9 (cont'd)

Grade Point Averages for Students Accepted into the University of Colorado School of Medicine by Minority Status and Sex, Academic Years 1973-74

		1973-74 Grade Point Average		
	Number	Science	Last Full Year	Cumulative
Asian American	2	3.68	3.63	3.59
Female	1	3.58	3.37	3.50
Male	1	3.78	3.88	3.67
Black	7	2.57	2.88	2.60
Female	4	2.61	2.99	2.65
Male	3	2.51	2.75	2.52
Native American	3	2.64	2.89	2.63
Female	2	2.81	2.76	2.75
Male	1	2.32	3.15	2.39
Spanish Origin	8	2.81	3.18	2.86
Female	3	2.61	3.23	2.74
Male	5	2.93	3.14	2.93
White & Other	106	3.56	3.62	3.56
Female	18	3.52	3.60	3.52
Male	88	3.57	3.63	3.56
Total	126	3.44	3.53	3.44

Source: University of Colorado Medical Center, April 1975

(cont'd)

Table 9 (cont'd)

Grade Point Averages for Students Accepted into the University of Colorado School of Medicine by Minority Status and Sex, Academic Years 1973-74

	1974-75 Grade Point Average			
	Number	Science	Last Full Year	Cumulative
Asian American	6	3.58	3.63	3.56
Female	2	3.72	3.69	3.73
Male	4	3.52	3.60	3.47
Black	5	2.28	2.64	2.56
Female	2	2.45	2.75	2.79
Male	3	2.17	2.57	2.40
Native American	4	2.56	2.58	2.65
Female	-	-	-	-
Male	4	2.56	2.58	2.65
Spanish Origin	11	2.78	3.04	2.90
Female	3	3.02	2.89	3.00
Male	8	2.69	3.10	2.86
White & Other	99	3.61	3.69	3.61
Female	30	3.59	3.65	3.60
Male	69	3.62	3.71	3.62
Total	125	3.45	3.55	3.47

Source: University of Colorado Medical Center, April 1975

Table 10

MCAT Scores for the University of Colorado School of Medicine 1974-75 Entering Class by Minority Status and Sex

	No.	Verbal Ability	Quantitative Ability	General Information	Science Ability
Asian American	6	585	615	553	590
Female	2	635	545	565	550
Male	4	560	650	548	610
Black	5	527	461	485	491
Female	2	550	430	490	405
Male	3	512	482	482	548
Native American	4	505	513	538	533
Female					
Male	4	505	513	538	533
Spanish Origin	11	490	538	495	508
Female	3	532	528	512	498
Male	8	475	541	489	511
White & Other	99	575	625	556	616
Female	30	619	612	580	594
Male	69	554	638	543	629

Source: University of Colorado Medical Center, April 1975.

National studies have shown that women usually have higher means on the verbal ability and general information subtests while men have scored higher on the quantitative ability and science subtests.[29] This was the pattern for men and women of all ethnic groups in the 1974-75 entering class.

Letters of recommendation are difficult to evaluate and are generally considered to be of little value by MSAO staff and members of the admissions committee. They are, in fact, judged subjectively, by consideration of the person who wrote the letter and the quality of the school the student attended. A standardized form is sent to references submitted by applicants which requests ratings on a scale from one to six of personality, academic ability, and overall acceptability. As previously noted, it is extremely difficult for many minority students to get letters of recommendation from professors whom they believe can speak knowledgeably about them.

The admission interview is a critical part of the admissions process. All students granted interviews are seen by two members of the admissions committee. Interviews are randomly assigned by the associate dean of admissions' secretary. Whether or not a woman candidate is interviewed by a woman member of the admissions committee is purely a matter of chance.[30]

When meeting with an applicant, the interviewer has the student's academic records and letter of recommendation. No formal training in interviewing techniques is given to those who do the interviewing. New members to the committee sit in on several interviews with experienced members of the committee to "get a feel of the different techniques they use." (Dr. Conrad Riley, p. 118.) In an attempt to standardize and quantify the interview process, a guide is used in which six separate personal characteristics are rated on a scale from one to six, "not acceptable" to "truly outstanding." The factors listed for consideration are personality, academic ability, motivation, other interests, maturity and judgment, and "overall rating." The score resulting from the interview is included in a total index figure which is processed by computer to help identify strong candidates.

The final decision regarding the admission of a candidate is made by the committee as a whole.

> ...each person who has criteria that make them look as if they might be highly acceptable is brought up for discussion, and the people who have done the interviewing, and the people who know something about it, and the recommendations are looked at by the committee as a whole, and a determination then is made as to whether a given individual should be accepted or not. (Dr. Conrad Riley, p. 119)

Each minority applicant granted an interview is seen by two members of the minority subcommittee. Since two of the four members of this committee are white, not all minorities are necessarily interviewed by minority interviewers.[31]

All minority students who are Colorado residents are granted interviews. Preliminary screening of out-of-State minorities is done by staff from the Minority Student Affairs Office. Those with acceptable academic qualifications (minimum cumulative GPA of 2.77 and MCAT score of 425-450) are recommended to be interviewed by the minority admissions subcommittee. MSAO staff also conduct a postinterview conference with minority applicants to evaluate the interview and to reveal possibly discriminatory questions or remarks.

Several minority and women medical students interviewed by MSRO staff complained of what they felt to be ineptness and insensitivity during admissions interviews. The most frequently mentioned concern of women was questions related to marriage and family plans, and reconciliation of the roles of housewife and physician. Some of the women students felt that those questions were realistic and fair in light of the investment the school of medicine would be making in their education. Several minority students were bothered by the subjectivity of the interviews. The most frequent complaint concerned inquiries about their involvement in activist minority movements, which they felt to be irrelevant questions. Due to the insensitivity of the interviewer, others felt compelled to act out customs foreign to their own culture--"a firm handshake and a look straight in the eye"--in order not to be written off.

After years of hope and preparation for a medical career, failure to be accepted into medical school, which happened to 842 persons who applied for admission to the C.U. School of Medicine last year, must be a devastating

experience. Students who are not accepted are sent a routine letter by the admissions committee with no explanation as to why they were rejected. A limited amount of counseling is given to rejected minority applicants by staff from MSAO. They suggest reapplying after further preparation or considering another career in the health field.[32] National statistics show that 52 percent of the unsuccessful candidates are lost to the health care field.[33]

Notes to Chapter III

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3. John R. Wingard and John W. Williamson, "Grades as Predictors of Physicians Career Performance: An Evaluative Literature Review," Journal of Medical Education, vol. 48 (1973), pp. 311-22.

4. James B. Erdmann and others, "The Medical College Admission Test: Past, Present, Future," Journal of Medical Education, vol. 46 (1971), pp. 937-46.

5. Ibid., p. 942.

6. American Association of Medical Colleges, Position Papers (Washington, D.C.: 1973), p. 38.

7. Leonard A. Katz, Randy Williams, and M. Luther Musselman, "Minority Students," The New England Journal of Medicine, vol. 293 (1975), pp. 206-07.

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9. Ibid., p. 126.

10. Ibid., p. 72.

11. American Association of Medical Colleges, Position Papers, p. 197.

12. Mark L. Rosenberg, "Increasing the Efficiency of Medical School Admission," Journal of Medical Education, vol. 48 (1973), p. 707-17.

13. William J. Oetgen and Max P. Pepper, "Medical School Admissions Committee Members: A Descriptive Study," Journal of Medical Education, vol. 47 (1972), pp. 966-68.

14. Harold J. Simon and James W. Covell, "Performance of Medical Students Admitted via Regular and Admission-Variance Routes," Journal of Medical Education, vol. 50 (1975), pp. 237-41. James C. Plagge, Robert L. Sheverbush, Nat E. Smith, and Lawrence M. Solomon, "Increasing the Number of Minority Enrollees and Graduates: A Medical School Opportunities Program," Journal of Medical Education, vol. 49 (1974), pp. 735-45. Association of American Medical Colleges, The MCAAP Report (July 1973).

15. Bakke v. Regents of the University of California, California Superior Court for Volo County, No. 31287 (Judgment, March 1975).

16. Association of American Medical Colleges, Division of Educational Assessment Research, DEMR Report (February 1975).

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19. Elaine Crovitz, "Comparison of Male and Female Physicians; Associate Program Applicants," Journal of Medical Education, vol. 50 (1975), pp. 672-76.

20. Office of Health Manpower Studies, Career Patterns, pp. 81-94.

21. Judith Jussin and Charlotte Muller, "Medical Education for Women: How Good an Investment?" Journal of Medical Education, vol. 50 (1975), pp. 571-80.

22. Ibid., p. 578.

23. Association of American Medical Colleges, Medical School Admission Requirements 1975-76 (Washington, D.C., 1974), p. 106.

24. Dr. Conrad Riley, dean of admissions, interview, Apr. 4, 1975, and hearing transcript, p. 116.

25. Association of American Medical Colleges, Medical School Admission Requirements 1975-76, (Washington, D.C.: 1974), p. 102.

26. Dr. Harry P. Ward (p. 122), and Dr. Conrad Riley and Dr. Dane Prugh, interviews, Apr. 7, 1975.

27. Dr. Conrad Riley, interview, Apr. 17, 1975.

28. Dr. Henry Cooper, interview, Mar. 20, 1975.

29. Bonnie C. Nelson, "Datagram: Medical College Admission Test," Journal of Medical Education, vol. 49 (1974), p. 213.

30. Dr. Conrad Riley, interview, Apr. 17, 1975.

31. Douglas Clinkscales, director of the Minority Student Affairs Office, interview, Mar. 31, 1975.

32. Catarino Martinez, MSAO recruiter, interview, Mar. 17, 1975.

33. Marshall Becker, Marilynn E. Katatsky, and Henry M. Seidel, "A Follow-up Study of Unsuccessful Applicants to Medical Schools," Journal of Medical Education, vol. 48 (1973), p. 1000.

IV. ACADEMIC PERFORMANCE AND SUPPORTIVE PROGRAMS IN MEDICAL SCHOOL

NECESSITY FOR CHANGE IN MEDICAL EDUCATION

Numerous educators in the United States have noted significant changes in medical education as a result of the democratization of the admission process.[1] These changes, taking place quietly over the past 5 or 6 years, have dramatically revealed that various social, racial, and economic groups can and should make a contribution to the medical profession.

The rapid increase in the admission of minorities raised fears that high standards of quality set by medical schools would be threatened. This prediction has failed to materialize. No one seriously expects a decline of quality in institutions such as Harvard and the University of California, which were among the first to alleviate some of the racial and socioeconomic segregation in medical schools.

Women and minority students often do not fit the traditional, white male model for medical students in the United States. While differences in environment, culture, and social orientation of the students provide valuable resources for medical schools, it must be recognized that these diversities may be an underlying source of problems. Although a supportive environment is beneficial for all students, it is especially necessary for those who are in the minority. Changes are required in the traditional approach to medical education in order to deal sensitively with the special needs of these groups.[2]

ACADEMIC PERFORMANCE OF WOMEN AND MINORITIES

A national study of academic performance of men and women in United States medical schools revealed that although women perform slightly poorer than men in the first 2 years their overall academic performances are equal by the junior year. In fact, women are selected for the national honorary medical society, Alpha Omega Alpha, as often or slightly more often than their male counterparts.[3]

As shown previously in table 5, at C.U. men of the 1972-73 entering class in all minority groups except black outperformed women on Part I of the national board exams.[4] In most cases the difference was small. Scores on Part II

of the national board exam for the 1974 graduating class indicated the same trend of the men doing slightly better than the women. This is contrary to the national pattern, as stated above. Ten white women who took the exam scored an average of 484 compared to 527 for the 100 white men. A comparison could not be made of black and Spanish-origin students, since no women from these groups took the exam at that time. Faculty interviewed indicated that, in general, white women have few academic problems in medical school.

Many of the faculty indicated that most minority students have academic problems, especially during the first 2 years when courses focus on the basic sciences. About one-fourth of the minority students interviewed stated that they did not have academic problems serious enough to concern them. As indicated in a previous section of this report, scores from the national board examination Part I for the 1972-73 entering class (table 5) show that the average performance of minority students is below that of whites.

The attrition rate is low for all students accepted into the school of medicine. As of April 17, 1975, 16 white students (12 men and 4 women) and 8 minorities (7 men and 1 woman) had dropped out since 1971.[5] As these figures include transfers and deaths, it is not known how many dropped out for academic reasons during this period.

Several faculty and staff members interviewed at the school of medicine emphasized that minority students usually perform much better during the last 2 years of school, which are largely devoted to clinical training. Dr. Janet Weston stated that minorities generally relate well to patients and that their abilities in this area build confidence and enhance the self-image.[6] Several of the faculty suggested that earlier involvement in clinical experiences would improve the overall performance of minorities during medical school.

To maximize their opportunity for a medical education, students need to support each other as well as establish good rapport and cooperation with their teachers. The pressure to achieve is intense, and every factor which can enhance the ability to learn is important. This is especially true for many minority students, who may be the first members of their family, or their entire community, to have the opportunity to become physicians.

Problems Related To Sexist Attitudes

There are several areas where minorities and women may find themselves at a relative disadvantage in terms of full participation in the learning process. One study showed that being a minority in a virtually all white-male environment can be a frightening and lonely experience unless a "critical mass" of fellow students can provide the needed psychological support.[7] There is much literature to document the fact that women entering a predominantly male field are vulnerable to downgrading, hostility, and exclusion.[8] Women cope with these problems by using one or more of three basic response patterns. Some deny any evidence of discrimination and remain in agreement with socially approved opinions about women as a class. Others react with anger, which may result in deepening loneliness and frustration. Still others form alliances with men and especially women who can provide them with support.[9]

Almost all of the faculty members and women students interviewed felt that, although greatly reduced from what it was in former years, raw sexist attitudes and humor still existed at the C.U. School of Medicine. Lectures interspersed with off-color jokes and playboy-type slides reflect lack of sensitivity or basic chauvinistic attitudes on the part of some professors. Some of the men faculty felt that women read more than was intended into these incidents. The majority of the women faculty interviewed opined that most women students had learned to handle these situations. They felt that such incidents did not unduly interfere with the learning process, at least during the first 2 years of medical school. Several of the women students interviewed indicated, however, that sexist attitudes did bother them and caused considerable emotional trauma. Some stated that they had complained to the administration.

Women students and faculty alike generally felt that chauvinistic attitudes were a more important factor during the years of clinical training when they can have serious consequences. The clinical training experiences are more individualized and the quality of learning, as well as the process of student performance evaluation, depends a great deal upon active student participation. A number of women students interviewed indicated that women are frequently relegated to supportive roles or excluded entirely from certain of the clinical learning experiences. As an

example, at the Advisory Committee's informal hearing one black woman student related the following experience:

> ...on one service...a surgical subspecialty, for 4 days they refused to believe or accept that I was a medical student, and I was supposed to be a nurse, and after respectfully telling them who I was, it was still ignored. I did work up a patient thoroughly and was supposed to assist on a surgery, but was denied this opportunity and a male student that had no prior knowledge of this patient was able to assist. I was shoved off into a corner and denied a very valuable learning experience on a female patient...(pp. 107, 108)

In an interview, another woman student stated that the resident on her ward would lecture to men but stop when she came in. Frequently, women students complained that residents were impatient or unresponsive to questions they asked and largely excluded them from discussions about particular cases.

Several women students felt the scarcity of women on the faculty was a problem, especially in certain clinical situations where a lone and inexperienced woman student could be made uncomfortable, the object of embarrassing comments. Dr. Karon Aronson, a 1974 graduate and currently in the C.U. residency program, stated:

> There are certain problems that women run into in the learning of medicine; specifically, since there are so few role models and so few women physicians on the faculty. When we are learning things like physical diagnosis and have to examine patients, we oftentimes have to have male instructors which makes things more uncomfortable when we're learning certain areas of the body. (p. 109)

During the 1974-75 school year 61 members of the faculty (13.0 percent) were women, out of a total of 468. Two of these were minority women, one black and one Asian American. Dr. Carolyn Male, a professor of micrology, stated that during the first 2 years of medical school students were regularly exposed to only three women faculty.[10] A later section will discuss faculty problems in more detail.

A considerable number of women students interviewed described their negative reaction to sexist and derogatory treatment of women patients by men physicians in obstetrics-gynecology (OB-GYN) sections. Women faculty also stated that OB-GYN was particularly blatant.

About half of the women students interviewed felt that in order to cope they were placed in the untenable position of having either to be extremely aggressive and "pushy," or possibly to ignore experiences deeply disturbing to them.

Problems of Communication and Sensitivity

A major impediment to the learning process for many minorities is the lack of communication with staff and faculty. Many of the faculty also felt that this was definitely a problem. Several felt that minority students were reluctant to take advantage of special office hours and programs available to them and were puzzled as to why this was so. In spite of numerous programs for the benefit of minorities and the efforts of many individual members of the staff and faculty, only two or three of all the minority students interviewed believed that the communications process was satisfactory.

There are several possible reasons for this lack of communication. Students and faculty both expressed the belief that there is need for more minority faculty with whom minority students could identify. Presently, out of the 468 full-time faculty of the school of medicine, there are no Spanish-surnamed or Native American members. There are six blacks, one of whom is a woman.

Numbers of minority students indicated that they felt some white faculty were insensitive to differences arising from cultural and environmental factors. Eight minority students approached one instructor and informed him that they were having trouble in his course. Two of these students reported his response was, "Stop acting like minorities and start studying." A counselor in the Minority Student Affairs Office reported that minority students often feel ignored by the faculty and interpret faculty attitudes as evidence of disinterest or even prejudice. Several minority students interviewed felt that many faculty gave the impression they had little time for minorities and would rather concentrate on the "elite groups" in their classes.

Dr. Christopher Paterson, director of the Medical Student Advisory Office, stated that a few years ago many faculty resented the fact that minorities were admitted with "substandard requirements." He believed that this attitude has been overcome and the faculty now accept them.[11] Most faculty members interviewed emphasized that they made efforts to be helpful and to establish a good rapport with minority students.

However, several members of the staff and faculty commented that no formal effort is made to orient and sensitize faculty to the special problems and needs of minority students.[12] A Spanish language course is offered for faculty and community physicians on a voluntary basis; otherwise no provision is made to gain systematically an understanding of minority culture.[13] Dr. Paul Beck, associate dean for student affairs, stated that no formal orientation could sensitize faculty to concerns of minorities. This, he felt, could only be realized through the kind of interaction he had as a student at Denver's Manual High School, where 40 percent of the student body was black and 25 percent Chicano (p. 127). Dr. Strother Walker, chairman of the curriculum and promotions committee, summed up the situation when he said, "There are 500 faculty members at the school of medicine and each one has a different degree of awareness of minority students."[14]

Identification of Academic Problems

Faculty interviewed frequently spoke about academic problems of minorities and the need to identify the difficulties early in the medical school program in order to correct them or compensate for them. Generally it was felt that these academic problems centered around a deficiency in study skills and the ability to integrate and correlate knowledge. Several faculty stated that minority students seem to be uncomfortable in problem-solving situations. Instructors are encouraged to try to identify potential problem areas early in the first quarter. Tests for this purpose are usually given after the first 3 weeks in school. The form and amount of feedback they give their students is left up to individual instructors. Some communicate warnings in writing to students, which may be traumatic. Others offer an oral evaluation to students in trouble or perhaps write a note of warning on the first exam.

Two curriculum and promotions committees, one for the first 2 years of medical school and one for the last 2 years, evaluate the progress of students and prescribe remedies for academic deficiencies. Membership on the committees consists of chairpersons of the academic department and four student members, one from each class. There are no minority members on either committee. Records of students in trouble are reviewed by the appropriate committee and additional information sought from advisors and instructors concerned. Students under consideration are not allowed to appear before the committee. Students are dropped from the program only in extreme situations, but it is not uncommon for them to be required to repeat courses or undertake an extended program.[15]

PROVISION OF SUPPORTIVE PROGRAMS

Academic supportive programs are available to all students. Often minority students are reluctant to take advantage of some of these. A number of the minority students interviewed felt part of the reason for this was the feeling that participating in some of the programs singled them out and stigmatized them as a low-performance group. Even minority students who were performing well academically felt that it was not uncommon for faculty members categorically to judge all minorities as poor students and to expect less from them. One professor was quoted as closing the introductory lecture to his class with the remark, "...and if any of you minority students have problems come by the office and I will be glad to help you." The majority of the minority students interviewed, and several of the faculty, felt that the stigma attached to the minority status placed the minority students at a psychological disadvantage. Consequently, their self-image was negatively affected, which made it necessary for them to prove themselves continually.

The Summer Program for Entering Students

Supportive programs provided primarily for the benefit of minority students have been established by the C.U. School of Medicine. It provides an introductory summer program for academically-disadvantaged students. The course is designed to help these students adjust to medical school through an introduction to medical subjects and classes to improve study skills.[16]

The program, set up by the curriculum and promotions committee, has been in existence for 3 years. The enrollment is limited to about 25 students each year. The first summer each minority student received a letter of information that most interpreted as an order to attend. The second year it was made clear the course was open to everyone within the limitations of the available spaces. In 1975, all incoming freshmen were required to take the course if they had been identified by objective criteria as likely to have academic difficulties.

Sufficient data have not been collected to determine whether the course has actually improved performance in the first 2 years of medical school. Some of the faculty interviewed felt that it was of limited value in that it presented an unrealistic view of medical school and did not prepare students for first-year classes. Others felt that it did provide some orientation to medical school and enabled students to get acquainted with the faculty. No official records are kept of performance in the course, but several students felt that some professors formed opinions in the summer that later stigmatized them in regular academic courses. Other feelings about the value of the courses were ambivalent.

Tutorial Programs

Each academic department is responsible for setting up a tutorial program for its students. As a result tutorial resources are scattered throughout the medical school as well as in the Student Advisory and Minority Student Affairs Offices. Most of the minority students interviewed who had used these programs felt them to be less than satisfactory. Faculty also felt that tutorial sessions varied greatly in effectiveness. Some of the tutorial sessions are taught by students, others by faculty. Few of the students or staff felt that the sessions fit the needs of individual students. Several students indicated that the quality of instruction was often so poor that it was a waste of time to attend. Others felt tutorials were of value if the instructor were really interested in teaching. Too often, however, the instruction bogged down in a discussion of the professor's own research interests rather than covering basic material.

The Student Advocacy Program

For the last 4 years a student program has been provided in which minority physicians from the community meet periodically with minority students. In addition to serving as role models and providing counseling, advocates are expected to protect the interests of their students with faculty and department heads. Six male physicians served as advocates during the past year, three black and three of Spanish origin.

Advocates, students, faculty, and staff interviewed were nearly unanimous that the program does not work, mainly for two reasons. Advocates do not have enough time to spend with students. Nor do advocates have any real influence in school affairs because they lack faculty status.

Counseling Programs

In addition to the advocacy program there are two programs which seek to provide students with counseling and advice. The staff of the Minority Student Affairs Office does a great deal of counseling for minority students. Again, the main limitation of this program is that MSAO staff do not have faculty status and have limited influence in decisionmaking processes that affect students. The Student Advisory Office, staffed by a white woman physician and a white man physician, has arranged an advisory program whereby each student has two advisors, one for the first 2 years of training in the basic sciences and a separate advisor for clinical training. Each advisor has six students. The staff members in this program do have faculty status, but few are minorities or women. Some minority students are reluctant to use their advisors because of what they feel is a lack of sensitivity to their needs. Three students interviewed stated that problems they brought to their counselors were not kept confidential.

In addition to the regular advisory program, Dr. Weston also coordinates a periodic "rap" session for women students wishing to discuss concerns with the student-faculty women's council.

Financial Aid for Students

Table 11 shows that 50 students (46.4 percent) of the 1974-75 entering class received financial aid. These included 19 minority students, who comprised 73 percent of the 26 minorities enrolled, and 39 (39.4 percent) of the 99

Table 11

Financial Aid Granted to Students in the University of Colorado School of Medicine Entering Class of 1974-75

	No.	Average Budget	Average Need	Average Aid Package: Grant	Loan	Total	% Loan
Asian American	4	$4,949.00	$1,835.00	$ 443.80	$1,095.00	$1,538.80	71.2%
Female	2					1,930.00	
Male	2					1,147.50	
Black	6	6,662.80	3,160.16	1,328.30	1,839.16	3,167.50	58.1
Female	3					2,230.00	
Male	3					4,105.00	
Native American	2	9,180.00		87.50		87.50	
Female							
Male	2					87.50	
Spanish Origin	7	6,393.30	3,175.90	2,492.70	1,293.60	3,786.30	34.2
Female	1					3,870.00	
Male	6					3,772.33	
White & Other	39	4,457.70	2,474.90	666.00	1,650.30	2,316.30	71.2
Female	15					3,004.70	
Male	24					1,886.00	

Source: University of Colorado Medical Center, April 1975.

Note: See page 59 for explanation of average budget and average need.

whites. The source of the loans and grants that go into the financial aid package allocated to students in need is a variety of Federal programs, State appropriations, foundations, and resources from private industry.

The amount and type (loans or grants) of aid that each person receives is computed by a complex set of rules and formulas. The "budget" amount set for each student includes the total cost of tuition, fees, books, and a living allowance which takes into account family size and other financial obligations. The "need" is the amount of the budget a student cannot finance through his or her own resources, including the G.I. Bill, summer earnings, savings, loans, and contributions from parents. The basic living allowance was set at $295 per month for single students and $465 per month for married students. Increments for married students are added for children and babysitters. Lindsay Baldner, C.U. Medical Center financial aid officer, stated that the budget for each student was considered sufficiently adequate so that no student need engage in part-time work.[17]

The American College Testing Service (ACTS) determines the parents' appropriate contribution from information submitted on a family financial statement. However, there is considerable flexibility in the amount parents must contribute. The ability of parents to contribute is considered in the allocation of grants to students, but it is not a consideration in the amount of funds from loans that a student is eligible to receive.[18]

Each student is required to accept a certain amount of aid in loans before receiving a grant. The proportion of loans vs. grants that each student receives is determined by the financial aid committee and fluctuates according to the amount of grant funds available.[19]

The average need of blacks and students of Spanish origin is considerably higher than that of whites or Asian Americans. Two Native Americans included in table 11 received financial aid administered by the Bureau of Indian Affairs and the Physician Shortage Program. The available data do not reflect the details of their situation.

About half of the minority students interviewed felt that the aid received was adequate. The other half felt that financial aid received did not sufficiently meet their

needs. Several pointed out that many students receiving financial aid are from more affluent families, who provide them with advantages most minority students cannot afford. Douglas Clinkscales stated that, because of the base from which they start, finances are a major problem for many minorities and this has a cumulative affect which contributes to academic problems.[20]

The average annual family income of white students in the 1974-75 entering class who received financial aid was $20,013. For Asian American students it was $19,796; for black students, $10,333; for Native Americans, $10,000; and for Spanish-origin students (with the exception of one family whose income was $64,000), $6,333.[21]

Several minority students also pointed out that much of the aid granted was in loans. It was possible for them to be $15,000 to $20,000 in debt at graduation. Joe Aragon, a junior, testified at the hearing that he had $10,000 in loans outstanding (p. 61). Minority students planning to go into physician shortage areas, where incomes are considerably lower than elsewhere, were concerned about their ability to pay back the loans. Several pointed out that it placed them under additional pressure to succeed because loans are not cancelled for students who fail in medical school.

Notes to Chapter IV

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2. Davis G. Johnson, Vernon C. Smith, and Stephen L. Tarnoff, Recruitment and Progress of Minority Medical School Students 1970-72 (revised January 1975, a cooperative study by the Student National Medical Association and the American Association of Medical Colleges, unpublished).

3. Ethel Weinberg and James F. Rooney, "The Academic Performance of Women Students in Medical School," Journal of Medical Education, vol. 48 (1973), pp. 240-47.

4. Part I of the national board exams is given following the second year of medical school. Part II is given during or after the senior year.

5. Information supplied by the University of Colorado Medical Center, April 1975.

6. Dr. Janet Weston, interview, Apr. 10, 1975.

7. Cyrena N. Pondrom, "Setting Priorities in Developing an Affirmative Action Program," Journal of Medical Education, vol. 50 (1975), pp. 427-34.

8. C. Bird, Born Female (New York: Pocket Books, 1971). J. E. Bowers, "Women in Medicine: An International Study," New England Journal of Medicine, vol. 275 (1966), pp. 362-65. Margaret A. Campbell, Why Would a Girl Go Into Medicine (New York: Feminist Press, 1973). C. F. Epstein, "Encountering the Male Establishment: Sex Status Limits on Women's Careers in the Professions," American Journal of Sociology, vol. 75 (1970), pp. 965-82. D. H. Merritt, "Discrimination and the Woman Executive," Business Horizons, vol. 12 (1969), pp. 15-22. C. Nadelson and M. T. Notman, "The Woman Physician," Journal of Medical Education, vol. 47 (1972), pp. 176-82. A. Theodore (Ed.) The Professional Woman (Cambridge, Mass.: Schenkman, 1971). Carol Lopate, Women in Medicine (Baltimore: Johns Hopkins Press, 1968).

9. R. A. Hudson Rosen, "Occupational Role Innovators and Sex Role Attitudes," Journal of Medical Education, vol. 49

(1974). Lopate, Why Would a Girl Go Into Medicine, pp. 45-47.

10. Dr. Karon Aronson, interview, Apr. 8, 1975.

11. Dr. Christopher Paterson, interview, Apr. 11, 1975.

12. Dr. Thomas Burke, assistant professor of physiology, and Dr. Robert Shikes, assistant professor of pathology and member of the curriculum and promotion committee, interviews, Apr. 8, 1975.

13. Tony Costillo, Spanish language instructor, interview, Mar. 19, 1975.

14. Dr. Strother Walker, interview, Mar. 26, 1975.

15. Ibid.

16. C.U. School of Medicine, Curriculum: The University of Colorado School of Medicine, 1974-75 Academic Year (1974).

17. Lindsay Baldner, interview, Mar. 19, 1975.

18. Ibid.

19. C.U. Medical Center, Financial Aid Information for Medical Students (a brochure prepared for the academic year 1975-76), p. 2.

20. Douglas Clinkscales, interview, January 1975.

21. Information provided by the C.U. Medical Center, April 1975.

V. BEYOND GRADUATION: RESIDENCY AND FACULTY APPOINTMENTS

RESIDENCY PROGRAMS

To gain a postgraduate training position, C.U. Medical School students participate in the National Intern and Resident Matching Program. About the middle of the senior year students prepare a preference list of positions in selected hospitals for which they would like to apply. The hospitals in turn make out lists ranking student applicants in order of preference. These lists are then matched by computer. Students get the highest position on their list in the hospital of their choice if they are ranked at an appropriately high level by the hospital. Any unmatched applicants must make individual arrangements with hospitals that still have unfilled positions. It is rare for a graduate not to be accepted into a residency program, since there are about 7,000 more positions available than there are medical school graduates. Some hospitals receive many times as many applications as they have positions available. Others do not get a single applicant.[1]

A recent study of the matching program and minority applicants indicated some of the potential difficulties with the system.[2] High-prestige residencies at university teaching hospitals are extremely competitive for all students, including minorities. Hospitals whose facilities are used for teaching, and which have Federal contracts, are prevented by law and Executive orders from denying equal opportunity for residencies because of race, color, religion, sex, or national origin.

Lower representation of minorities and women in many residency programs may indicate that some medical schools have not made as great a commitment to affirmative action programs in this area as they have in admissions. Still, statistics show that minority students are getting residency positions in many of the most sought-after hospitals in the United States.[3]

Table 12 shows that for the academic years 1972-73 through 1974-75 the University of Colorado has made little progress in the recruitment of minorities and women for its residency programs. Excluding Asian Americans, only 10 minorities (4 women and 6 men) out of 600 residents were in the school of medicine's residency program last year. Minority residents accounted for 1.7 percent of the total

Table 12

Housestaff at the University of Colorado School of Medicine by Minority Status and Sex, Academic Years 1972-73 through 1974-75

	1972-73		1973-74		1974-75	
	No.	%	No.	%	No.	%
Black	2	0.3	6	1.0	6	1.0
Female			2	0.3	4	0.7
Male	2	0.3	4	0.7	2	0.3
Native American						
Female	-	-	-	-	-	-
Male	-	-	-	-	-	-
Spanish Origin	7	1.2	6	1.0	4 (1)	0.7
Female	1	0.2				
Male	6	1.0	6	1.0	4 (1)	0.7
Total Above Minorities	9	1.6	12	2.0*	10 (1)	1.7
Female	1	0.2	2	0.3	4	0.7
Male	8	1.4	10	1.6	6	1.0
Asian American	16	2.8	15	2.5	15	2.5
Female	1	0.2			4	0.7
Male	15	2.6	15	2.5	11 (6)	1.8
Total Above Minorities	25	4.3	27	4.4	25 (7)	4.2
Female	2	0.3	2	0.3	8	1.3
Male	23	4.0	25	4.1	17	2.8
White & Other	553	95.7	583	95.6	575 (7)	95.8
Female	45	7.8	45	7.4	47	7.8
Male	508	87.9	538	88.2	528 (7)	88.0
Total All Housestaff	578	100.0	610	100.0	600 (7)	100.0
Female	47	8.1	47	7.7	55	9.2
Male	431	91.9	563	92.3	545 (7)	90.8

*Because of rounding subtotals do not equal larger total.

Notes: 1) Figures in parentheses indicate the number included who are not U.S. citizens.

2) "Housestaff" is a term that includes both residents and interns. "Intern" is a term infrequently used and refers to 1-year resident.

Source: University of Colorado Medical Center, April 1975.

number of doctors in training. The number of Spanish-origin residents decreased from seven to four during the 3-year period, and one of the four was not a citizen of the United States. During the last 2 years none of these were women. No Native Americans have participated in the program. Only 9.2 percent of the housestaff in 1974-75 were women and of these eight were minorities, four black and four Asian American.

REPRESENTATION OF WOMEN IN MEDICAL SPECIALTIES

Numerous studies have shown that women tend to follow a pattern of entering certain specialties. The vast majority of women physicians are involved in patient care rather than research, teaching, or adminstration. Nationally, approximately 70 percent of women physicians enter the six specialties shown in table 13.

Table 14 depicts the proportion of women residents at the C.U. School of Medicine enrolled by residency programs offered in the 1974-75 academic year. Pediatrics, psychiatry, and internal medicine rank first, second, and third, which is the same order these specialties place on the national scene. The proportion of women entering pediatrics at the C.U. School of Medicine (34.5 percent) is almost twice as large as that for medical schools in the nation as a whole. Only two women (3.4 percent) are in the anesthesiology program at C.U. though nationally it ranks fifth, with 7.2 percent women physicians. Obstetrics-gynecology, a specialty which was sixth in popularity for women nationwide, had no women enrolled at all in Colorado. The staff of this department has not accepted a woman intern or resident for the past 15 years, though two women residents have been admitted to the program this year. Nor are there any women in neurosurgery at C.U., and only one is in orthopedics.

Table 15 relates the specialty appointments made to women from the 1975 C.U. graduating class. Included among the 16 women who entered residencies were 4 minorities, of whom 3 accepted appointments at C.U. teaching hospitals. Half of the 12 white women accepted appointments in C.U. residency programs. It was frequently said by faculty and staff interviewed that women do not enter certain specialties, such as obstetrics-gynecology and surgery, because of the rigid and demanding training schedule in these two specialties. Many expressed the opinion that

Table 13

Proportion of U.S. Women Physicians Entering Six Most Popular Specialties, 1973

	Specialty	Proportion of Total Women Physicians
1.	Pediatrics	18.8%
2.	Psychiatry	14.1
3.	Internal Medicine	13.3
4.	General Medicine	10.5
5.	Anesthesiology	7.2
6.	Obstetrics and Gynecology	6.3
7.	All Other	29.8
	Total	100.0

Source: Maryland Pennel and Shirline Showell, Women in Health Careers (Washington, D.C.: American Public Health Association, 1975), p. 38.

Table 14

Departmental Housestaff by Sex at the University of Colorado School of Medicine, Academic Year 1974-75

	Total		Men		Women	
Department	No.	%	No.	%	No.	%
Anesthesiology	31 (1)	5.2%	29	5.4%	2 (1)	3.4%
Medicine	161 (1)	26.8	155 (1)	28.6	6	10.3
Neurology	20 (1)	3.3	17	3.1	3 (1)	5.2
Neurosurgery	5	0.8	5 (1)	0.9		
Obstetrics & Gynecology	36	6.0	36	6.6		
Orthopedics	16	2.7	15	2.8	1	1.7
Pathology	40 (3)	6.7	35 (2)	6.5	5 (1)	8.6
Pediatrics	124	20.7	104	19.2	20	34.5
Physical Medicine & Rehab	5 (1)	0.8			5 (1)	8.6
Psychiatry	58	9.7	50	9.2	8	13.8
Radiology	32	5.3	28	5.2	4	6.9
Surgery	72 (2)	12.0	68 (2)	12.5	4	6.9
Total	600	100.0	542	100.0	58	99.9*

* Does not total to 100% because of rounding.

Note: Numbers in parentheses refer to non-U.S. citizens.

Source: University of Colorado Medical Center Affirmative Action Utilization Analysis and Progress Report, Oct. 30, 1974.

Table 15

Specialties Entered by Women at the University of Colorado School of Midicine, Class of 1975

	Asian Amer.	Black	Native Amer.	Spanish Origin	White & Other	Total
Pediatrics					1	1
Medicine				1	5	6
Obstetrics-Gynecology		1			1	2
Surgery					1	1
Family Practice		1			3	4
Flexible Program					1	1
Psychiatry			1			1
Total		2	1	1	12	16
C.U. Hospitals		1			6	9
Elsewhere		1			6	7

Source: University of Colorado Medical Center, April 1975.

residency schedules could be made more flexible and less demanding. In response to the question of whether or not women are at a disadvantage in getting into surgery and obstetrics-gynecology at the University of Colorado, Dr. Paul Beck, associate dean for student affairs, replied:

> There are certain aspects of [some]...training programs which...emphasize...increased commitment of time, and less flexibility of time than others do. For our surgery program at the University of Colorado School of Medicine it's still...mandatory...for the residents to be on call every night. That is far more demanding than is true nationally [and] tends to discourage most of our students from going into surgery.
>
> I think for a woman who has some children and a husband to take care of, I'm certain that many of the husbands feel a need for dependency gratification at times. This poses a problem.
>
> The other side of it is whether or not the faculty members and the program directors themselves, per se, are saying, "No, we don't want you because you're a woman." I think that this is not an overt type of activity, although at times the fact that the demands of duty are so great,...may cause the program director to make these kinds of insistences. (p. 130)

Dr. Louise Walker, the first and only woman to finish the obstetrics-gynecology residency at the C.U. School of Medicine, states that she feels the lack of women in the program has been largely due to faculty attitudes. Because of marriage and family responsibilities, women are considered tc be high-risk candidates. She also feels that the training schedule was extremely demanding and that split-residencies (two persons working the same residency) were a posibility and should be made an option.[4]

There are indications that many women entering a medical career are no longer content with the specialties traditionally open to them and are venturing into surgery and other residencies once virtually closed to them. Women's groups are lobbying for child-care facilities, curriculum changes, and flexible schedules. Women at the University of Pittsburgh Medical School are asking for

split-residency programs which would allow two persons to share a residency, allowing more time and flexibility in completing the program.[5]

Dr. Margaret Neville, assistant professor of physiology at the C.U. School of Medicine, feels that a child-care program for faculty, students, and staff that was developed by the medical center has been of some help but less than successful. Rates are high, services are not well publicized, and it is difficult to find persons willing to provide emergency child care--a serious problem for anyone with a demanding schedule.[6] Dr. Neville also felt that part-time residencies and faculty appointments would enable more women to participate in a greater variety of specialties.

MINORITIES AND WOMEN ON MEDICAL SCHOOL FACULTIES

A number of the students and staff interviewed believed that many of the problems encountered by minorities and women in the admissions process, as well as during medical school, are directly related to lack of sufficient nonwhite and female representation on the faculty.

The underrepresentation of women and minorities on the faculties of institutions of higher education is a national problem. During the 1972-73 school year women held only 22.3 percent of the faculty positions in all institutions of higher education in the United States.[7] From 1968 to 1973 the percentage of women faculty increased by less than 1 percent, although the number of women Ph.D.s produced during the period 1960-70, who could have been hired from 1968 to 1973, was more than the total from all previous years since 1926.[8]

Figures available show that minorities constituted only 5.8 percent of U.S. college and university teaching faculty during the 1972-73 academic year. The various ethnic and racial groups were represented as follows: white and other, 96.2 percent; black, 2.9 percent; Native American, 0.8 percent; Asian American, 1.5 percent; Mexican American-Chicano, 0.3 percent; and Puerto Rican American, 0.3 percent.

In the U.S. medical schools the number and proportion of women faculty members has shown a slow but steady increase, from 9.3 percent of the total in 1952 to 19.6

Table 16

Proportion of Women Faculty in Selected Departments of U.S. Medical Schools, 1972

Department		Total Faculty	No. of Women	Percent Women
Anatomy	M.D.	244	22	9.0%
	Non-M.D.	1,036	157	15.2
Anesthesiology	M.D.	882	145	16.5
	Non-M.D.	40	8	20.5
Biometry	M.D.	9	1	11.1
	Non-M.D.	103	10	9.7
Medicine	M.D.	5,651	357	6.3
	Non-M.D.	477	133	28.5
Neurology	M.D.	641	54	8.4
	Non-M.D.	128	35	28.0
Obstetrics-Gynecology	M.D.	1,021	89	8.7
	Non-M.D.	181	60	33.7
Orthopedic Surgery	M.D.	208	3	1.4
	Non-M.D.	15	1	6.7
Pathology	M.D.	1,696	180	10.6
	Non-M.D.	529	178	33.7
Pediatrics	M.D.	2,332	582	25.1
	Non-M.D.	488	222	45.6
Psychiatry	M.D.	2,484	219	8.8
	Non-M.D.	1,524	512	33.8
Radiology	M.D.	1,387	118	8.5
	Non-M.D.	465	59	12.8
Surgery	M.D.	2,912	64	2.2
	Non-M.D.	363	77	21.4

Source: Medical College of Pennsylvania, Center for Women in Medicine, Women in Medicine: Action Planning for 1970s: Resource Booklet (Philadelphia: 1974), pp. 67-70.

percent in 1972.[9] Table 16 shows the proportion of women faculty, physicians and nonphysicians, in selected departments of U.S. medical schools in 1972. Nationwide data on minority faculty in U.S. medical schools are not available at the present time.

Comparative data on minority and women faculty at the C.U. School of Medicine for the last two academic years are given in table 17. It shows that neither Native Americans nor U.S. citizens of Spanish origin are represented on the faculty. Blacks have six representatives, one of whom is a woman. The number and proportion of full-time women faculty decreased during this period so that in the 1974-75 academic year they comprised only 13.0 percent of the total, considerably lower than the national average of 19.6 percent in 1972. As a result of a 1971 review of the C.U. School of Medicine by the DHEW Office for Civil Rights, goals and timetables for the recruitment of women and minority faculty were set up in 1972 that called for the addition of 25 women and 35 minority faculty members by 1977.[10] Present trends indicate that it is unlikely that these goals will be met in the remaining 2 years.

Table 18 gives a departmental breakdown of faculty by minority status and sex at C.U. Five departments--anatomy, biometrics, orthopedics, pathology, and surgery--employ no U.S.-born, full-time women faculty. The department of medicine employs only 5 women (4.7 percent) out of a total of 107 full-time faculty. This is below the national average (see table 15). Less than 13 percent of the C.U. psychiatry and obstetrics-gynecology department's faculty are women.

Promotion and Tenure

A major complaint of women faculty at the C.U. School of Medicine centered around what they felt to be a lack of opportunity for advancement. Dr. Dane Prugh, affirmative action officer for the medical center, testified that most of the women faculty were at the lower employment levels and that few--approximately 10--are tenured (p. 131).

Tenure recommendations are made by departmental chairmen. Candidate credentials also are evaluated by an ad hoc committee appointed by the faculty officers and the dean. Recommendations then go to the executive committee, composed of all the department chairmen plus three faculty

Table 17

Full-Time Faculty (U.S. Citizens) at the University of Colorado School of Medicine by Minority Status and Sex, Academic Years 1973-74 and 1974-75

	1973-74		1974-75	
	No.	%	No.	%
Black	5	1.2%	6	1.3%
Female	1	0.2	1	0.2
Male	4	0.9	5	1.1
Native American				
Female				
Male				
Spanish Origin				
Female				
Male				
Total Above Minorities	5	1.2*	6	1.3
Female	1	0.2	1	0.2
Male	4	0.9	5	1.1
Asian American	3	0.7	7	1.5
Female	1	0.2	1	0.2
Male	2	0.5	6	1.3
Total Above Minorities	8	1.9	13	2.8
Female	2	0.5	2	0.4
Male	6	1.4	11	2.4
White & Other	415	98.1	455	97.2
Female	69	16.3	59	12.6
Male	346	81.8	396	84.6
Total All Faculty	423	100.0	468	100.0
Female	71	16.8	61	13.0
Male	352	83.2	407	87.0

* Subtotals do not equal larger total because of rounding.

Source: University of Colorado Medical Center Affirmative Action, Utilization Analyses and Progress Report, Oct. 30, 1974.

Table 18

Full-Time Departmental Faculty by Minority Status and Sex at the University of Colorado School of Medicine, Academic Year 1974-75

Department	Percent Women	Total Faculty	Asian American Male	Asian American Female	Black Male	Black Female	Native American Male	Native American Female	Spanish Surname Male	Spanish Surname Female	White & Other Male	White & Other Female
Anatomy		12									12	
Anesthesiology	26.3	19		1							14(3)	4
Biochemistry	20.0	10	1								7	2
Biometrics		6									6	
Biophysics & Genetics	22.2	18	3(1)						(1)		10	4
Microbiology	27.3	22	(2)	1							14	5
Medicine	4.7	107	5(3)		1				(2)		94	5
Neurology	20.0	10									8	2
Neurosurgery	25.0	4									3	1
Obstetrics & Gynecology	10.0	10									9	1
Orthopedics		2									2	
Pathology		13									13	
Pediatrics	25.9	58		1	3						40	14
Pharmocology	22.2	9									7	2
Physical Medicine & Rehab.	38.9	18									11	7
Physiology	11.1	9							(1)		7	1
Preventive Medicine	20.0	10									8	2
Psychiatry	12.9	70	(1)			1					60	8
Radiology	7.1	14									13	1
Surgery	4.3	47	(1)	(2)	1						43	
Total		468	13(8)	5(2)	5	1			(4)		381(3)	59

Note: Numbers in parentheses refer to non-U.S. citizens.

Source: University of Colorado Medical Center Affirmative Action, Utilization Analyses and Progress Report, Oct. 30, 1974.

officers, which makes the final decision subject to ratification by the dean, the president, and the Board of Regents.[11] The decision to grant a woman tenure and promotion lies with the all-male departmental chairmen and executive committee, except when one of the faculty officers is female. Presently a woman is serving for 1 year as secretary to the committee. Table 19 ranks C.U. faculty members for the 1973-74 academic year. Only 3 minorities and 6 women were associate professors or above, out of 173 faculty members. Proportionately, 45.6 percent of the men (167) were professors or associate professors, compared with 6.9 percent of the women. At the other end of the scale, 45 percent of the women faculty were instructors compared with 15.4 percent of the men. Nationally, in 1970-71, 22.1 percent of U.S. medical school women faculty held the ranks of professor and associate professor.[12]

Among university faculties it has been argued that women, due to their household and family responsibilities, do less research and have a lower scholarly output than men. Therefore, fewer women are eligible for promotion to the higher faculty ranks. However, the opposite is true. The productivity of female Ph.Ds in the physical sciences, as measured by the mean number of articles and books published, is greater than that of men. Furthermore, married women Ph.Ds, and those with children, were more productive than single women.[13]

Availability of Minority and Women Faculty

When asked what actions were being taken to alleviate underrepresentation of minorities and women on the C.U. Medical School faculty, Dr. Dane Prugh testified:

> The main problem is that the national pools are so small in the various specialties within medicine. [There were] two or three Chicano biochemists in the United States at the time the [School of Medicine's affirmative action] goals were set. The largest group of minority physicians was then 250 black psychiatrists. The problem is with all [105 medical] schools in the United States trying to recruit...the chances of getting even one of the 250 black psychiatrists would be very small.
>
> The recruitment potentialities for minorities lies in the internal pools...in the residency group.

Table 19

University of Colorado School of Medicine
Full-Time Faculty Profile by Rank,
1973-74

	Total		Male		Female		Spanish Origin	Native American
	No.	%	No.	%	No.	%	None	None
Professors	90	100.0	87	96.7	3	3.3		
Associate Professors	83	100.0	80	96.4	3	3.6		
Total Above Ranks	173	100.0	167	96.5	6	3.5		
Assistant Professors	153	100.0	121	79.1	32	20.9		
Senior Instructors	22	100.0	7	31.9	15	68.2		
Instructors	72	100.0	47	65.3	25	34.7		
Assistants	6	100.0	6	100.0	-	-		
Research Associates	12	100.0	3	25.0	9	75.0		
Total	438	100.0	351	80.1	87	19.9		

(cont'd)

Table 19 (cont'd)

University of Colorado School of Medicine
Full-Time Faculty Profile by Rank,
1973-74

	Asian American				Black				White and Other			
	Male		Female		Male		Female		Male		Female	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Professors	1	1.1	-	-	-	-	-	-	86	95.6	3	3.3
Associate Professors	-	-	-	-	2	2.4	-	-	78	94.0	3	3.6
Total Above Ranks	1	0.6	-	-	2	1.2	-	-	164	94.8	6	3.5
Assistant Professors	-	-	1	0.7	1	0.7	1	0.7	120	78.4	30	19.6
Senior Instructors	-	-	-	-	1	4.5	-	-	6	27.3	15	68.2
Instructors	-	-	-	-	-	-	-	-	47	65.3	25	34.7
Assistants	-	-	-	-	-	-	-	-	6	100.0	-	-
Research Associates	-	-	1	8.3	-	-	-	-	3	25.0	8	66.7
Total	1	0.2	2	0.5	4	0.9	1	0.2	346	79.0	84	19.2

Source: Affirmative Action Plan, University of Colorado Medical Center, revised Oct. 15, 1973.

> We're beginning to see the graduates of our program stay on as residents or housestaff and hopefully in 3 to 4 years a significant number of these will stay on as junior faculty.
>
> The problem of recruitment of women is not difficult at the medical student level presently. It is still difficult at the faculty level because there have been fewer women graduates. (pp. 132-33)

Physicians are not the only category of professional persons who serve on medical school faculties. There are positions in almost every department for persons with doctorates in basic sciences or other fields. Nationwide, statistics show that in 1972, 33.8 percent (12,043 persons) of all U.S. medical school faculty members were not physicians.[14]

There is no single reliable guide listing earned degrees for minorities. The U.S. Department of Health, Education, and Welfare (DHEW) is in the process of letting contracts to groups working on ways of determining the availability of minorities more precisely.[15] DHEW has also published a Manual for Determining the Labor Market Availability of Women and Minorities to assist in conducting a work force analysis.[16]

Various statistics indicate that there are numbers of potential minority faculty members. In 1970 there were 10,293 Spanish-origin and 6,106 black physicians in the United States.[17] National figures indicate minorities hold 1 to 2 percent of all earned doctorates.[18] In 1973 alone, 96 blacks, 17 Native Americans, 56 persons of Spanish origin, and 372 Asian Americans received doctorates in the life sciences.[19] Also in 1973, there were 3,337 minorities (including black, Native American, and Asian) with doctorates in the biosciences.[20] That same year 816 blacks, 1,387 Asian Americans, 251 persons of Spanish origin, and 148 Native Americans who are Ph.Ds (in all fields) were added to the labor force.[21] Between 1930 and 1972, 1,860 blacks, 10,987 Asian Americans, 1,412 persons of Spanish origin, and 106 Native Americans received doctorates in either science or engineering.[22]

The potential supply of women for medical faculties is much greater than that of minorities. In 1970 there were

25,824 women physicians in the United States.[23] Between the years of 1920 to 1973, 9,181 women received doctorates in the life sciences.[24] In 1973, 827 women were recipients of doctorates in the fields of bioscience and medical science.[25] That year, 7,293 women held Ph.Ds in the field of bioscience.[26] Furthermore, during that year the unemployment rate of women who held doctorates in science and engineering was four times greater than that of their male colleagues.[27]

CIVIL RIGHTS REQUIREMENTS AND AFFIRMATIVE ACTION

The C.U. School of Medicine's complex situation relating to faculty employment, admissions, and academic programs is influenced by the following key statutes. The Equal Pay Act of 1963 requires equal pay for equal work regardless of sex, and Title IX of the Education Amendments of 1972 extends coverage to include faculty.[28] Executive Order 11246 as amended by Executive Order 11375 prohibits employment discrimination by Government contractors.[29] The Office of Federal Contract Compliance, Department of Labor, requires written affirmative action programs by all Government contractors, including the C.U. School of Medicine, who receive more than $50,000 in Federal funds and employ at least 50 persons.[30]

Title VI of the Civil Rights Act of 1964 forbids discrimination against students on the basis of race, color, or national origin in all federally-assisted programs.[31] Titles VII and VIII of the Public Health Service Act prohibit sex discrimination in health training programs.[32] Title IX also forbids discrimination on the basis of sex for students and employees in all federally-assisted education programs. Title VII of the 1964 Civil Rights Act forbids discrimination in employment on the basis of race, color, religion, national origin, or sex and covers all educational institutions whether or not they receive any Federal funds.[33]

"Affirmative action" consists of efforts to end discrimination and remedy the effects of past discrimination. It requires, among other things, adequate job-opening notification, recruiting procedures aimed at women and minorities, and the provision of equal opportunities for advancement. Executive Order 11246 and Revised Order No. 4, promulgated by the Department of Labor,[34] also require the establishment of goals and

timetables for increasing participation of women and/or minorities. An institution must document its good-faith efforts to meet these goals. Preferential treatment of minorities or women is not required except under specific court order.

The Higher Education Division of DHEW's Office for Civil Rights has the responsibility for enforcing these civil rights statutes and Executive orders prohibiting discrimination by institutions of higher education. In a recent report the U.S. Commission on Civil Rights charged that DHEW's enforcement effectiveness has been seriously diminished by two factors. First, DHEW relies almost totally on voluntary negotiations instead of administrative sanction; and second, it has failed to issue comprehensive guidelines outlining the civil rights responsibilities of institutions of higher education.[35]

The General Accounting Office in a recent study also charged that DHEW has failed to penalize colleges and universities that do not develop anti-job-discrimination programs. Out of 1,300 U.S. colleges and universities monitored for compliance with Federal guidelines on the employment of women and minorities, only 27 affirmative action proposals had been approved by DHEW's Office for Civil Rights as of December 9, 1974.[36]

On November 15, 1972, an affirmative action plan was developed by the C.U. Medical Center and forwarded to the Regional Office for Civil Rights (OCR) of DHEW, followed by a revision in October of 1973 and a progress report in October 1974. The plan has not been officially approved and negotiations regarding it are still in progress.[37]

FACULTY HIRING PROCEDURES AT THE C.U. SCHOOL OF MEDICINE

When a position is open a faculty search committee is formed. C.U.'s affirmative action office assists in the recruitment effort by specifying hiring guidelines and providing a list of women and minority organizations to be contacted. The chairman of the department makes the final appointment. (p. 134) The affirmative action officer is an ex-officio member of all faculty search committees. Few of the committees have had women or minority representatives on them.

Faculty from various departments form a search committee when a position is open for a departmental chairperson. They then forward a recommendation to the dean, who makes the final selection. Dr. Barbara Thulin, a former faculty member, testified that a woman has never been a member of a search committee to hire a department chairperson (p. 104).

Departmental chairmen recently have been appointed for the departments of preventive medicine, psychiatry, and pediatrics. A search is in progress for chairpersons for the departments of medicine and otolaryngology. Dr. Harry P. Ward, dean of the school of medicine, testified:

> We are making every effort to recruit minorities or women for these positions. We have been unable to identify a single woman or single minority for Otolaryngology. We have some excellent candidates for medicine.
>
> For the department of pediatrics, we had some excellent women candidates, and ended up making a decision for a male candidate. But we had some excellent women candidates. (pp. 151-52)

The departmental chairpersonship is an extremely powerful and influential position. Not only do chairmen control the affairs within their own departments, they constitute the membership of the executive committee, the policymaking body for the school of medicine. Unless removed by the dean, which rarely happens, departmental chairmen serve for life. There are no women or minorities who serve as departmental chairpersons. Therefore, both groups are excluded from much of the decisionmaking process within the medical school.

Notes to Chapter V

1. National Intern and Resident Matching Program, The Student and the Matching Program (Evanston, Ill.).

2. James L. Curtis, "Minority Student Success and Failure with the National Intern and Resident Matching Program," Journal of Medical Education vol. 50 (1975), pp. 563-70.

3. Ibid., p. 570.

4. Interview, Apr. 18, 1975.

5. "More Women Now in Law and Medicine," New York Times, Jan. 15, 1975.

6. Interview, Apr. 11, 1975.

7. Scientific Manpower Commission, Professional Women and Minorities, p. 142.

8. Leigh Bienen, Alice Ostriker, and J. P. Ostriker, "Sex Discrimination in the Universities: Faculty Problems and No Solution," Women's Rights Law Reporter, vol. 2 (1975), pp. 3-12.

9. Medical College of Pennsylvania, Center for Women in Medicine, Women in Medicine: Action Planning for the 1970s, Resource Booklet (Philadelphia: 1974), p. 63.

10. University of Colorado Medical Center Affirmative Action Utilization Analyses and Progress Report, October 1974 (unpublished), p. 1.

11. Dr. Harry P. Ward, p. 143.

12. Maryland Pennell and Shirlane Shovell, Women in Health Careers (Washington, D.C.: American Health Association, 1975), p. 48.

13. Bienen, Ostriker, and Ostriker, "Sex Discrimination in the Universities," p. 7.

14. Women in Medicine: Action Planning for the 1970s: Resource Booklet, pp. 67-70.

15. Cyrena N. Pondron, "Setting Priorities in Developing An Affirmative Action Program," Journal of Medical Education, vol. 50 (1975), p. 432.

16. U.S., Department of Health, Education, and Welfare, Manual for Determining The Labor Market Availability of Women and Minorities (DHEW Publication No. (OCR) 74-11).

17. U.S., Department of Health, Education, and Welfare, Minorities and Women in the Health Fields (DHEW Publication No. (HRA) 75-22, May 1974), p. 7.

18. Pondron, "Setting Priorities," p. 432.

19. Commission on Human Resources, Summary Report 1973 Doctorate Recipients from United States Universities (Washington, D.C.: National Academy of Sciences, 1974), p. 4.

20. Commission on Human Resources, Doctoral Scientists and Engineers in the United States, 1973 Profile (Washington, D.C.: National Academy of Sciences, July 1974), p. 9.

21. Commission on Human Resources, Minority Groups Among United States Doctorate Level Scientists, Engineers, and Scholars, 1973 (Washington, D.C.: National Academy of Sciences, 1974), p. 11.

22. Ibid., p. 19.

23. Minorities and Women in Health Fields, p. 8.

24. Professional Women and Minorities, p. 51.

25. Commission on Human Resources, Summary Report 1973 Doctorate Recipients, p. 12.

26. Commission on Human Resources, Doctoral Scientists and Engineers, p. 9.

27. Ibid, p. 25.

28. 29 U.S.C. § 206d and 20 U.S.C. §§ 1681-1683.

29. Exec. Order No. 11246, 3 C.F.R., 1964-1965 Comp., p. 339; Exec. Order No. 11375, 3 C.F.R., 1966-1970 Comp., p. 684.

30. 41 C.F.R. § 60-2.

31. 42 U.S.C. § 2000d.

32. 42 U.S.C. §§295h-9 and 298b-2.

33. 42 U.S.C. § 2000e.

34. 41 C.F.R. § 60-2.

35. U.S., Commission on Civil Rights, The Federal Civil Rights Enforcement Effort--1974: To Ensure Equal Educational Opportunity (1975) p. 367.

36. U.S., General Accounting Office, More Assurances Needed that Colleges and Universities with Government Contracts Provide Equal Employment Opportunity (Publication No. MWD-75-72, Aug. 25, 1975).

37. Joseph Torres, Branch Chief, Regional Office for Civil Rights Higher Education Division, telephone conversation, Oct. 8, 1975.

VI. FINDINGS AND RECOMMENDATIONS

Based upon its investigation, the Colorado Advisory Committee to the U.S. Commission on Civil Rights reports the following findings and recommendations:

REPRESENTATION OF MINORITIES AND WOMEN

Finding

Information gathered by the Colorado Advisory Committee gave clear indication that minority and women physicians are severely underrepresented in the medical profession in the State. Colorado data published by the Bureau of the Census for black physicians and those of Spanish origin appear to be grossly inaccurate, and statistics for Asian and Native American physicians have not been compiled by the Bureau. Although the American Medical Association gathers data on women physicians, it does not do so for minority physicians.

Severe underrepresentation of minorities and women in institutions of higher education, both in Colorado and nationally, limits the number of these students available to apply for medical school. DHEW has the responsibility of ensuring compliance of these institutions with Federal civil rights requirements.

Recommendation No. 1:

The U.S. Bureau of the Census, the Colorado Division of Employment, the Colorado Department of Health, and the DHEW Office of Health should cooperate in providing accurate statistics on black and Spanish-origin physicians in Colorado, and in developing statistical categories for Asian and Native American physicians.

Recommendation No. 2:

In order to facilitate affirmative action programs and to enable an accurate assessment of health manpower resources, the American Medical Association should develop a minority physician data bank that indicates their origin, number, specialty, type of practice, and income level for the United States and for each State.

Recommendation No. 3:

DHEW's national Office for Civil Rights should issue adequate guidelines detailing the responsibilities of institutions of higher education in conforming with civil rights statutes and Executive orders which prohibit discrimination. The Region VIII DHEW Office for Civil Rights should conduct regular, indepth compliance reviews of Colorado colleges and universities receiving any Federal funds, and impose administrative sanctions against any institutions found to be in noncompliance.

ACADEMIC PREPARATION AND RECRUITMENT FOR MEDICAL SCHOOL

Findings:

The failure of schools to provide adequate education and acquisition of study skills at the lower academic levels is a severe handicap for minority students preparing to enter medical school.

Counseling received by minority and women students in junior and senior high school, as well as during undergraduate studies, frequently discourages them from seeking a medical career. This is due to a lack of information by counselors regarding medical school requirements, improper perception of students' ability, and preoccupation with the white-male stereotype of physicians in our society. There are no women and only one minority person on the C.U. premedical advisory committee.

Women are frequently treated differently from men by counselors who perceive an incongruity between the demanding role of physicians and the stereotypic role of women as housewives and mothers. The lack of minority counselors and of women and minority role models in the medical profession are additional factors which inhibit the choice of a medical career.

Women of all racial and ethnic groups are severely underrepresented in the pool of applicants for admission to medical school. Though the C.U. School of Medicine does make a special effort to recruit minorities, it makes no special effort to recruit either minority or white women.

Recommendation No. 4:

The Colorado Department of Education should initiate a study to evaluate the quality of education received by

minority students at the elementary and secondary levels as compared to that received by the majority. Statistics should be provided by race and sex on reading achievement, school holding power, grade repetition, "overageness," and participation in extracurricular activities. The department should also gather information required to evaluate properly new programs designed to eliminate unequal educational opportunities for minorities, such as bilingual-bicultural programs and school desegregation plans. Additional programs should be developed to eliminate inequities that may exist in the State's educational system.

Recommendation No. 5:

The department should assure that junior and senior high counselors provide students with information on prerequisites for medical education. Counselors also should make minority and women students aware of the needs and opportunities which exist for them in medicine and other health-care fields. They should encourage more students from these groups to enroll in science and mathematics courses which would enable them to pursue a career in medicine and other science-related courses.

Recommendation No. 6:

The C.U. School of Medicine should endeavor to increase the proportion of women from all racial and ethnic groups in the pool of applicants for admission. The medical school should specifically include them in its recruitment efforts.

Recommendation No. 7:

The University of Colorado at Boulder should assure that minority and women faculty are adequately represented on the premedical advisory committee. The committee should inform students early in their academic career of their future need for letters of recommendation and provide liaison with the faculty in order to help obtain them.

Recommendation No. 8:

The University of Colorado at Boulder should develop a pilot program to prepare academically-disadvantaged minority and nonminority students for a medical career. This should be designed to remedy any deficiencies in study skills and

provide intensive training in disciplines which would prepare them for admission to medical school.

ADMISSION TO MEDICAL SCHOOL

Findings:

Many of the criteria used for admission to the C.U. School of Medicine are poorly defined and subjective. The MCAT is of limited value in predicting success in medical school or as a physician, and is possibly biased against minority and nonurban applicants. The GPA also has limited value as a predictor of performance. Methods used to assess noncognitive characteristics frequently place minority and women students at a disadvantage.

Both groups are inadequately represented on the medical school's admissions committee. As a consequence, students may not be interviewed by persons of their own sex or minority group. Members of the committee are not given training in interviewing techniques, nor are they familiarized with the cultural and economic backgrounds of students they interview. Guidelines for the interview process, and definitions of desirable characteristics for applicants, are highly ambiguous. Unaccepted candidates are seldom given reasons for their rejection and are not provided with adequate counseling to help with planning an alternative career.

The C.U. School of Medicine has admitted increasing numbers of minority students. However, in contrast to nonminority students admitted, a minimal number of minorities admitted are residents of Colorado. Students of Spanish origin are most severely underrepresented. Few minorities or women apply for or are admitted through the WICHE program.

Recommendation No. 9:

The C.U. School of Medicine should use the MCAT only as an initial admissions screening device for students who score below the 400 level. The MCAAP admissions test should be considered as an alternative pending its successful validation in 1977. The development of more objective means of defining and evaluating noncognitive characteristics desirable for medical school admission should be undertaken by the C.U. School of Medicine with the assistance of the

Association of American Medical Colleges. This should include training for the entire admissions committee in interview methodology and in the awareness of differences in individual students due to cultural and environmental factors.

Recommendation No. 10:

The admissions committee at the C.U. School of Medicine should include faculty advocates for all minorities. As an immediate measure a person of Spanish origin should be appointed to the committee. Until such a time as minority faculty members are available, advocates should be selected from the community. Faculty women should be adequately represented on the admissions committee. An additional one or two faculty women should be appointed to the committee for the coming year. Counseling should be made available to unaccepted applicants that provides them with information regarding possible alternative careers in health care.

Efforts to recruit in-State minority students should be intensified, and highest priority for admission should continue to be given to them.

ACADEMIC PERFORMANCE AND SUPPORTIVE PROGRAMS IN MEDICAL SCHOOL

Findings:

Differences in environment and cultural backgrounds, social isolation, and deficiencies in academic skills due to unequal educational opportunities at lower educational levels frequently place minority students at a disadvantage in medical school. Academic and psychologically supportive programs are required to overcome this disadvantage. Sexist attitudes, though much less a factor now than in former years, are still present and are detrimental to women students. These attitudes frequently result in the exclusion of women from important learning experiences.

Rapport between many minority students and white faculty is very poor and often results in a climate of distrust and suspicion. For this reason, counseling and other supportive programs have been unsatisfactory for many of the minority students. Tutorial programs vary greatly in quality and effectiveness. The Student Advocacy Program has largely failed, due in part to the lack of faculty status

for advocates. Many minority students feel stigmatized by these and other programs provided largely for their benefit. Responsibility for design and implementation of academically supportive programs is widely diffused throughout various departments and offices of the medical school. As a result, these programs are poorly coordinated, duplicative in their efforts, and vary greatly in their effectiveness.

Recommendation No. 11:

Faculty of the C.U. School of Medicine should be required to participate in a series of seminars designed to provide sensitivity to differences in the culture and environmental backgrounds of their students. These seminars should also investigate means of implementing educational procedures which would take these differences into account.

Problems arising from condescending racial and sexist attitudes on the part of some faculty members, which affect their teaching relationships with students, should be dealt with by a grievance committee appointed by the dean. This committee should recommend disciplinary action where appropriate.

Recommendation No. 12:

A separate office should be established to plan and coordinate supportive programs presently administered separately by the Minority Student Affairs Office, the Student Advisory Office, and the individual departments. Minority student advocates should be made voting members of the curriculum and promotions committee until they can be replaced by faculty members.

RESIDENCY AND FACULTY APPOINTMENTS AND THE DECISIONMAKING PROCESS

Findings:

Affirmative action to recruit minorities and women to residency programs at the C.U. School of Medicine has failed to produce significant results. Representation from these groups remains at an appallingly low level. The same is true for minority and women faculty. Several departments have no women on their faculties and only a few have minority members. Women and minorities on the faculty are concentrated primarily at the lower levels. The lack of

women and minority faculty and residents has serious consequences for the quality of education received by minority and women medical students. Faculty hiring and appointments to residency programs use a decisionmaking process that almost entirely excludes minorities and women. There are no minority or women departmental chairpersons, thereby excluding them from the chief policymaking body of the medical school.

Recommendation No. 13:

The Higher Education Division of DHEW's Office for Civil Rights recently undertook a student services compliance review at the C.U. School of Medicine. However, the committee recommends that in addition they do an employment compliance review, which would include faculty hiring and promotional practices and methods used for residency appointments.

Recommendation No. 14:

The Regents of the University of Colorado should revise the bylaws of the school of medicine to provide for adequate representation of minorities and women on the executive committee, faculty search committees, and on all other bodies which affect policy decisions. In order to provide periodic openings at the departmental chairpersonship level, these positions should be filled on a rotating basis for 10 years maximum by any one person.

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