

COUNCIL ON GRADUATE MEDICAL EDUCATION

Twelfth Report

Minorities in Medicine

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U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
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The Council on Graduate Medical Education

The Council on Graduate Medical Education (COGME) was authorized by Congress in 1986 to provide an ongoing assessment of physician workforce trends and to recommend appropriate federal and private sector efforts to address identified needs. The legislation calls for COGME to serve in an advisory capacity to the Secretary of the Department of Health and Human Services (DHHS), the Senate Committee on Labor and Human Resources, and the House of Representatives Committee on Commerce. By statute, the Council was to terminate on September 30, 1995. It has been extended through the end of FY 1998 by appropriations legislation.

The legislation specifies 17 members for the Council. Appointed individuals are to include representatives of practicing primary care physicians, national and specialty physician organizations, international medical graduates, medical student and house staff associations, schools of medicine and osteopathy, public and private teaching hospitals, health insurers, business, and labor. Federal representation includes the Assistant Secretary for Health, DHHS; the Administrator of the Health Care Financing Administration, DHHS; and the Chief Medical Director of the Veterans Administration.

Charge to the Council

The charge to COGME is broader than the name would imply. Title VII of the Public Health Service Act, as amended by Public Law 99-272 as amended by Title III of the Health Professions Extension Amendments of 1992, required COGME to provide advice and make recommendations to the Secretary and Congress on a wide variety of issues:

1. The supply and distribution of physicians in the United States.
2. Current and future shortages or excesses of physicians in medical and surgical specialties and subspecialties.
3. Issues relating to international medical school graduates.
4. Appropriate federal policies with respect to the matters specified in items 1-3, including policies concerning changes in the financing of undergraduate and graduate medical education (GME) programs and changes in

the types of medical education training in GME programs.

5. Appropriate efforts to be carried out by hospitals, schools of allopathic and osteopathic medicine, and accrediting bodies with respect to the matters specified in items 1 - 3, including efforts for changes in undergraduate and GME programs.
6. Deficiencies and needs for improvements in data bases concerning the supply and distribution of, and postgraduate training programs for, physicians in the United States and steps that should be taken to eliminate those deficiencies.

In addition, the Council is to encourage entities providing graduate medical education to conduct activities to voluntarily achieve the recommendations of this Council under item 5 above.

COGME Reports

Since its establishment, COGME has submitted the following reports to the DHHS Secretary and Congress:

- First Report of the Council (1988)
- Second Report: The Financial Status of Teaching Hospitals and the Underrepresentation of Minorities in Medicine (1990)
- Scholar in Residence Report: Reform in Medical Education and Medical Education in the Ambulatory Setting (1991)
- Third Report: Improving Access to Health Care Through Physician Workforce Reform: Directions for the 21st Century (1992)
- Fourth Report: Recommendations to Improve Access to Health Care Through Physician Workforce Reform (1994)
- Fifth Report: Women and Medicine (1995)
- Sixth Report: Managed Health Care: Implications for the Physician Workforce and Medical Education (1995)
- Seventh Report: Physician Workforce Funding Recommendations for Department of Health and Human Services' Programs (1995)
- Eighth Report: Patient Care Physician Supply and Requirements: Testing COGME Recommendations (1996)
- Ninth Report: Graduate Medical Education Consortia: Changing the Governance of

Graduate Medical Education to Achieve
Workforce Objectives (1997)

- Tenth Report: Physician Distribution and Health Care Challenges in Rural and Inner-City Areas (1998)
- Eleventh Report: International Medical Graduates, The Physician Workforce and GME Payment Reform (1998)

COGME Research Papers

COGME has recently issued the following resource papers:

- Preparing Learners for Practice in a Managed Care Environment (September 1997)
- International Medical Graduates: Immigration Law and Policy and the U.S. Physician Workforce (February 1998)

Members, Council on Graduate Medical Education

Chair

David N. Sundwall, M.D.

President
American Clinical Laboratory Association
Washington, D.C.

Carl J. Getto, M.D.

Dean and Provost, Southern Illinois University
School of Medicine
Springfield, Illinois

Vice Chair

Lawrence U. Haspel, D.O.

Senior Vice-President
Metropolitan Chicago Health Care Council
Chicago, Illinois

Ms. Kylanne Green

Senior Consultant
Coopers and Lybrand
Washington, D.C.

Paul W. Ambrose, M.D.

Resident, Dartmouth Family Practice Program
Concord, New Hampshire

Ms. Ann Kempski

Assistant Director Health Policy
American Federation of State, County and
Municipal Employees
Washington, D.C.

Macaran A. Baird, M.D.

Associate Medical Director for Primary Care
Health Partners
Bloomington, Minnesota

Designee of the Assistant Secretary for Health

Robert Knooss, M.D.

Director Office of Emergency Preparedness
Health Resources and Services Administration
Rockville, Maryland

Regina M. Benjamin, M.D., M.B.A.

Family Practice
Bayou La Batre, Alabama

*Designee of the Health Care Financing
Administration*

Ms. Barbara Wynn

Director, Plan and Provider Purchasing Policy
Group
Center for Health Plans and Providers
Health Care Financing Administration
Baltimore, Maryland

JudyAnn Bigby, M.D.

Division of General Medicine
Brigham and Women's Hospital
Boston, Massachusetts

F. Marian Bishop, Ph.D., M.S.P.H.

Professor and Chairman Emeritus
Department of Family and Preventive Medicine
University of Utah School of Medicine
Salt Lake City, Utah

Designee of the Department of Veterans Affairs

David P. Stevens, M.D.

Chief Academic Affiliations Officer
Department of Veterans Affairs
Washington, D.C.

Jo Ivey Boufford, M.D.

Dean, Robert F. Wagner Graduate School of Public
Service, New York University
New York, New York

Statutory Members

John Eisenberg, M.D.

Acting Assistant Secretary for Health
Department of Health and Human Services
Washington, D.C.

Sergio A. Bustamante, M.D.

Director, Pediatric Medical Education
Children's Regional Hospital at Cooper Hospital
Camden, New Jersey

Nancy-Ann Min DeParle

Administrator, Health Care Financing
Administration
Department of Health and Human Services
Baltimore, Maryland

Mr. Richard D. Cordova, M.B.A.

Chief Executive Officer, Health Care Systems
San Francisco General Hospital
San Francisco, California

Kenneth Kizer, M.D., M.P.H.

Undersecretary for Health
Veterans Health Administration
Department of Veterans Affairs
Washington, D.C.

Ezra C. Davidson, Jr., M.D.

Professor, Department of Obstetrics and Gynecology
King/Drew Medical Center
Los Angeles, California

Minorities in Medicine Work Group Members

COGME

JudyAnn Bigby, M.D.

Work Group Chair

Division of General Medicine
Brigham and Women's Hospital
Boston, Massachusetts

Stuart J. Marylander

Vice Chairman, COGME
Informatix, LLC
Beverly Hills, California

Eric E. Whitaker, M.D.

Former Internal Medicine Resident
University of California at San Francisco
San Francisco, California

Other Members

Ciriaco Gonzales, Ph.D.

Director, Division of Disadvantaged Assistance
Bureau of Health Professions, HRSA
Rockville, Maryland

Jose Hawayek, M.D.

University of Puerto Rico School of Medicine
San Juan, Puerto Rico

Gerald Ignace, M.D.

Harwood Medical Associates
Brookfield, Wisconsin

Paul Jung, M.D.

American Medical Student Association
Reston, Virginia

Erick Munoz, M.D., M.B.A.

Associate Dean of Clinical Affairs
University of Medicine and Dentistry of New Jersey
Newark, New Jersey

Herbert Nickens, M.D.

Vice President, Division of Minority Health,
Disease Prevention and Health Promotion
Association of American Medical Colleges
Washington, D.C.

Eliseo Perez-Stable, M.D.

Associate Professor of Medicine
Division of General Internal Medicine
University of California, San Francisco
San Francisco, California

Timothy Ready, Ph.D.

Assistant Vice President, Community and
Minority Programs
Association of American Medical Colleges
Washington, D.C.

Elena Rios, M.D., M.S.P.H.

Medical Advisor
Office on Womens Health
Department of Health and Human Services
Washington, D.C.

Barbara Ross-Lee, D.O.

Dean, Ohio University College of Osteopathic
Medicine
Athens, Ohio

Anthony So, M.D., M.P.A.

White House Fellow, Office of the Secretary
Department of Health and Human Services
Washington, D.C.

Lois Steele, M.D.

Medical Research Officer
Indian Health Service
Tuscon, Arizona

Grace Wang, M.D., M.P.H.

Chinatown Medical Center
Roosevelt Island, New York

Tanya Zangaglia, M.D.

St. Vincent's Hospital, AIDS Center
New York, New York

Retired Members Contributing to The Recommendations

David A. Kindig, M.D., Ph.D.

Past Chair, COGME
Professor of Preventive Medicine
University of Wisconsin, Madison Medical School
Madison, Wisconsin

Paul C. Brucker, M.D.

President, Thomas Jefferson University
Philadelphia, Pennsylvania

George T. Bryan, M.D.

Dean Emeritus
University of Texas Medical Branch
Galveston, Texas

Jack M. Colwill, M.D.
Professor and Chairman
Department of Family and Community
Medicine
University of Missouri-Columbia
Columbia, Missouri

Peggy Connerton, Ph.D.
AFL-CIO Service Employees International
Union
Washington, D.C.

Christine Gasciel
Manager of Health Care Plans
General Motors
Detroit, Michigan

Huey Mays, M.D., M.B.A., M.P.H.
CEO, American Health Education
Advancement Decision (AHEAD), Inc.
Philadelphia, Pennsylvania

Elizabeth M. Short, M.D.
Associate Chief Medical Director for
Academic Affairs
Department of Veterans Affairs
Washington, D.C.

Robert L. Summitt, M.D.
Dean, College of Medicine
University of Tennessee Health Science
Center
Memphis, Tennessee

Modena H. Wilson, M.D., M.P.H.
Director, Division General Pediatrics
Johns Hopkins University School of
Medicine
Baltimore, Maryland

COGME Staff

Enrique S. Fernandez, M.D., M.S.Ed.
Executive Secretary
Director, Division of Medicine

F. Lawrence Clare, M.D., M.P.H.
Deputy Executive Secretary
Deputy Chief, Special Projects and Data
Analysis Branch
Division of Medicine

**Stanford M. Bastacky, D.M.D.,
M.H.S.A.**
Chief
Special Projects and Data Analysis Branch
Division of Medicine

P. Hannah Davis, M.S.
Staff Liaison, Minorities in Medicine Issues
Statistician

C. Howard Davis, Ph.D.
Staff Liaison, Medical Credentialing and
International Medical Graduate Issues
Economist

Paul J. Gilligan, M.H.S.
Staff Liaison, Competencies for A New
Environment

Jerald M. Katzoff
Staff Liaison, Physician Workforce and
Medical Education Consortia Issues

Helen K. Lotsikas, M.A.
Staff Co-Liaison, Competencies for A New
Environment
Health Manpower Education Specialist

John Rodak, M.S. (Hyg.), M.S. (H.S.A.)
Staff Liaison, Geographic Distribution
Issues

Eva M. Stone
Committee Management Assistant

Velma Proctor
Secretary

CONTRIBUTIONS

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Executive Summary

Between the time it issued its first report in 1988 and the present, the Council on Graduate Medical Education (COGME) has repeatedly voiced its concern that minorities are greatly underrepresented in medicine, and has made wide-ranging recommendations to address the consequences of a physician work force that does not reflect the nation's racial and ethnic diversity. COGME's Fourth Report, issued in 1994, argued that efforts to increase minorities in medicine are justified, not only because the nation values equal opportunity, but also because the nation's health depends on a physician work force that reflects the nation's increasingly diverse population.

This report, the twelfth since COGME's inception, contends that, despite nearly two decades of efforts to increase minority representation in medicine, many minorities remain critically underrepresented at every level of medicine. COGME's attention to minority representation in medicine continues during a period when policy changes severely impact minority physicians and potentially the health of minority populations. Changes in affirmative action policy have already begun to erode the meager and hard-won gains in the underrepresented minority physician work force that have been made in the last 20 years. Unfortunately, these attitudinal shifts occur at a time when disparities in health between minority groups and whites are in some instances increasing, and the entry of underrepresented minorities into medical schools is losing ground. Moreover, changes in the systems of paying for and providing medical care, especially under the spreading influence of managed care, will surely impact many aspects of work force education and practice.

This report focuses on several issues relevant to minorities in medicine: the implications for medicine of the nation's rapidly changing demographics; the health status of minority populations and the important role minority physicians play in improving minority access to care; trends in minority participation in medicine; and programs that work effectively to increase the level of minority participation in medicine. Based on its findings, the report makes recommendations to address these issues.

IMPLICATIONS OF CHANGING DEMOGRAPHICS IN THE UNITED STATES

Today, minority populations are the fastest growing segments of the U.S. population. Black Americans, Hispanic Americans, Asian Pacific Americans, and American Indians/Alaska Natives made up 26.4 percent of the U.S. population in 1995. By 2010, according to U.S. Census Bureau projections, these groups will make up 32.0 percent of the population, and, by 2050, 47.2 percent. Thus, physicians of the next century will provide care to a population whose characteristics will differ markedly from those of the population in the United States today, and who may have significantly different patterns of disease and health care needs. The report contends that these projected demographics call for two parallel responses: enlisting greater numbers of minority physicians into the work force; and training all physicians to become culturally competent to care for all populations. Physicians must learn appropriate communications skills, understand ways to identify health beliefs in different groups, and understand the barriers and biases that limit access to health care systems.

THE HEALTH STATUS OF MINORITY POPULATIONS

Black Americans, Mainland Puerto Ricans, Mexican Americans, and American Indians/Alaska Natives have some of the worst health indicators among U.S. population groups. Some indicators of poorer health status, which vary by and within specific minority populations, include lower life expectancy, greater prevalence of chronic diseases, and poorer outcomes for pregnancy. In addition, minorities obtain some technological and surgical procedures and routine health care preventive services less frequently than whites do.

The report contends that physicians from racial and ethnic minority groups can help improve access to care for minority groups. These minority physicians are more likely than white physicians to practice in underserved areas and are more likely

to care for minority, poor, underinsured, and uninsured persons. At the same time, to adequately serve the diverse minority population, all physicians need to be appropriately trained in cultural competency.

TRENDS IN MINORITY PARTICIPATION IN MEDICINE

Minorities are underrepresented at all levels of medicine. In 1997, black Americans, Hispanics, and American Indians/Alaska Natives represented approximately 23.6 percent of the population, while only 12.2 percent of all enrollees in allopathic medical schools were underrepresented minorities.* Between 1996 and 1997, there was a 7.1 percent decline in underrepresented minority new entrants to U.S. medical schools. Moreover, minorities who attend medical school may find themselves with few minority role models and mentors, since minorities still are greatly underrepresented on faculties of U.S. allopathic medical schools. After reviewing medical school enrollments and other data, the report sets new goals for minority representation in medicine.

PROGRAMS TO INCREASE MINORITY REPRESENTATION IN MEDICINE

This section of the report describes efforts designed to attract minorities into medicine and support them throughout their undergraduate and medical school education. Successful programs include high school and undergraduate science and health career programs; articulation agreements between high schools, colleges, and medical schools; academic enrichment programs; and the inclusion of strong minority affairs offices in medical schools. Public and private monies have supported these programs. Admission policies that do not rely solely on Medical College Admission Test (MCAT) scores and grade point averages may be successful in producing highly qualified physicians.

The report also argues that affirmative action efforts to address ongoing barriers to minority entry in medicine continue to be necessary to

* Population percents provided here are for blacks (not of Hispanic origin), American Indians, Eskimos and Aleuts (not of Hispanic origin), and all persons of Hispanic origin. These population groups correspond with those enrolled in allopathic medical schools with the exception of Hispanic enrollees. Only Mexican Americans and Mainland Puerto Ricans are counted as Hispanic enrollees, because they are underrepresented in the medical profession.

achieve equity. Recent court rulings have weakened affirmative action measures. California's Proposition 209, prohibiting consideration of race or gender in education, contracting, or public employment, may have produced a far-reaching ripple effect on minority student entry in medical school. Historically, federal courts have upheld race-based preferences to cure present effects of past discrimination, to address manifest imbalance in the representation of racial groups within specific categories, and to foster diversity in student admissions. Courts have looked more favorably on programs that: remedy racial imbalance and do not simply maintain racial balance; do not violate the rights of non-minorities; have flexible goals as opposed to quotas; are not arbitrarily structured; are not perpetual; and are alternatives to race-neutral efforts that have failed or are unworkable.

RECOMMENDATIONS

Based on its findings, COGME makes the following recommendations in order to move toward greater equity for minorities in medicine and to improve the health status of minorities.

GROUP I RECOMMENDATIONS: The last 20 years have provided insight into the programs and resources required to facilitate minority entry into medicine. To strengthen and sustain these efforts, and to achieve proportionate minority representation in medicine, COGME makes the following recommendations:

1. **Critically examine the role of standardized test scores and grade point averages for admission to medical school and resident placement. These measures may be more predictive of science achievement than success as a physician. Criteria to determine alternative characteristics desirable in medical students need to be developed.**
2. **Allow osteopathic medical schools and partners with osteopathic schools to have full access to funds to enhance minority entry into medicine and science careers.**
3. **Encourage public and private organizations to agree collectively upon a nationwide strategy for duplicating successful models and dedicate a budget to developing, implementing, and evaluating the impact of these strategies. Widely disseminate and publicize successful programs.**

4. To continue to make progress toward a more representative participation of minorities in medicine, establish a goal of 4,500 underrepresented minority medical school matriculants by the year 2010 and 6,000 by the year 2020. Resources and efforts to achieve these goals should reflect an understanding of the enormous challenges the nation will face in reaching these objectives. Appropriate targets should be met at every point of the educational pipeline, beginning in middle school.
5. Encourage and reward collaborative efforts to increase the number of academically prepared minority students, between and among institutions at multiple levels of the education continuum, using governmental matching funds and financial incentives to academic medical centers.
6. Develop partnerships with national and local media, advertising agencies, and video companies to implement innovative, culturally appropriate campaigns describing opportunities in science and health careers for minority and disadvantaged children.
7. Support more research to assess the impact of rising medical student debt on the entry of minorities into medicine and on the future impact of such debt on career choice and place of service.
8. Assure the availability of financial assistance to underrepresented minorities throughout all levels of education through public and private sector scholarships and loans.

GROUP II RECOMMENDATIONS: *Given the changing demographics of the U.S., physicians will care for increasingly diverse populations, but the diversity of the physician workforce is not keeping pace with the diversity of the nation. Physicians need to have competencies that promote high quality care of culturally, racially, and ethnically diverse populations. To address issues of cultural competency in medicine, COGME makes the following recommendations:*

1. Convene a panel to define and develop consensus on the definition of cultural competency in medicine. The Public Health Service of the U.S. Department of Health and Human Services, the Asso-

ciation of American Medical Colleges (AAMC), the Association of American Colleges of Osteopathic Medicine (AACOM), and others concerned with medical education should participate in selecting members for the consensus panel.

2. Private and public organizations should offer funding for the development, implementation, and evaluation of curricula and programs that promote cultural competency in medical schools, residency training, and practice settings, including managed care.
3. Medical schools, residency programs, medical specialty organizations, and continuing medical education programs should incorporate, as essential elements of their required curricula, teaching methods and experiences that assure cultural competency in medicine.
4. The National Board of Medical Examiners, the National Board of Osteopathic Medical Examiners, and specialty board certification and accreditation bodies should review examinations for appropriate assessment of cultural competency and make appropriate changes to reflect assessment of cultural competency. Accreditation standards for medical schools should also include an assessment of cultural competency.
5. Managed care plans should develop targets for minority physician representation and track their success in achieving these targets. Measures of quality should include the ability of managed care plans to deliver culturally competent care with adequate numbers of minority physicians and staff who demonstrate cultural competency.

GROUP III RECOMMENDATIONS: *Minorities should have access to all specialties and career choices in medicine, including academic medicine. More research is necessary to understand the factors influencing minority specialty choice.*

1. The Bureau of Health Professions (BHPr), the AAMC, and the AACOM should sponsor research to identify and eliminate any barriers to underrepresented minority entry into medical and surgical specialties. Medical and surgical specialty

organizations and societies should support research to determine whether minorities have the same flexibility in selecting their specialties as do non-minorities.

2. As COGME and others consider policies to decrease the number of federally supported positions in specialty graduate medical education programs, they should track the impact on underrepresented minority participation in medical and surgical specialties and devise and advocate remedies for any disproportionate impact.
3. By 2010, underrepresented minorities should constitute at least 10 percent of medical school faculty. Every academic medical center should have in place specific programs and a dedicated budget for identifying and supporting underrepresented minority students with an interest in academic medicine.
4. Managed care organizations should develop training and mentoring programs to promote minority physician leadership in these organizations. These organizations should participate in partnerships between medicine and pre-professional educational institutions.

GROUP IV RECOMMENDATIONS: *The health status of minority populations may be improved by increasing access to medical care, by decreasing health professional shortages in minority communities, and by increasing minority representation in medicine. COGME recommends that:*

1. Governmental and private funding sources should provide resources for research to document the impact of minority physicians on minority health status. They should also provide resources to

study the impact of culturally appropriate medical education and training on access to care and on minority health status. The targeted minority communities should participate in the design and planning of this assessment.

2. Community service and outreach should be an explicit mission of academic medical centers. These centers should develop criteria to recognize community service among faculty and staff and track the impact of such recognition on career choice and practice location.

GROUP V RECOMMENDATION: *Educational institutions, academic medical centers, and others should continue all constitutional and legal efforts to increase minorities in medicine.*

1. The AAMC and AACOM, with representatives from the Public Health Service, Office for Civil Rights of the Department of Education, and Justice Department, should educate universities and academic medical centers about effective and legal affirmative action programs. These bodies should develop and issue guidelines for judging the constitutionality of affirmative action programs.

GROUP VI RECOMMENDATION: *Given the changing demographics of the U.S. population and the past and current underrepresentation of minority groups in medicine, COGME recommends that:*

1. The AAMC and the AACOM track and report the participation in medicine of various racial and ethnic subgroups. Policies to promote minority entry into medicine should reflect need as portrayed by these data.

Introduction

The Council on Graduate Medical Education (COGME), established by Congress in 1986, advises the Secretary of Health and Human Services, the Senate Committee on Labor and Human Resources, and the House of Representatives Committee on Commerce about physician work force trends and related issues in health professions education. COGME also makes recommendations regarding the supply and distribution of physicians and the appropriate efforts of hospitals, medical schools, and accrediting bodies to deliver health care to the nation. The diversity of the physician work force, the training of minority physicians, and minority physicians' contributions to reducing physician shortages in certain areas are important topics directly relevant to COGME's mission.

From the time it issued its first report in 1988 until the present, COGME has repeatedly voiced its concern that minorities are greatly underrepresented in medicine, and has made a series of wide-ranging recommendations to address the consequences of a physician work force that does not reflect the nation's diversity. For example, COGME's Third Report, issued in 1992, recommended that the nation provide financial incentives, including loan and scholarship programs, to recruit and retain more underrepresented minorities. Its Fourth Report, published in 1994, noted that efforts to increase minorities in medicine are not only justified because the nation values equal opportunity, but also because the nation's health depends on a physician work force that reflects the increasing diversity of the nation.^{1,2,3,4}

Despite two decades of efforts to increase minority participation in medicine, minorities remain critically underrepresented in medical education at all levels, from medical school applicants to faculty. COGME's continued attention to minority representation in medicine is especially critical during a period in our nation when rapid changes impact minority physicians and the health of minority populations. Changes in society's political will, generated by changes in government policy and the courts, threaten to erode the meager, hard-won gains in the underrepresented minority physician work force that have been made in the last 20 years. These changes occur at a time when disparities in health between minority groups and whites are in some instances increasing, while underrepresented minority entry into medical school is losing ground. Moreover, changes in the systems of paying for medical care, primarily managed care and the emergence of for-profit medicine, may have a substantial impact on minorities.

This report focuses on major issues related to minorities in medicine. These issues include:

- the health status of minorities and the important role minority physicians play in improving minority health and access to care;
- recent trends in minority participation in medicine; and
- a discussion of programs that are effective in improving minority entry into medicine.

Implications of Changing Demographics in the United States

Today, minority populations are the fastest growing segments of the U.S. population. They will represent a substantial proportion of the work force of the twenty-first century in a way that is different from the pattern that exists today (Figure 1).

Black Americans, Hispanic Americans, Asian Pacific Americans, and American Indians/Alaska Natives, which made up 26.4 percent of the U.S. population in 1995, will grow to 32.0 percent of the U.S. population by 2010 and 47.2 percent by 2050. Persons of Hispanic origin will become the largest minority group, and whites (not including Hispanic Americans) will represent a smaller proportion of the total population than they do now. Projections by the U.S. Census Bureau indicate that the percentage of whites of non-Hispanic origin will decrease from 73.6 percent in 1995 to 52.8 percent in 2050. During that same period, the percentage of Hispanics (of all races) will more than double from 10.2 percent of the population to 24.5 percent. The population of black Americans (not of Hispanic origin), currently the largest minority group in the United States, will increase from 12.0 percent to 13.6 percent. American Indians/Alaska Natives will increase only slightly from 0.7 percent to 0.9

percent, but the percentage of Asian Pacific Americans will nearly triple, from 3.3 percent to 8.2 percent (Figure 1).⁵

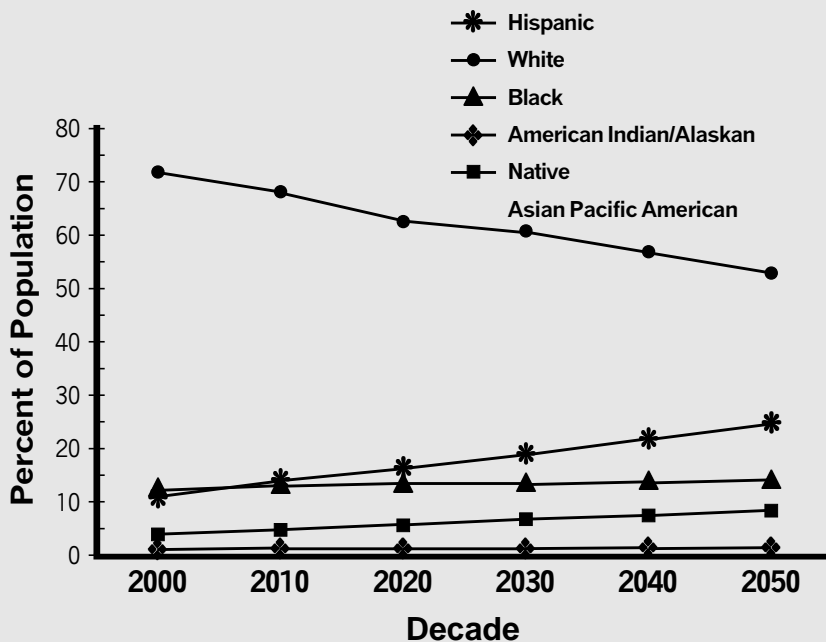
The population changes will impact some areas of the U.S. more than others, especially in the next 20-25 years. For example, the U.S. Census Bureau projects that between 1995 and 2020, the Hispanic population in the Western states will increase by 104 percent, while the Northeastern states will see a 77 percent increase in their Hispanic population. With more than 25 million Hispanic residents projected by the year 2020, the West will have approximately 1.5 times the Hispanic population of the South and more than three times the Hispanic population of the Northeast. The Asian Pacific American population will more than double in each region, with the Northeast and West experiencing the largest proportional increases in that population. The West will have more persons of Asian Pacific American origin than all other regions combined. Although the population of blacks will increase by about 30 percent in all regions of the United States, the South will have the largest percent increase (37.6 percent), with the result that one-fifth of all Southerners in 2020 will be of African-American origin.⁶

As these projections indicate, physicians of the next century will provide care to a population with markedly different ethnic and cultural characteristics than the population in the United States today. In addition to being more diverse, the population will be older. These projected demographic trends will influence significantly the patterns of disease and the health care needs of the population, and should prompt a reexamination of the effectiveness of policies to increase diversity in the physician work force.

WHO IS CONSIDERED A MINORITY?

The word “minority” has always been defined in terms of a number or ratio for example, a population subgroup that is less than 50 percent of the total population. In 1970, the Association of American Medical Colleges (AAMC) coined the term “underrepresented minority” (URM) to reflect the disparity between the proportion of health care providers from certain racial and ethnic groups and their total proportion in the U.S. population.

FIGURE 1 – Population Projections by Race and Ethnicity, 2000 - 2050



Source: U.S. Bureau of the Census, Current Population Reports.

which met this criterion were black Americans (born in the United States), Mexican Americans, Mainland Puerto Ricans (who received a large proportion of their primary education in the continental United States), and American Indians/Alaska Natives.*

The term “underrepresented minority” has attained more than a numerical connotation, however. The term also refers to groups who have lived in this country a long time (measured in decades, and usually more than 100 years), and who have experienced educational and economic disadvantages caused by racism and discrimination. The Federal Government and specifically the U.S. Public Health Service expanded the consideration of minority status to include Asian Pacific Americans for those seeking grants or contracts.

Over the last 10 to 15 years, new “minority groups” have been emerging in different geographical areas within the United States. Those groups include Latinos from the Dominican Republic, Panama, and Central America; blacks recently arrived from the Caribbean and Africa; and Vietnamese and other Asians who are disadvantaged by socioeconomic and language barriers. Some medical schools have defined “minority” in relation to the geographic trends in their areas.⁷ The AAMC has recently developed a process to track the participation in medicine of subgroups of various racial and ethnic groups. This information will be extremely helpful in monitoring the entry of new minority groups into medicine and in developing appropriate policies regarding minority entry into medicine.

IMPLICATIONS FOR CULTURAL COMPETENCIES IN MEDICINE

The rapidly changing demographic composition of the U.S. population compels a re-evaluation of who will be the physician of the future, and how that physician’s background and sociocultural experiences will prepare him or her for understanding each patient’s needs. When physician and patient differ with respect to race, ethnicity, language, religion and values, ensuring fair, equitable, and culturally sensitive care is more challenging.

It is, therefore, essential to increase the diversity of the physician work force in order to

ensure that patients receive culturally appropriate and sensitive care. People who share the same backgrounds, cultural norms, experiences, and values are more likely to feel comfortable with each other and to communicate better. This perception not only influences social interactions, but it deeply affects the very important doctor-patient relationship as well. In a study of persons with Limited English Proficiency (LEP), a recent report prepared for the Department of Health and Human Services cites several studies that focus on the physician-patient interaction when a different language or culture is involved.⁸

Effective communication does not take place if understanding does not result from conversation. Isham states that understanding is largely drawn from our background information and prior experiences.⁹ According to Woloshin, communication is key to the clinician’s use of the medical interview as a tool in patient treatment.¹⁰ Although interpreters can assist physicians in communicating with LEP patients and thus overcome language barriers, recent recommendations suggest that health care professionals should become more involved in the communication process by seeking a greater understanding of cultural differences among their patient populations.¹¹

Because many minorities are still underrepresented in the health professions, non-minority physicians will continue to care for the growing numbers of minority persons and must, therefore, become knowledgeable about cultural issues that affect minority health. Consequently, the best approach to treating a diverse population requires two parallel efforts: increasing minority representation in medicine; and working to prepare all physicians to be culturally competent in order to care for all populations.

As yet, cultural competency as it applies to the practice of medicine is not well defined, and there is no consensus about how to teach the knowledge, skills, and attitudes necessary to care for diverse populations. However, many physicians and medical educators would agree that cultural competency includes certain common elements: appropriate communication skills; an ability to identify health beliefs of different groups; and an understanding of biases and barriers that inhibit access to health care. Becoming culturally competent is viewed as a developmental process with five elements: a) valuing diversity; b) making a cultural self-assessment; c) understanding the dynamics when cultures interact; d) incorporating cultural knowledge; and e) adapting practices to the diversity of the population in the setting.¹² A major focus of the recommendations of the Pew Commission’s recent report, “Critical

* The term “American Indian” refers to enrolled members of federal and/or state recognized tribes as well as people who are self-identified as “American Indian” on the U.S. Census. Some tribes have a minimum blood quantum requirement for membership, while others have a simple descendant requirement. “Alaska Native” refers collectively to Eskimos, Aleuts, and American Indians who are indigenous to Alaska (James W. Hampton, MD, 1996).

Challenges: Revitalizing the Health Professions for the Twenty-first Century,” is the need to ensure that students represent the ethnic diversity of the country and that practitioners appreciate the growing diversity of populations and learn to understand health status and health care through different cultural values.¹³

The inability of medical systems and medical providers to break down barriers posed by race, ethnicity, religion, and economic disparity contributes to a distrust of the medical system by some patients. Besides understanding cultural differences, physicians must avoid discriminatory behaviors. Comer and Adams emphasize the importance of recognizing the impact of racism on the clinical interaction.^{14,15}

In addition to the shifting demographics of the population, the systems for the delivery and financing of health care are rapidly changing and affecting the way in which patients gain access to care and physicians deliver care. Achieving cultural competency becomes ever more challenging as the penetration of managed care into health care delivery increases. Managed care, formerly confined to middle class populations, has now expanded into more socioeconomically varied groups. A recent report by Ware and associates suggests that chronically ill, poor, and elderly patients may not fare as well as middle class populations in managed care.¹⁶ While not bearing

directly on the issue of culture, their study suggests that managed care organizations may need to revisit their methods of case management when presented with populations different from those for which the systems of care were developed.

Lavizzo-Mourey and Mackenzie have succinctly discussed the changing population in managed care as one of two important trends that have accompanied managed care.¹⁷ Cultural competency must focus not only on the individual doctor-patient relationship, but also on broader health issues. Lavizzo-Mourey suggests that cultural competency involves the integration of three population-specific issues:

1. The delivery of culturally appropriate health care as related to beliefs and cultural values;
2. An epidemiological perspective on disease incidence and prevalence in ethnic subpopulations; and
3. Treatment efficacy among different populations.

Given the disturbing trends in the health status of minorities, documented in the next section, culturally appropriate health care and epidemiological perspectives on disease are critically needed to equip physicians with the tools needed to provide effective care to all ethnic and cultural populations.

The Health Status of Minority Populations

In 1984, the U.S. Department of Health and Human Services (DHHS) documented the extent of the disparities in health among minority groups in the United States. The report focused on the minority groups of blacks, Hispanics, American Indians/Alaska Natives, and Asian Pacific Americans. The DHHS Secretary's 1985 report estimated that thousands of excess deaths in these groups were largely attributable to cancer, cardiovascular disease, diabetes, infant mortality, substance abuse, and violence.¹⁸ Even today, the overall health status of minorities is worse than that of whites, despite increases in both the number of physicians nationally and national health expenditures.

Differences in health insurance coverage create real differences in health status among the races. Lack of access to health services, caused by a lack of insurance or an inability to pay, has been associated with disparities in health outcomes.^{19,20,21} In 1995, 84.6 percent of the U.S. population was covered by health insurance for some or all of the year. However, while only 14 percent of whites were uninsured, 21 percent of blacks and 33 percent of Hispanics had no health insurance that year.²² Moreover, even when income is accounted for, studies point to continued unequal access to certain medical procedures for blacks compared with whites, suggesting that racial differences in treatment exist and transcend income.²³

At the same time, compared with their distribution in the United States, black Americans and Hispanics are overrepresented among those insured by Medicaid. In 1995, 25 percent of the 36 million Medicaid recipients were black American, 17 percent were Hispanic, and 45 percent were white. Ayanian et al., found differences between those with private insurance and those with either Medicaid or no insurance, so Medicaid status per se may not equalize either access to care or health outcomes.¹⁹

Cultural factors also play a central role in minority health care issues, adding weight to the argument that culturally competent physicians will be necessary to treat minority patients. The absence of interpreters when English is not the patient's first language, a patient's lack of affinity with his physician, differing health practices, psychosocial, and environmental stresses, and a variety of cultural differences have an impact on the health status of minority persons.^{24,25,26} The racial and ethnic groups which make up the

minority populations in the United States are overrepresented among the groups that receive disproportionately fewer health care services. Patients who are less acculturated and less able to speak English are less likely to receive outpatient care for physical or emotional problems.

The health status of Americans has been tracked using a variety of indicators that provide some insight into the health problems facing the country and some indication of the effectiveness of programs to improve the nation's health. Table 1 provides a summary of these indicators for racial and ethnic groups in the United States. A more detailed discussion of health status among these groups follows.

HEALTH STATUS OF BLACK AMERICANS

Blacks (including those of Hispanic origin) are the largest minority group in the United States, comprising 33,144,000 people or 12.6 percent of the population, as reported by the U.S. Bureau of the Census for 1995. (Non-Hispanic blacks comprised 31,598,000 or 12.0 percent of the population.)²⁷ Diversity exists within the black population. For example, blacks who emigrated from the Caribbean during this century have retained a specific identity. Although the U.S. Census does not contain detailed data on the proportion of black Americans who are West Indian or members of other subgroups, major cultural differences between these subgroups exist.

Like other minorities in the nation, black Americans are considerably more likely than whites to be poor. In 1995, nearly one-third (29.3 percent) of all blacks had annual incomes below the poverty level, while just 13.8 percent of all Americans were poor. Forty-two percent of black children less than 18 years of age were poor—more than two and one-half times the percentage (16 percent) of white children in poverty. Twenty-two percent of black adults 18-64 years old were poor compared with 9.6 percent of white adults, and 25 percent of black adults 65 years and over were poor compared with 9.2 percent of elderly whites.²⁸

Black Americans are not only poorer than white Americans, but they are also sicker. Major differences are found in infant mortality, overall life expectancy, cardiovascular disease, cancer, AIDS, and homicide rates.

TABLE 1 – Selected Health Indicators by Race/Ethnicity, 1995

	White	Black	Hispanic	American Indian/Alaska Native ¹	Asian Pacific American
Infant Mortality Rate ²	6.3	14.9	6.9	8.8	5.5
% Live Births w/ Prenatal Care in First Trimester	83.5	70.3	70.4	62.0	77.6
Life Expectancy at Birth (M/F, years)	73.4/79.6	65.4/74.0	NA	73.2*	NA
Age-Adjusted Mortality Rate ³	477.6	758.6	378.7	594.1	293.2

¹ American Indian/Alaska Native (AI/AN) data are from 1991-93 and are for Indian Health Service populations

² Per 1,000 live births

³ Per 100,000 population

* Male and female combined

NA = not available

Sources: Monthly Vital Statistics Report; Vol 45 no 3, Supp 2, NCHS, 1996 [for all white, black, and Hispanic statistics and APA age-adjusted mortality rate].

1996 Trends in Indian Health, IHS [for AI/AN statistics on infant mortality rate, life expectancy, and age-adjusted mortality rate].

Regional Differences in Indian Health, 1996, IHS [for AI/AN percent of live births with prenatal care in first trimester].

Health US, 1995 [for APA percent of live births with prenatal care in first trimester].

Infant Mortality: The infant mortality rate of blacks is more than double that of whites.²⁹ In 1995, the rate was 14.9 deaths per 1,000 births for blacks, and 6.3 for whites. The ratio of black to white infant mortality has increased for much of the last 10 years because white infant mortality rates have declined more rapidly than black rates. Nearly 60 years ago, in 1940, the ratio of black to white infant deaths was 1.6, but it grew to 2.4 in 1995. Low birth weight is a major risk factor for infant mortality. The percent of low birth weight infants born to black mothers is more than twice the percent born to white mothers.³⁰ Even when income differences are factored in and financial access to prenatal care is assured, black women use prenatal care later and less often and give birth to a higher proportion of low birth weight babies.^{31,32} Murray and Bernfield suggest that lower marriage rates, child care problems, transportation difficulties, work schedule complexities, and differences in the perceived value of prenatal care are possible factors related to lower levels of prenatal care among black women.

Life Expectancy: In 1995, the estimated life expectancy for black males was 65.4 years, compared with 73.4 years for white males. Black females fare better than black males: their life expectancy is 74.0 years, although this rate is less

than the 79.6 years for white females.³³ The gap between black men and white men has increased in recent years because the rise in life expectancy of black men has leveled off.³⁴ Cardiovascular disease, homicide, cancer, and infant mortality account for three quarters of the difference. There are also important differences in death rates among blacks depending on the geographical areas where they live in the United States. For example, the annual excess mortality rate for black men living in Harlem was dramatically higher than for black men of similar economic status living in Black Belt Alabama (1,296 vs. 338 per 100,000 population of the respective communities). Differences in death rates among areas of the country are thought to relate to differences in availability of health care resources, housing conditions, relative crowding, and crime rates.³⁵

Cardiovascular disease: In 1993, the age-adjusted death rates from cardiovascular disease were 267.9 for black men versus 190.3 for white men, and 165.3 for black females compared with 99.2 for white females. Among black men, the age-adjusted death rate from stroke was 1.9 times that of white men; among black women, it was 1.8 times that of white women.³⁶

Cancer: Blacks have higher cancer rates and higher mortality from cancer than do whites. They survive fewer years with the disease. Between 1970 and 1993, mortality rates from malignant neoplasms increased 21 percent for black men and 10 percent for black women, compared with only 1 percent for white men and 2 percent for white women.³⁷ Although black women have lower incidence of breast cancer than white women, they have higher age-adjusted mortality rates from the disease.³⁸ Mortality rates for blacks are also higher than whites for cancer of the cervix, esophagus, larynx, lung, pancreas, and prostate, and for multiple myeloma.³⁹

AIDS: The 1995 prevalence rates per 100,000 population of AIDS cases indicate a far more severe health burden upon blacks (males/females, 199.5/61.2) than whites (males/females, 36.1/3.7). Between 1992 and 1993, the number of AIDS cases increased by 124 percent among blacks aged 13 and older, compared with 114 percent for the same age group of whites. (The number of AIDS cases in 1994 fell for both races, but at a lower rate for blacks than for whites.)

Black and Hispanic women comprised only 22 percent of the female population, but 76 percent of 1994 AIDS cases among women. Eighty-four percent of all children with AIDS were either black or Hispanic.⁴⁰ Other sexually transmitted diseases are also disproportionately represented among blacks. In 1994, blacks accounted for 81 percent of the total reported cases of gonorrhea and 87 percent of all reported cases of primary and secondary syphilis. The rates per 100,000 of congenital syphilis among blacks, Hispanics, and whites were 202.1, 66.9, and 4.2, respectively.⁴¹

Homicide: The age-adjusted homicide death rates in 1993 were almost eight times higher for black men than for white men (70.7 vs. 8.9), and more than four times higher for black women than for white women (13.4 vs. 3.0).⁴²

Significant disparities exist between blacks and other groups in other conditions and consequences of health status. In 1993, the estimated prevalence of diabetes mellitus in blacks and Mexican Americans was 9.6 percent, compared with 6.2 percent in whites.⁴³ In 1994, black workers (civilian, non-institutional population) had 18.4 restricted activity days per person, compared with 15.7 for white workers.⁴⁴ In 1994, blacks missed 4.0 days of work, compared with 3.0 days missed by whites.⁴⁵

The American Medical Association's Council on Ethical and Judicial Affairs has framed the disparities in the quality of health status among black and white Americans as indicative of differences in both need and access.⁴⁶ While economic circumstances clearly contribute to the lack of access to health services, even those blacks above the poverty level have less access to medical care than do their white counterparts. Recent studies suggest that even when blacks gain access to the health care system, they have fewer ambulatory visits and are less likely than whites to receive certain surgical and other therapies. Compared with their white counterparts, black Medicare recipients are less likely to undergo mammography, to receive influenza vaccination, to undergo percutaneous transluminal coronary angioplasty, and to undergo coronary artery bypass surgery.⁴⁷

Black and white Medicare patients in the United States experienced differential rates in obtaining coronary artery bypass graft surgery. Sex and age-adjusted rates were computed for 1986; the rate of performance of this surgery for whites was 27.1 per 10,000 and for blacks was 7.6 per 10,000. There are other technological and surgical procedures, such as operations on the musculoskeletal system, which minorities obtain less

frequently than whites.⁴⁸ The studies offer few clues as to the reasons for these disparities, although some researchers suggest cultural differences, unspecified patient preferences, or simply a lack of information by black patients. Conscious or unconscious racism by some physicians also is posed as at least a possible alternative explanation.⁴⁹

HEALTH STATUS OF HISPANIC AMERICANS

Hispanic Americans are the second largest minority in the United States, with 26,936,000 residents (of any race) in 1995 or 10.2 percent of the population.⁵⁰ The term "Hispanic" recognizes the similarities of people with Spanish as their native language, overlapping culture, and a connection to origins in Spain. Many Hispanic groups prefer the term "Latino" as recognition of their Latin American roots, which can include Indian and African influences.

Hispanics are one of the fastest growing populations in the United States, having increased by more than 50 percent between 1980 and 1990.⁵¹ In 1990, of the 22.4 million Hispanics (of any race) then in the United States, 60.4 percent were of Mexican origin, 12.2 percent were Puerto Rican, 4.7 percent were Cuban, and 22.8 percent were from Central America, South America, or other countries.⁵² Hispanics are also diverse in terms of socioeconomic status, the circumstances under which they came to the United States, and levels of acculturation. In 1995, 40 percent of Hispanic children under age 18 were poor, as were 25 percent of Hispanic adults age 18-64, and 23 percent of Hispanics 65 years and older.⁵³ Overall, Hispanics have the highest rate of being uninsured of any racial/ethnic group in the United States. Cuban Americans, who have the highest incomes, are more likely than other Hispanics to have private health insurance, while Mainland Puerto Ricans, with the lowest incomes, are most likely to use Medicaid.^{54,55} However, recent immigration patterns may change socioeconomic groupings among Hispanics. Newly arrived Cubans, who are not as well off financially as established Cubans, may have higher percentages lacking health insurance.

Based on data from the Hispanic Health and Nutrition Examination Survey (HHANES), Hispanics are half as likely as whites to cite a regular source of health care and twice as likely to use the emergency department as a source of primary care. Hispanic patients who speak English are more likely to have a regular source of medical care, compared with those who speak only Spanish.^{56,57}

Health data on Hispanics have only recently become available, due to the earlier lack of Hispanic identifiers on state and national instruments used to track health indicators. Death certificate data became available in 1988. Hayes-Bautista indicates that by cause of death “Latinos also have lower age-adjusted death rates due to heart disease, strokes, and cancers [than Anglos’], again, about equal to Asians.” One possible explanation offered is that Hispanic families “. . . are more likely than any other group, Anglo, black, or Asian, to be a classic nuclear family.” Latinos also were found to have high participation in the labor force. However, Hispanics have higher mortality rates due to cirrhosis, cancers of the stomach, esophagus, pancreas, and cervix, and violent deaths. Hispanic males with Mainland Puerto Rican and Cuban roots have higher rates of suicide than white males.⁵⁸

Although Hispanic women are less likely than whites to receive prenatal care in their first trimester of pregnancy, they have relatively low rates of premature birth and low birth weight babies. Puerto Rican women have the highest percent of low birth weight babies among Hispanic women and the highest infant mortality rate. Mexican Americans have the lowest percent of low birth weight babies, while Cuban Americans have the lowest infant mortality rates, lowest both for all Hispanics and for most racial groups.⁵⁹ As Hispanic women become more acculturated, their risk of giving birth to low birth weight babies increases, making the overall Hispanic infant mortality rate of 6.9 similar to the white rate. Immigrant Hispanic women had better birth outcomes than their U.S.-born counterparts, which suggests that acculturation to United States customs and certain lifestyle decisions may also carry certain risks.^{60,61}

In general, Hispanics are three times more likely than whites to have diabetes and to suffer end organ complications. Hispanics are also at increased risk for hypertension, tuberculosis, HIV infection, and alcoholism. Hispanic rates for communicable diseases, such as measles, shigellosis, giardiasis, and hepatitis A, were much higher than those for whites and blacks, but lower than those for Asians. The rate for sexually transmitted diseases, such as gonorrhea and syphilis, is approximately twice that of whites but less than that of blacks.

Mainland Puerto Ricans have the worst health status among all Hispanics in the U.S., as defined by the prevalence of chronic disease and incidence of acute medical conditions.

HEALTH STATUS OF AMERICAN INDIANS/ALASKA NATIVES

American Indians/Alaska Natives are the smallest and most diverse of all American under-represented minority groups.* The population of American Indians/Alaska Natives increased from approximately 300,000 at the turn of the century to nearly 2.0 million in 1995.⁶² In 1990, American Indians were 0.76 percent of the U.S. population; Eskimos, 0.02 percent; and Aleuts, 0.01 percent.⁶³ American Indians/Alaska Natives consist of more than 500 tribes and village units, with about half the population living outside of reservations.⁶⁴ They are younger, less educated, less likely to be employed, and poorer than the general population. In 1990, 30.9 percent of American Indians/Alaska Natives were below the poverty level, including 29 percent of those aged 65 and over and 39 percent under 18 years old.⁶⁵

The Indian Health Service (IHS), an agency of the Public Health Service within DHHS, is responsible for providing health services to American Indians and Alaska Natives that are members of federally recognized tribes. The IHS carries out its responsibility through IHS and tribally operated hospitals and health centers. In Fiscal Year 1997, the IHS service population (those eligible for IHS services) is approximately 1.43 million, more than half the total American Indian/Alaska Native population.⁶⁶ The data on American Indian and Alaska Native health indicators are based on this service population.

In spite of the IHS service system, access to health care for American Indians/Alaska Natives is difficult because of the geographic isolation of villages and communities, large reservations, and poor transportation and communications systems. Travel may require long distances on dirt roads or by air. In the past 20 years, however, IHS efforts have contributed significantly to improved health, especially

* There are differences in the name this group is called, but there should be no difference in the selection of persons included in counts. American Indian/Alaska Native is the terminology used by the Indian Health Service. The U.S. Bureau of the Census calls the same group American Indian, Eskimo, or Aleut. Data on Vital Statistics from the National Center for Health Statistics uses the term American Indian, but footnotes that the term includes Eskimos and Aleuts. Data for “Health U.S.” from NCHS uses the term American Indian or Alaska Native. The Association of American Medical Colleges uses the term Native American to describe American Indians and Alaska Natives. For consistency purposes throughout this report, the term American Indian/Alaska Native is used.

among infants and pregnant women.

Advances in sanitation and disease control have provided effective management of infectious diseases such as tuberculosis and pneumonia.⁶⁷

In calendar years 1991-1993, the leading age-adjusted cause of death among American Indians and Alaska Natives residing in IHS service areas was cardiovascular disease, followed by malignant neoplasms and accidents. The accident mortality rate among American Indians/Alaska Natives was 2.8 times higher than the U.S. average. Deaths from motor vehicle accidents accounted for more than half the accidents; the rate for such deaths was three times higher than the rate of motor vehicle accident deaths for the general population. The age-adjusted mortality rates from alcoholism were a devastating 465 percent higher for American Indians/Alaska Natives than for the U.S. population; tuberculosis, 425 percent higher; diabetes, 166 percent higher; suicide, 46 percent higher; and homicide, 39 percent higher.⁶⁸

Suicide and alcohol abuse account for an unacceptable level of preventable mortality, especially among young men. Alcohol abuse alone has been considered the number one health problem of American Indians and Alaska Natives. Abuse of other drugs has also been documented and, in some communities, abuse of inhalants continues to be a problem. However, traditional ceremonial and selected cultural practices have had some success in curtailing alcohol abuse.

In calendar years 1991-93, the age-adjusted mortality rate from diabetes for American Indians/Alaska Natives was 2.7 times that of the U.S. for all races and 3.0 times that of whites. Furthermore, the high incidence of diabetes results in a large number of American Indians/Alaska Natives with end stage renal disease that requires hemodialysis. Malignant neoplasms have increased among American Indians/Alaska Natives in the past 20 years, and cancer is the second leading cause of death in American Indians/Alaska Native women.⁶⁹

Only 62.0 percent of American Indian/Alaska Native women receive care in the first trimester of pregnancy.⁷⁰ However, the low birth weight rate is 5.8 percent, and the infant mortality rate decreased to 8.8 in calendar years 1991-93 from 22.2 in calendar years 1972-74. Still, American Indians/Alaska Natives have the highest rate of Sudden Infant Death Syndrome in the country—1.8 times greater than that of the general population.⁷¹

Professionals working with American Indians/Alaska Natives must be educated about and respectful of the cultural traditions of their

unique heritage. The traditional healing practices of many American Indian/Alaska Native cultures share a common concept of “wellness,” the belief that the mind, body, and spirit are all one and cannot be separated one from the other. A circle, which has no beginning or end, symbolizes harmony and balance of all things. The four directions, the four winds, and the four elements (fire, water, earth, and air) are symbolic of the four components of health: physical, mental, emotional, and spiritual.

HEALTH STATUS OF ASIAN PACIFIC AMERICANS

Asian Pacific Americans, the third largest minority group in the United States, consisted in 1995 of 9,357,000 people (including those of Hispanic origin) or 3.6 percent of the U.S. population. (Excluding those of Hispanic origin, the 1995 population of Asian Pacific Americans was nearly 9 million, or 3.3 percent of the U.S. population.)⁷² They speak more than 30 different languages and represent many distinct cultures.

Any examination of issues related to Asian Pacific Americans must recognize that this category is to some extent an arbitrary grouping. Statistical data on Asian Pacific Americans represent a pooling of information and mask the problems which are evident if information is analyzed according to subgroups or length of time in the United States. The Asian Pacific American population includes persons from 28 Asian countries and 25 identified Pacific Island cultures. Chinese, Filipinos, and Japanese still rank as the largest groups, although Southeast Asians, Indians, Koreans, and other groups recently have registered much faster growth.⁷³ The Asian Pacific American population also includes small Native Hawaiian and American Samoan subgroups.

Over each of the past two decades, the Asian Pacific American population has doubled, from 1.5 million in 1970 to 3.6 million in 1980, and again to 7.0 million in 1990.⁷⁴ Two-thirds of Asian Pacific Americans were born abroad, and 39 percent of all APAs entered the United States from 1980 to 1990. The immigration of new groups, some with little linguistic or cultural connection to earlier waves of Asian immigrants, has fueled the rapid growth of the Asian Pacific American population. Census data report that 35.4 percent of Asian Pacific Americans have limited command of the English language.⁷⁵ The economic and educational stratification of Asian Pacific Americans is often tied to their length of residence in this country.

The largest proportion of Cambodian, Laotian, and Hmong immigrants has come to the U.S. since 1980. These groups have among the highest family poverty rates (42.6 percent, 34.7 percent, and 63.6 percent, respectively), while other Asian American subgroups such as Filipinos and Japanese have among the lowest rates (5 percent and 3 percent). The proportion of Vietnamese Americans 25 years and older (many of whom have been in this country since the Vietnam War) who completed high school was 61.2 percent, a rate comparable to that of blacks in 1990. In contrast, other recent immigrant subgroups—Cambodian (34.9 percent), Hmong (31.1 percent), and Laotian (40.0 percent)—had significantly lower high school completion rates than Hispanic Americans (49.8 percent).⁷⁶

Table 1 suggests that the health status of Asian Pacific Americans is superior even to that of whites. These data can be misleading. The most disadvantaged subgroups of Asian-Pacific Islanders have the lowest mean age; many are young immigrants. By failing to account for these younger groups of immigrants, who carry a disproportionate burden of disease, the age-adjusted mortality figure is misleading. As these disadvantaged subgroups age, the age-adjusted mortality figure is likely to rise dramatically.

Aggregate health data on all Asian Pacific Americans, a heterogeneous group, mask in statistical averages significant health problems in some of this population, preventing subgroups with poor health indicators from being identified. For example, the Commonwealth of Massachusetts reports that, in 1995, statewide low birth weight rates were 6.3 percent overall: 5.7 percent for whites, 11.7 percent for blacks, 7.4 percent for Hispanics, and 6.8 percent for Asians. However, the low birth weight rate for Cambodians was 10.1 percent. Cambodians had the worst maternal and child health indicators among Asian Americans in Massachusetts.⁷⁷

Important ethnic differences in risk factors indicate that Asian Pacific American groups should be targeted for public health efforts concerned with obesity, hypertension, hypercholesterolemia, and smoking. Although documentation of health status for Asian Pacific Americans is limited by data collection (reporting in this category is only a recent phenomenon), there is cause for concern. Conditions endemic in the country of origin and case rates for tuberculosis and hepatitis B among Asian Pacific Americans are greater than for other minority groups. The prevalence rates for tuberculosis per 100,000 are 44.5 for Asian Pacific Americans, versus 29.1 for blacks, 20.6 for Hispanics, and 14.6 for American Indians/Alaska Natives.

IMPACT OF MINORITY PHYSICIANS ON ACCESS TO CARE

The lack of providers in disadvantaged areas has been one of the most important impediments to health care access for minority populations. In 1985, Keith et al. studied the effects of affirmative action in medical schools. This study did not actually report on the relative success of affirmative action programs on the production of minority physicians, but focused instead on the practice location decisions of minority physicians. Presumptively, if affirmative action or any other incentive program were to prove successful at increasing the number of minority graduates, then indeed minority populations would be highly likely to be more adequately served than at present. Keith found that minority graduates practiced in federally designated health-manpower shortage areas almost twice as often as non-minority graduates (11.6 percent vs. 6.1 percent).⁷⁸ This general trend held true for physicians practicing primary care, obstetrics and gynecology, internal medicine subspecialties, and general and subspecialty surgery. Keith also found, similar to past studies, that minority physicians tended to serve members of their own racial or ethnic population group more than members of other groups. Thus, increasing the population of medical practitioners in one racial or ethnic group will not necessarily serve the access needs of other minority groups.

More recently, Moy and Bartman found, by reviewing data from the 1987 National Medical Expenditure Survey, that minority patients were more than four times more likely to receive care from non-white physicians than were white patients not of Hispanic origin.⁷⁹ Low-income, uninsured, and Medicaid patients were also more likely to receive care from non-white physicians. Minority physicians appeared to care for sicker patients than did white physicians. Individuals who said they received care from black, Hispanic, and Asian American physicians were more likely to report poor health, report functional limitations, visit an emergency department, or be hospitalized. Beyond the central theme in this study that minorities are more likely to seek the services of minority physicians the study points to another issue: that minority physicians are more likely to see relatively severer illness in their patient profiles and are relatively more likely to receive lower patient fees and to deliver more free care, factors that may contribute to dissatisfaction with medicine.

Kamaromy *et.al.* reported that a recent study of 718 primary care physician practices in 51 communities in California in 1993 found that black physicians practiced in areas where the percentage

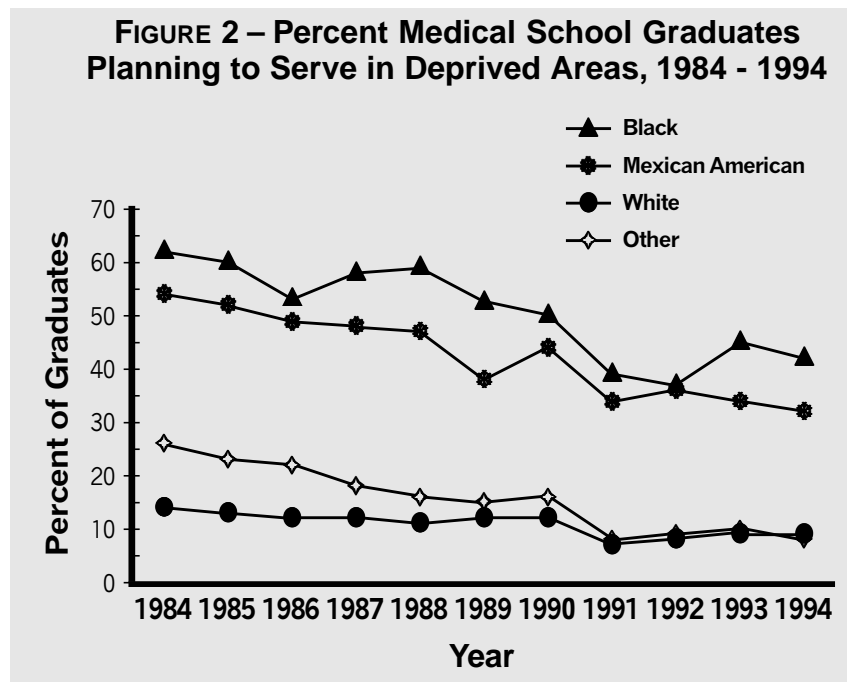
communities in California in 1993 found that black physicians practiced in areas where the percentage of black residents was nearly five times higher than in communities where non-black physicians practiced.⁸⁰ Similarly, Hispanic physicians practiced in areas where the percentage of Hispanic residents was twice as high as in areas where non-Hispanic physicians practiced. More pointedly, black physicians cared for nearly six times as many black patients as did other physicians, and Hispanic physicians cared for three times as many Hispanics as did other physicians. Black physicians cared for more patients covered by Medicaid, and Hispanic physicians cared for more uninsured patients.

Proposals to increase health care delivery to the underserved have emphasized increasing the number of generalist physicians. However, this goal can be met only if generalists are willing to practice among the underserved, and specialists are also available to these communities. Recently, in spite of overall trends away from practicing in underserved communities, substantial proportions of underrepresented minorities considering careers in the medical, surgical, and support specialties indicated plans to practice in such areas. For example, in 1994, more than 40 percent of black medical school graduates planned to practice in an underserved area (Figure 2).⁸¹

Rivo and Satcher emphasize the need to

increase underrepresented minorities in the medical profession as an important way to improve both access to care and the health status of the nation’s underserved populations.⁸² In the U.S. in 1990, white, non-Hispanics comprised 75.7 percent of the population but 80.5 percent of all physicians. In sharp contrast, black Americans comprised 11.8 percent of the population, but only 3.6 percent of all physicians; Hispanic Americans constituted 9.0 percent of the population, but only 4.9 percent of all physicians; and American Indians/Alaska Natives constituted 0.7 percent of the population, but only 0.1 percent of all physicians.^{83,84} Physician shortages exist in many communities around the country. However, such shortages are especially acute in every specialty and subspecialty in black, Hispanic, and American Indian/Alaska Native communities.

In addition to practicing more in minority and underserved areas, minority physicians can help to reduce language and cultural barriers to care and provide needed community leadership. There are numerous anecdotes of minority health professionals’ abilities to enhance the “user friendliness” of health services for minorities and, hence, the accessibility of those services. Minority physicians increase the cultural sensitivity in the way such services are organized and delivered.



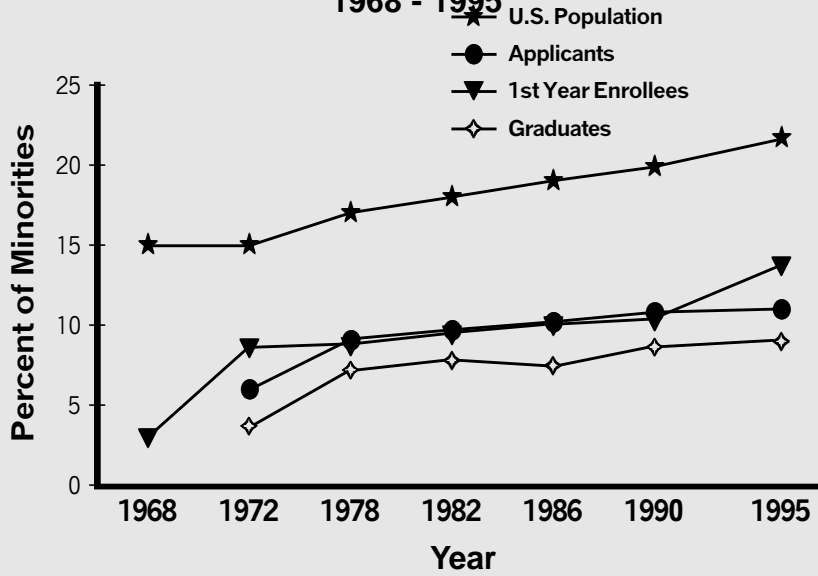
Source: AAMC, Student and Applicant Information Management System.

Trends in Minority Participation in Medicine

As we move into the next century, disparities in minority health status and the continued underrepresentation of minorities among practicing physicians present significant challenges to the nation. The trends

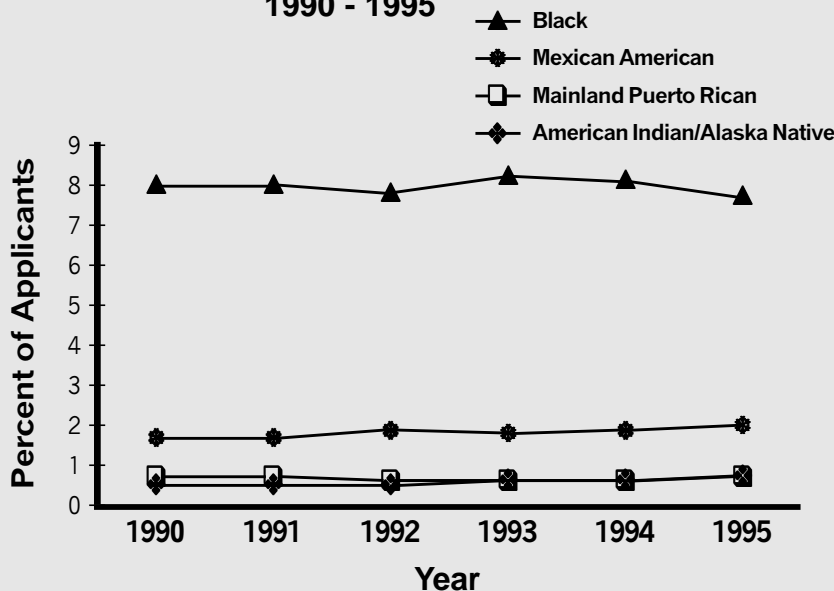
described in this section make it clear that the nation must set new goals and devise new strategies to achieve the goals for minority representation in medicine for the next century to ensure both equity and the nation's health.

FIGURE 3 – Underrepresented Minorities in Allopathic Medical Schools and U.S. Population, 1968 - 1995



Source: AAMC Section for Student Services

FIGURE 4 – Underrepresented Minority Applicants to Allopathic Medical Schools by Race/Ethnicity, 1990 - 1995



Source: AAMC: Project 3000 by 2000, Progress to Date, Year Four Program Report, April 1996

ALLOPATHIC MEDICAL SCHOOLS

Applicants: Between 1968 and 1995, the percentage of underrepresented minority applicants to medical school increased from approximately 3 percent to 11 percent. During this same period, the proportion of underrepresented minorities in the population increased from approximately 15 percent to 21 percent.⁸⁵ Although minorities have made gains, the percent of underrepresented minority medical school applicants has not kept pace with the growth in the minority population (Figure 3).

Preliminary data for 1997 show that underrepresented minority applicants remained at 11.0 percent of the applicant pool. The 1997 U.S. minority population (blacks, Hispanics and American Indians/Alaska Natives) was 23.6 percent.^{*86}

Although applications from all underrepresented minority groups combined increased between 1990 and 1995, applications decreased among some minority groups. The total number of black applicants declined from 3,659 in 1994 to 3,595 in 1995, a decrease of nearly 2 percent.⁸⁷ Although there were more than 2.7 million Puerto Ricans living in the continental United States in 1995, their percent of applicants to medical school remains discouragingly low (Figure 4).⁸⁸

Between 1996 and 1997, all applicants to medical school declined 8.4 percent while underrepresented minority applicants declined 11.1 percent.^{†89} Although the 2.7 percent difference may not be construed as a huge gap, it further hinders progress

* The categories of "underrepresented minority" and "minority" are not strictly comparable. The underrepresented minority applicants to allopathic medical schools are blacks, American Indians/Alaska Natives, Mexican Americans, and Mainland Puerto Ricans. Minority population percentages provided here are for blacks (not of Hispanic origin), American Indians, Eskimos, and Aleuts (not of Hispanic origin), and all persons of Hispanic origin. Native Hawaiian applicants are in the URM category American Indian/Alaska Native, while counted in the U.S. population as Asian Pacific Americans.

† The 1996 and 1997 statistics exclude foreign applicants, who in prior years had been distributed into the appropriate racial categories.

toward minorities gaining par representation in the profession. The numbers of American Indian/Alaska Native, Mexican American, and Mainland Puerto Rican applicants had the largest proportional declines, ranging from 14 to 17 percent.

One encouraging trend is a relatively sustained acceptance rate of underrepresented minority applicants to medical schools. The overall applicant pool today is greater than it was in 1989. While the acceptance rate for all medical school applicants declined to 37.2 percent in 1995 from 63.1 percent in 1989, for underrepresented minorities, the acceptance rate declined to 42.3 percent in 1995 from 53.4 percent in 1989, a less precipitous drop.⁹⁰ By 1997, preliminary data showed the acceptance rate for URM students steady at approximately 41.5 percent, but the acceptance rate for all applicants rose to 40.2 percent, thus narrowing the gap of a relatively higher URM acceptance rate.⁹¹

Matriculants: Between 1990 and 1995, the total number of underrepresented minority first-year (new entrant) matriculants in allopathic medical schools grew from 1,470 to 2,010 (an increase from 9.2 percent to 12.4 percent) (Figure 3). The representation of black matriculants increased from 6.6 percent to 7.9 percent. The

representation of Mexican Americans nearly doubled from 1.6 percent to 2.9 percent, and small percentage increases were also observed for Mainland Puerto Ricans and American Indians/Alaska Natives. Between 1994 and 1995, however, the total number of underrepresented minority matriculants showed no growth.⁹² Furthermore, preliminary data show that between 1996 and 1997, there was a 7.1 percent decline in underrepresented minority new entrants to U.S. medical schools; their number fell from 1,906 to 1,770, declining to a representation of merely 11.0 percent. By contrast, there was only a negligible drop in the total number of new entrants in all racial/ethnic categories between 1996 and 1997.⁹³

Total Enrollment: Between 1990 and 1995, the total number of students from underrepresented minority groups enrolled in allopathic medical schools increased from 6,084 to 8,062 (an increase from 9.3 percent to 12.0 percent of total enrollment). American Indians/Alaska Natives and Mexican Americans had the largest percentage increases in enrollment. However, there was no growth in the total number of Mainland Puerto Ricans enrolled in allopathic U.S. medical schools during this five-year period (Figure 5).⁹⁴

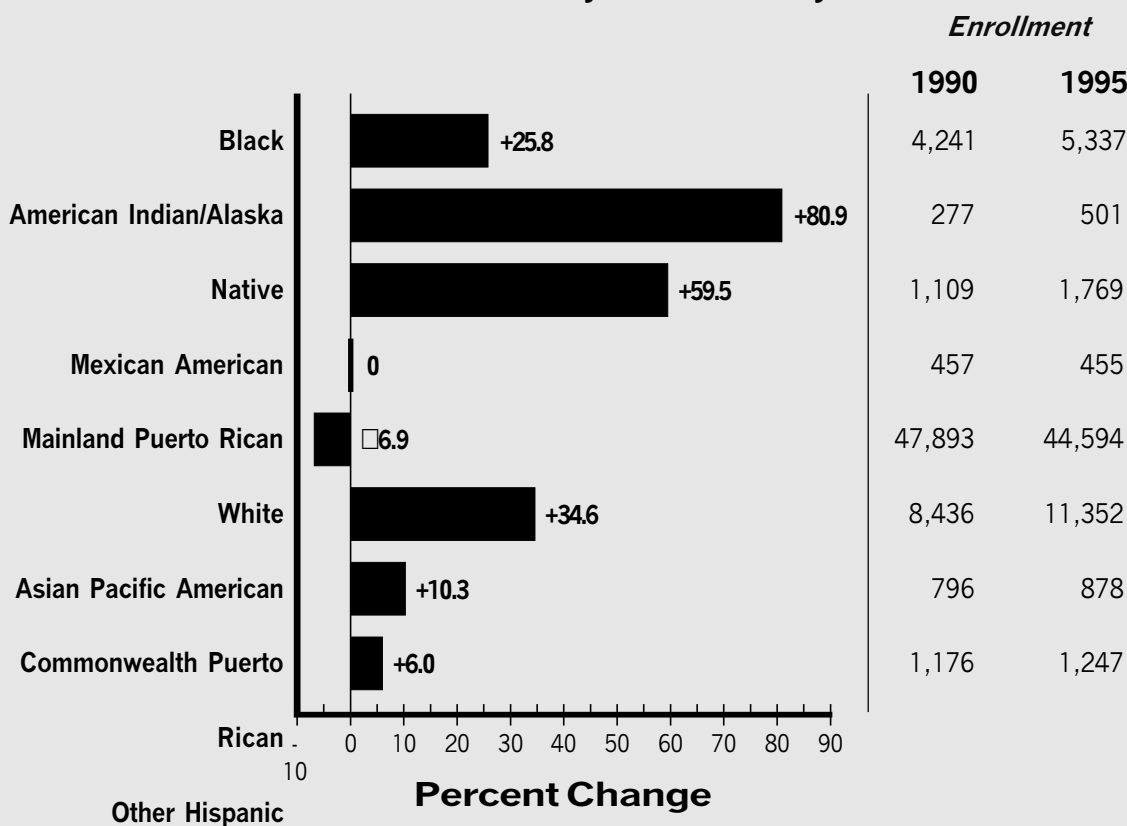
By 1997, underrepresented minority students still made up only 12.2 percent of all U.S. medical school enrollments. Total enrollment of black students

fell nearly 2 percent from 1996, and that of Mainland Puerto Ricans dropped 2.5 percent. Only the total enrollments of American Indians/Alaska Natives and Mexican Americans increased, as they had between 1990 and 1995.⁹⁵

Nearly 97 percent of all 1992 matriculants were still actively enrolled at the beginning of

* The 1996 and 1997 statistics exclude foreign applicants, who in prior years had been distributed into the appropriate racial categories.

FIGURE 5 – Percent Change in Enrollment From 1990 to 1995 by Race/Ethnicity



their fourth year of medical school. The dismissal rates for all racial/ethnic groups declined, compared with those matriculating in 1988. For underrepresented minorities, only 1 percent of the 1992 matriculants, compared with approximately 4 percent of 1988 matriculants, were dismissed by the beginning of the fourth academic year.⁹⁶ However, of the 1992 matriculants, only 61 percent of the underrepresented minority students graduated from medical school in four years compared with 84 percent of the non-underrepresented minority students.⁹⁷

Graduates: The 1995 graduating class was made up of 10.2 percent underrepresented minorities. This is a slight improvement over 1990, when they were 8.6 percent of the graduating class. While blacks, American Indians/Alaska Natives and Mexican Americans increased their representation during this time, Mainland Puerto Ricans showed no growth.⁹⁸

OSTEOPATHIC MEDICAL SCHOOLS

Overall, underrepresented minority enrollment in osteopathic medical schools increased between 1985 and 1995. After rising from 8.7 percent of the applicant pool in 1985 to a high of 13.2 percent in 1989, URM applicants to schools of osteopathic medicine receded to 9.4 percent by 1995 (figure 6). From 1985 to 1995, the proportion of blacks rose from 3.8 percent to 4.3 percent of all applicants, Hispanics declined from 4.4

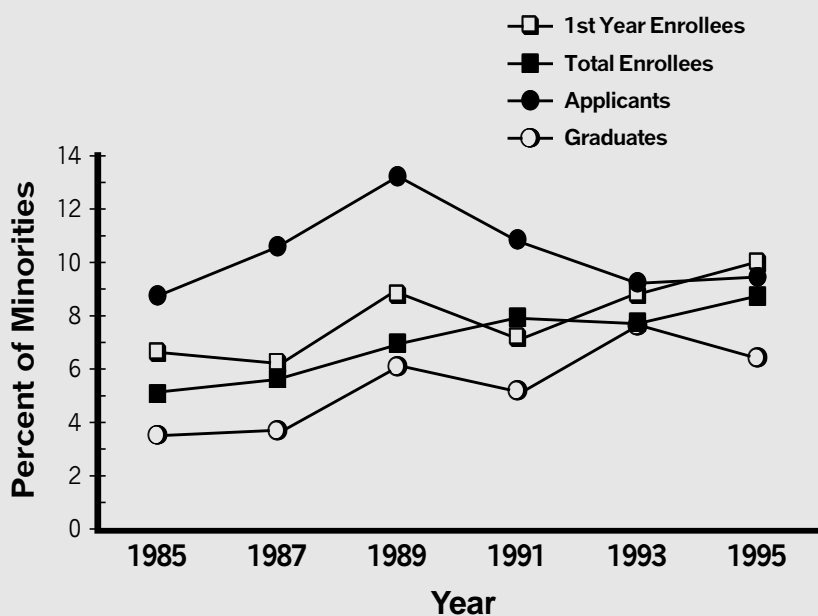
percent to 4.0 percent, and American Indians/Alaska Natives more than doubled from .5 percent to 1.2 percent. At the same time, Asian Pacific American representation increased from 6.1 percent to 19.0 percent of all applicants.⁹⁹ (Asian Pacific Americans are not included as underrepresented minorities.)

The percentage of URM students among first-year students increased from 6.6 percent in 1985 to 10.0 percent in 1995, the highest proportion reached during this period. Blacks represented 4.8 percent, Hispanics 4.0 percent, and American Indians/Alaska Natives 1.2 percent of first-year enrollment in 1995. First-year enrollment of Asian Pacific Americans in osteopathic medical schools increased from 4.0 percent in 1985 to 12.0 percent in 1995.¹⁰⁰

The URM proportion of total osteopathic medical school enrollment increased steadily from 1985 to 1990, from 5.0 percent to 7.8 percent, and remained at that level until 1995 when it rose to 8.7 percent. In that year, blacks were 3.8 percent, Hispanics 3.9 percent, and American Indians/Alaska Natives 1.0 percent of total osteopathic medical school enrollment, while Asian Pacific Americans made up 11.0 percent.¹⁰¹

The percent of underrepresented minority graduates fluctuated from year to year between 1985 and 1995. In 1985, only 3.5 percent of the graduates were underrepresented minorities. The proportion reached a high of 8.7 percent in 1992, then dropped to 6.4 percent in 1995. Asian Americans were 10.4 percent of the 1995 graduating class.¹⁰²

FIGURE 6 – Underrepresented Minorities in Osteopathic Medical Schools, 1985 - 1995



Source: AACOM Annual Statistical Reports

MEDICAL SPECIALTY INTEREST

Data from the AAMC's yearly medical school matriculation and graduation questionnaires are helpful in understanding the medical specialty interests of underrepresented minority and other students, and how those interests change over time. Between 1987 and 1990, interest in primary care among first-year matriculants from all racial and ethnic groups declined, with the biggest drop observed among Mexican Americans (Table 2). The trend for Mexican-American matriculants had reversed by 1994, while black matriculating student interest in primary care continued to decline between 1990 and 1994.

The medical school graduating classes of 1987, 1991, and 1995 had higher percentages of students expressing interest in primary care than the matriculating classes of 1987, 1990 and 1994 did. Graduates in the class of 1995 had a substantially

higher interest in primary care than the graduating class of 1991. For all three graduating classes, Mexican Americans had the highest interest in primary care (Table 3).

Table 4 shows data about primary care choice by physicians who graduated from medical school in 1987 and 1991 and subsequently completed residency training. For the 1987 graduate cohort, a higher percentage of blacks and Mexican Americans, when compared with whites,

completed primary care training. For the 1991 graduates, the differences in primary care interest by race/ethnicity had narrowed.

Linking the available data to follow one cohort, the graduating class of 1991 (matriculating in 1987), shows that the pattern of primary care interest did not diminish by graduation for whites as it did for all other racial/ethnic groups. Although all racial/ethnic groups' participation in primary care rose by the completion of graduate medical education (GME) compared to their expressed interest at the time of graduation, the rise was sharpest for non-whites (Table 5). This pattern raises the question of whether there were fewer opportunities outside primary care for minorities. Were minorities choosing generalist careers or entering them because they could not gain entry to the specialty residencies of their choice? As COGME and others consider policies to decrease the number of federally supported positions in specialty GME programs, they should track underrepresented minority participation in medical and surgical specialties.

TABLE 2 – Percent of Medical School Matriculants Expressing an Interest in Primary Care* by Race/Ethnicity, Selected Years

<i>Year of Matriculation</i>	Black	Mexican American	White	Other
1987	28.7	33.9	26.8	25.7
1990	24.2	24.8	23.1	20.9
1994	17.7	29.6	29.7	18.0

*General internal medicine, general pediatrics, and family practice

Source: AAMC

TABLE 3 – Percent of Medical School Graduates Expressing an Interest in Primary Care* by Race/Ethnicity, Selected Years

<i>Year of Graduation</i>	Black	Mexican American	White	Other
1987	29.3	38.0	29.9	26.8
1991	25.8	26.7	26.2	21.9
1995	34.0	42.0	34.0	30.1

*General internal medicine, general pediatrics, and family practice

Source: AAMC

TABLE 4 – Percent of Medical School Graduates Who Completed Primary Care* Postgraduate Training by Race/Ethnicity, Selected Years

<i>Year of Graduation</i>	Black	Mexican American	White	Other
1987	30.9	42.7	27.3	25.1
1991	32.9	33.0	30.0	28.1

*General internal medicine, general pediatrics, and family practice

Source: AAMC

CAREER PATHS

As noted earlier in this report, physicians from racial and ethnic minority groups compared with white physicians are more likely to practice in areas where there is a shortage of health professionals and to care for minority, poor, underinsured, and uninsured persons.

Nearly 39 percent of 1995 underrepresented minority graduates, compared with only 10 percent of other 1995 graduates, indicated on an AAMC questionnaire at the time of their graduation that they planned to practice in a socioeconomically deprived area. Those figures indicate that both groups are thinking more about serving traditionally underserved populations than they did in 1991, when 34 percent of underrepresented minority graduates and 7.5 percent of non-underrepresented minority graduates indicated such an interest. Of the 1995 underrepresented minority graduates who planned to practice in an underserved area, nearly two-thirds were planning non-generalist careers. The reverse proportion held for non-underrepresented graduates.¹⁰³

Underrepresented minority students who graduated between 1980 and 1989 and expressed an interest in academic medicine were less likely to have gained a faculty position by 1995 than all other graduates with an interest in academic medicine (15.1 percent vs. 23.6 percent). Underrepresented minority graduates who did not express an interest

TABLE 5 – Percent of 1991 Medical School Graduates Expressing Interest in Primary Care* at Selected Times and Percent Ultimately Trained in Primary Care, by Race/Ethnicity

	Black	Mexican American	White	Other
1987 Matriculation	28.7	33.9	26.8	25.7
1991 Graduation	25.8	26.7	26.2	21.9
Completion of GME [□]	32.9	33.0	30.0	28.1

*General internal medicine, general pediatrics, and family practice

[□]Graduate medical education

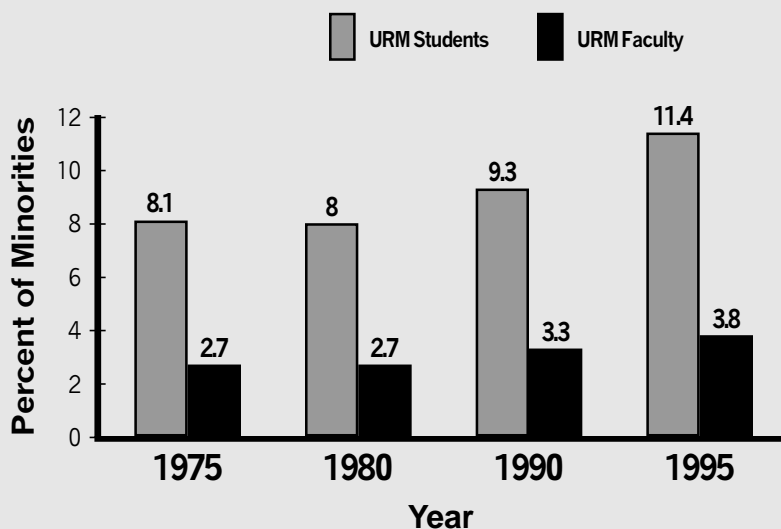
Source: AAMC

in academic medicine at the time of graduation were also less likely to have obtained a faculty position than all others (8.5 percent vs. 10.3 percent).¹⁰⁴

MEDICAL SCHOOL DEBT

The average debt of medical school graduates with loans increased between 1981 and 1995. In 1981, the average debt for both underrepresented minority and white indebted students was nearly \$20,000. By 1995, average debt levels had increased approximately 250 percent, reaching an average \$71,364 debt for underrepresented minorities and \$68,910 for non-minorities.¹⁰⁵ The greater length of time between matriculation and graduation is one of the factors contributing to the differential in debt level for underrepresented

FIGURE 7 – Underrepresented Minority Students and Faculty in Allopathic Medical Schools



Source: AAMC Faculty Roster System

minority students. In addition, 40 percent of underrepresented minority students rely on high-cost, unsubsidized loans, compared with 35 percent of all students.¹⁰⁶

More than 83 percent of graduating underrepresented minorities, compared with 51 percent of non-underrepresented minorities, reported receiving scholarships or grants during medical school. Underrepresented minorities are more likely than non-URMs to receive assistance through School-based Scholarships for the Disadvantaged, Financial Aid for Disadvantaged Health Professions Students (FADHPS), National Medical Fellowships, the Exceptional Financial Need program, and the National Health Service Corps. Majority students are more likely to receive need-based school scholarships, school merit scholarships, and Armed Forces scholarships.¹⁰⁷

MINORITY MEDICAL FACULTY

Minorities seeking role models on the faculties of U.S. allopathic medical schools will not find many, since minorities continue to be gravely underrepresented on those faculties. Although underrepresented minority medical faculty increased from 2.7 percent in 1975 to 3.8 percent in 1995, the increases have not kept pace with percentage increases in underrepresented minority medical student enrollment (Figure 7).^{108,109,110,111,112}

Overall, the number of faculty at U.S. medical schools increased from 40,578 to 82,512, with the faculty composed mostly of whites (33,309 in 1975 and 65,895 in 1995). The number of underrepresented minority faculty thus represented a small percentage of faculty both in 1975 and 1995 (Table 6). In 1995, blacks were 2.5 percent of medical school faculty, Puerto Ricans, 0.8 percent, Mexican Americans, 0.3 percent, and American Indians/Alaska Natives, 0.1 percent. Asian Pacific Americans' representation grew from 5.9 percent in 1975 to 8.6 percent in 1995.

Furthermore, the distribution of minority faculty is decidedly uneven. Almost 20 percent of black faculty are at traditional minority medical schools (Howard University, Meharry Medical College, Morehouse School of Medicine, and Drew/UCLA School of Medicine). More than 50 percent of Puerto Rican faculty are at the Universities of Puerto Rico, Ponce, and/or Central Del Caribe Schools of Medicine. In contrast, 74 percent of medical schools

TABLE 6 – Change in Numbers and Percents of Faculty Between 1975 and 1995 at U.S. Allopathic Medical Schools by Faculty Race/Ethnicity

	Change in Numbers	Change in Percents
Black	1,346	0.7
Mexican American	205	0.2
Puerto Rican	391	0.1
American Indian/Alaska Native	78	0.0
White	32,586	-2.2
Asian Pacific American	4,739	2.7

Source: AAMC Faculty Roster System

have 25 or fewer underrepresented minority faculty in their institutions.¹¹³

In 1995, underrepresented minority faculty were also less likely than white faculty to hold positions in basic science departments at medical schools not including Howard, Meharry, Morehouse, and the Puerto Rico schools (7.7 percent vs. 16.4 percent).¹¹⁴ Nor are underrepresented minority faculty proportionately represented across faculty ranks: in 1995, 2.5 percent of medical school faculty were black, but only 1.0 percent of Professors and 2.0 percent of Associate Professors, compared with 3.3 percent of Assistant Professors and 4.8 percent of Instructors.¹¹⁵

FUTURE TRENDS

In 1995, there were 24,797 first-year residents participating in GME (66.5 percent white, 21.4 percent Asian Pacific American, 5.7 percent black, 6.1 percent Hispanic, and 0.2 percent American Indian/Alaska Native).¹¹⁶ Table 7 shows the potential impact of decreasing first-year GME residents between 1995 and 2010 to achieve a physician-to-population ratio of 218 per 100,000 population. The upper part of the table shows the impact on the racial/ethnic distribution of residents if the current distributions are maintained. The lower part demonstrates the impact if racial parity (a racial/ethnic distribution of physicians equivalent to the general population) were to be achieved.

TABLE 7 – Estimated Changes in the Number of First-Year GME¹ Residents Required to Attain 218 Physicians per 100,000 Population for 1995 and 2010

<i>Maintaining current racial/ethnic distribution</i>				
	1995	2010	Absolute Change	Percent Change
White	16,493	11,871	-4,623	-28%
Asian Pacific American	5,303	3,817	-1,486	-28
Black	1,423	1,024	-399	-28
Hispanic	1,522	1,095	-427	-28
American Indian/Alaska Native	56	40	-16	-28
<i>Achieving racial/ethnic parity</i>				
	1995	2010	Absolute Change	Percent Change
White	16,493	9,655	-6,838	-40%
Asian Pacific American	5,303	1,731	-3,522	-67
Black	1,423	2,690	1,269	89
Hispanic	1,522	3,590	2,068	136
American Indian/Alaska Native	56	40	123	220

¹ General internal medicine, general pediatrics, and family practice

Source: Libby DL, Zijun Z, and Kindig D. Will Minority Physician Supply Meet US Needs? Health Affairs. July/August 1997.

The medical training establishment faces a daunting task to achieve representation of minorities proportional to their representation in general society. The projections in Table 7 demonstrate that the number of first-year residents required to achieve proportional representation for blacks, Hispanics, and American Indians/Alaska Natives would have to be more than 6,000 first-year residents by the year 2010, more than double their 1995 number. Achieving this growth is highly unlikely, given the slow rate of increase in minority school matriculants observed over the

Although attaining 6,000 newly graduated underrepresented minority physicians in the year 2010 seems infeasible, that goal could be reached by the year 2020 and, hence, should be an objective for the longer term. If the AAMC were to meet its objective to achieve 3,000 matriculants by 2000, which doubles its 1990 number of matriculants, then perhaps this growth rate could be sustained for several more decades to achieve

4,500 matriculants by 2010 and 6,000 by 2020. A long-term commitment to such a program would ultimately give underrepresented minorities the opportunity to achieve proportional representation in the physician work force. Efforts to increase minorities in medicine must continue with absolute commitment in order to maintain the gains that have been achieved, to avoid decreasing representation, and to strive toward proportional representation in the future.

Programs to Increase Minority Representation in Medicine

FEDERAL PROGRAMS

The Federal Government has engaged in an extensive, ongoing effort to increase minority participation in medicine since the late 1960s. Federal programs have been authorized under Titles VII and VIII of the Public Health Service Act, as well as under the Health Manpower Act, the Disadvantaged Minority Health Improvement Act, and other statutory authorities. Table 8

describes current Federal programs. Many of these initiatives are designed to enhance the academic abilities of underrepresented minority students and other disadvantaged groups who are not adequately prepared for college through our nation's public school systems. The programs' goals are to offer academic enrichment that enables students to compete successfully for admission to colleges and medical schools. Financial assistance can also enhance access to education.

TABLE 8 – Federally Sponsored Initiatives to Increase Minority Participation in Health Science and Medical Careers

	TARGET	SCOPE/EVALUATION	AUTHORITY/SPONSOR	COMMENTS
HEALTH CAREERS OPPORTUNITY PROGRAM (HCOP) POST BACCALAUREATE PROGRAM	Undergraduate students and post baccalaureates not admitted to medical school	In 1990-94, 71% were admitted to medical school ¹¹⁷ In 1993, 77% entered medical school ¹¹⁸	Title VII, section 740 of Public Health Service Act, Bureau of Health Professions	Began in 1978, preceded by the Special Health Careers Opportunity Grant
CENTERS OF EXCELLENCE PROGRAM	Underrepresented minority students in schools of medicine, dentistry and pharmacy	In 1996-97, 4,537 URM students in COE schools	Title VII, section 739 of Public Health Service Act, Bureau of Health Professions	Grants to schools of medicine, dentistry and pharmacy
FACULTY LOAN REPAYMENT PROGRAM	Faculty positions for health professionals from disadvantaged backgrounds	In FY1997, 23 participants (18 URMs) In FY 1996, 27 participants (24 URMs)	Title VII, section 738 of Public Health Service Act, Bureau of Health Professions	Up to \$20,000 in loan repayment per year of service for faculty in health professions schools
MINORITY FACULTY FELLOWSHIP PROGRAM	Fellows trained to pursue academic careers	2 candidates each in FY1995 and FY1996	Title VII, section 738 of Public Health Service Act, Bureau of Health Professions	Provides 50% of fellow's salary in matching funds (up to \$30,000)
NATIONAL HEALTH SERVICE CORPS SCHOLARSHIP PROGRAM	Entering medical students interested in primary care	In 1996, 415 physicians were serving in clinical practice	Title III, section 338 of Public Health Service Act, Bureau of Primary Health Care	
NATIONAL HEALTH SERVICE CORPS LOAN REPAYMENT PROGRAM	Physicians in primary care residencies or practices	In 1996, 1,230 physicians were serving in clinical practice	Title III, section 338 of Public Health Service Act, Bureau of Primary Health Care	
MINORITY ACCESS TO RESEARCH CAREERS	College students in junior and senior years, graduates and faculty	In 1996, 30% of URM participants with baccalaureates in biomedical sciences entered medical school	National Institutes of Health, National Institute of General Medical Science	Institutional grant to schools with URMs. Mission is to increase number of URMS in biomedical research

TABLE 8 (Continued)

	TARGET	SCOPE/EVALUATION	AUTHORITY/SPONSOR	COMMENTS
MINORITY BIOMEDICAL RESEARCH SUPPORT PROGRAM	Undergraduate and graduate students, faculty, and colleges and universities	In 1997, \$32.4 million funded 105 programs	National Institutes of Health, National Institute of General Medical Science	Institutional grant to schools with URMs. Mission is to increase number of URMS in biomedical research
BRIDGES TO THE BACCALAUREATE DEGREE	2-year junior or community college students	From 1992-1996, approx 1,200 students were supported	National Institutes of Health, National Institute of General Medical Science	Institutional grant to schools with URMs. Mission is to increase number of URMS in biomedical research
BRIDGES TO THE DOCTORATE DEGREE	Graduate students	From 1992-1996, approx 200 students were supported	National Institutes of Health, National Institute of General Medical Science	Institutional grant to schools with URMs. Mission is to increase number of URMS in biomedical research
K-12 SCIENCE EDUCATION PROGRAM	High school students, and teachers and counselors of K-12 students	From FY 1980-1997 approx 20,000 students were supported In FY1997, \$3.83 million funded 145 active grants	National Institutes of Health, National Center for Research Resources	Replaced Minority High School Student Research Apprentice Program in FY1995
SCIENCE EDUCATION PARTNERSHIP AWARDS	K-12 students	In FY1997, \$2.42 million funded 12 active grants	National Institutes of Health, National Center for Research Resources	Grant programs for partnerships
NATIONAL & MARC PREDOCTORAL FELLOWSHIP AWARDS FOR MINORITY STUDENTS	Ph.D. or MD/Ph.D. or equivalent program students	In 1997, approx 200 students were supported	National Institutes of Health, Trans-NIH	Mission is to increase the number of URMs in biomedical and behavioral research
RESEARCH SUPPLEMENTS FOR UNDERREPRESENTED MINORITIES	High school, college, and graduate students, graduate research assistants, postdoctorates and faculty	From FY1989-1996, 6,973 individuals were supported	National Institutes of Health, Trans-NIH	For individuals interested in biomedical and behavioral research careers

INITIATIVES OF THE AAMC AND OTHER NON-GOVERNMENTAL GROUPS

The Association of American Medical Colleges (AAMC) has monitored and vigorously responded to the underrepresentation of minorities in medicine for some time. In 1970, with the National Medical Association and others, the AAMC began a campaign known as Project 75. Its goal was to expand underrepresented minority medical school enrollment to 12 percent in order to achieve parity with the minority population throughout the nation. In 1978, the AAMC identified the limited pool of underrepresented minorities as the main obstacle to increasing minority matriculants, and urged medical schools to establish partnerships with colleges and senior

high schools to encourage and prepare more underrepresented minorities for careers in medicine.

In 1991, the AAMC launched *Project 3000 by 2000*. The goal of this project is to increase the number of underrepresented minorities entering medical school to 3,000 annually by the year 2000. The target number, 3,000, constituting approximately 20 percent of matriculants, reflects the combined presence of underrepresented minorities in the U.S. population. To implement *Project 3000 by 2000*, the AAMC established a national network of community partnerships, comprised of secondary school systems that have health science magnet programs, science high schools, colleges, and academic health centers. Since the program began, the

number of medical schools that have established partnerships with these institutions has significantly increased (Figure 8).

As a result of this comprehensive, well-organized effort, *Project 3000 by 2000* met its goals for the first three years. However, the number of underrepresented minority matriculants

stayed virtually level between 1994 and 1995 (Figure 9), and fell from 1995 to 1997. The challenges remain.

The AAMC also provides leadership in other areas designed to promote entry of underrepresented minorities into medicine:

The Expanded Minority Admissions

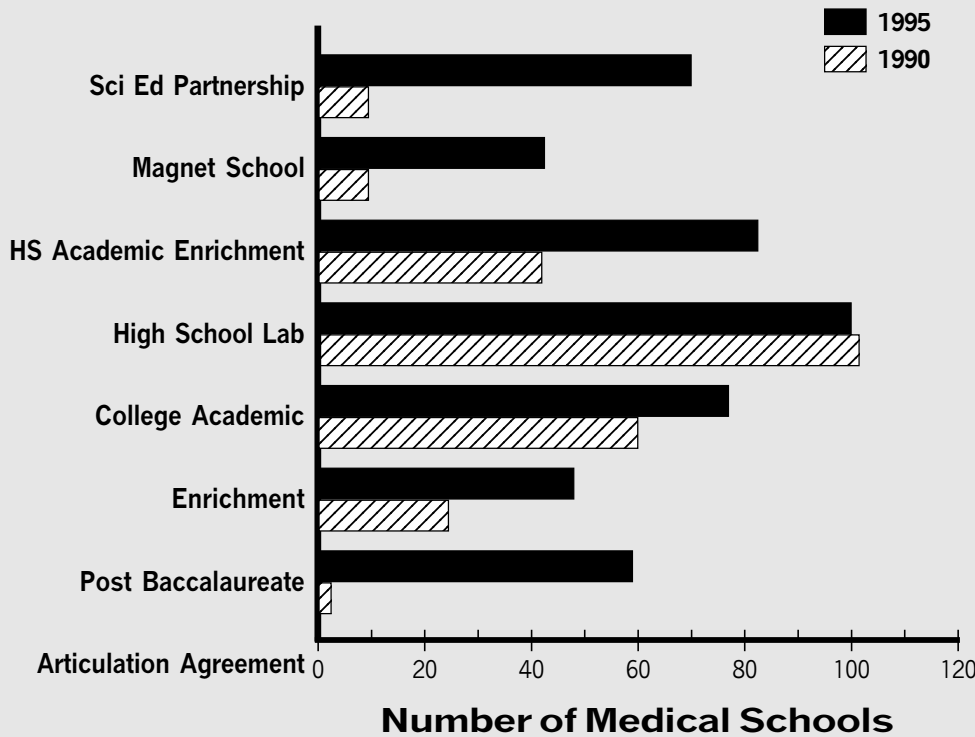
Exercise: This workshop program is designed to help admissions committees recognize minority students who have the potential to succeed in medical school despite lower test scores and grade point averages (GPAs). The workshop teaches admissions committees how to consider other qualities in a student (a positive self concept, an ability to focus on long-range goals, a support system, leadership abilities, a background of community service, and demonstrated interests in medicine) that may predict success in medical school.

Health Professionals for Diversity: In August 1996, more than 30 of the nation's leading medical, health, and education associations formed this coalition to help ensure freedom to consider race, ethnicity, and gender as factors in the admissions process. This coalition believes that: 1) gender, racial, and ethnic diversity is key to an effective work force of health care providers; 2) the medical profession cannot achieve diversity without affirmative action; and 3) the dismantling of affirmative action will result in serious consequences to our nation's health.

Minority Faculty Development Program: This program targets minority faculty at U.S. medical schools and provides training and mentorship for research careers in academic medicine. It emphasizes grant writing skills and an understanding of the grant making process.

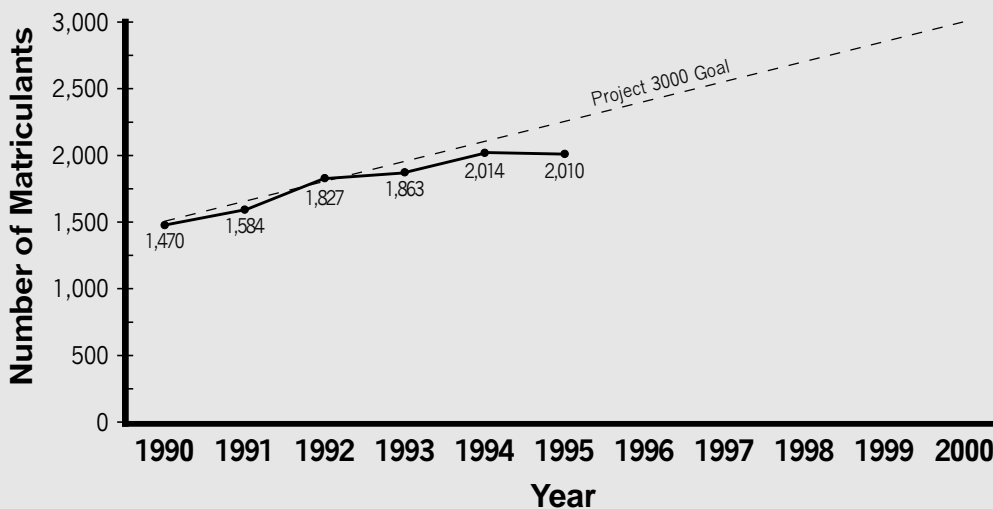
Table 9 provides a brief description of national efforts sponsored by other non-governmental organizations, some in partnership with governmental programs.

FIGURE 8 – Number of Medical Schools With Programs to Expand Minority Participation



Source: AAMC Project 3000 by 2000 Progress to Date, Year Four Program Report, April, 1996

FIGURE 9 – Underrepresented Minority Matriculants to Allopathic Medical Schools



Source: AAMC Project 3000 by 2000 Progress to Date, Year Four Program Report, April 1996

TABLE 9 – Efforts by Non-Governmental Bodies to Increase Minorities in Medicine

	TARGET	PROGRAM COMPONENTS	COMMENTS
ROBERT WOOD JOHNSON FOUNDATION			
<i>Minority Medical Education Program</i>	Undergraduates	Educational assistance enrichment	
<i>Minority Faculty Development Program</i>	Junior faculty	Financial support for research and mentorship	Goal is to increase minority faculty in senior ranks of academic medicine
<i>Health Professions Partnership Initiative (jointly funded by the Kellogg Foundation)</i>	Middle school through college	Creation of community-wide education partnerships to improve science curricula, provide mentorship, develop science faculty, etc.	<ol style="list-style-type: none"> 1. Partnership with AAMC 2. Award to academic medical centers 3. Requires participation of a nursing and medical school, the preprofessional program of an undergraduate college, and at least one K-12 school system 4. Focus on education reform
HOWARD HUGHES MEDICAL INSTITUTE	Elementary and high school students	Hands-on research experience and science education	Partnerships with academic medical centers
JOSIAH MACY, JR. FOUNDATION	Medical students	Scholarships and support for minority affairs offices	
	High school students	Magnet high school program	
VENTURES IN EDUCATION	Elementary and high school students	Enhanced science curriculum	
MINORITIES IN MEDICINE PROGRAM	High school students	Links tenth and eleventh graders to academic medical centers	

INSTITUTIONAL EFFORTS

In 1970, the AAMC Executive Council urged allopathic medical schools to establish offices of minority affairs. Presently, all 126 allopathic medical schools have a designated representative to the Minority Affairs Section of the AAMC’s Group on Student Affairs, which represents the activities of offices of minority affairs. Those offices are generally responsible for recruiting premedical students and organizing summer college enrichment and prematriculation programs to support and enhance the academic success of matriculating minority medical students. Minority affairs offices also provide academic support services and counseling, and help students adapt to the academic demands and the sometimes unwelcoming environment of the medical school.

Articulation agreements between educational institutions are one way to support minority students with an interest in science along the length of the educational pipeline. These agreements make it easier for students to progress from high school to college, and from college to medical school. Articulation agreements enable coordination of curricula to avoid redundancy and provide students with advanced standing at the next educational level; guarantee admission to students, contingent on acceptable academic performance; and/or provide financial aid. Brown University School of Medicine, Baylor College of Medicine, and Boston University School of Medicine are examples of schools that have successful articulation programs.

Colleges of osteopathic medicine have been participating in the Health Careers Opportunity

Program. The Ohio University College of Osteopathic Medicine is the one osteopathic school currently designated as a Center of Excellence.

Medical school admissions committees need to evaluate alternative, non-traditional criteria for selecting medical school acceptances. Admissions policies that do not rely solely on Medical College Admission Test (MCAT) scores and grade point averages may be successful in producing highly qualified physicians.¹¹⁹

Over the past 20 years, researchers have described many of the factors that help to attract and retain minority students in courses that lead toward health careers. Two recent publications from the Institute of Medicine and the Henry J. Kaiser Foundation summarize past and current efforts to increase minorities in medicine and the components of successful efforts.^{120,121}

THE NEED FOR A COORDINATED NATIONAL AGENDA

The nation would benefit from a comprehensive approach to recruit and engage underrepresented minority students in sciences early (at the elementary school level) and maintain and support them as they advance along the educational pipeline to medical school and beyond.

One of the most significant obstacles to reaching parity of minority representation is inadequate preparation of minority students in mathematics and science during high school. Black, Hispanic, and American Indian/Alaska Native students take fewer advanced mathematics and science courses in high school than white and Asian students.¹²² In addition to the relative lack of academic preparation, minority students may experience science anxiety and frustration with traditional teaching methods. These students find that they lack the skills to meet the academic challenge confronting them in mathematics and science classes.

Currently, the number of blacks, Hispanics, and American Indians/Alaska Natives who major in science during college is similar to the number who apply to medical school. Therefore, the applicant pool is as large as it can be at present. The problem lies in the overall size of the pool of underrepresented minority college graduates. Among 18 year olds, only 10.7 percent of blacks and 8.6 percent of Hispanics eventually earn bachelor's degrees, compared with 28.2 percent of whites.¹²³

Future efforts should concentrate on collaborations among college faculty, K-12 students and

teachers, strategies to improve K-12 instruction for minority students, and partnerships involving the private sector, school campuses, and communities. Colleges and medical schools must continue academic enrichment programs and support. Academic medical centers must make a commitment to the communities they serve by linking to elementary, secondary, and undergraduate programs designed to promote science and health careers. Financial barriers must be addressed, and appropriate and adequate financial aid made available in the form of scholarships, loans, and service opportunities. Thus, the ingredients of successful programs include solid academic preparation at the precollege level, high-caliber undergraduate college curricula taught in a supportive environment, experiential hands-on learning, availability of accurate, reliable counseling and resource materials, financial support, and social access to overcome the pressure of "culture shock" and isolation often experienced by minorities studying in majority institutions.¹²⁴

AFFIRMATIVE ACTION

Affirmative action has played an important part in increasing minority representation in medicine, but these policies and programs are changing to reflect the times. Affirmative action programs were developed and widely implemented by government, business, and educational institutions in the 1970s and 1980s in an effort to remedy discrimination against and exclusion of racial and ethnic minorities. As the data presented in this report suggest, affirmative efforts to overcome barriers to minority entry in medicine are necessary to achieve equity and address the needs of the diverse population of the United States. A recent report from the University of California at Davis, detailing 20 years of experience with affirmative action, demonstrates the effectiveness of these efforts in producing successful physicians.¹²⁵

The courts have influenced and will continue to influence the design and viability of affirmative action in education and employment. Just as the Bakke decision affected admission policies and enrollment patterns almost 20 years ago, so too will recent cases influence our society's institutions today and in the future. Recently, courts have ruled against minority-targeted scholarships (*Podberesky v. Kirwan*), required more specific criteria to justify set-asides for minority contractors (*Adarand Constructors v. Peña*), and ruled that race could not be considered in the law school admissions process simply to further diversity (*Hopwood v. Texas*).

In a key recent decision involving affirmative action in education, *Hopwood v. Texas*, four unsuccessful white applicants challenged the admission policy of the University of Texas Law School, which had used a bifurcated review process in an attempt to make its student body racially reflective of the state. The federal appeals court ruled that the law school could not use race as a factor in admissions simply to further diversity. It reasoned that diversity focuses on, rather than disregards, race and treats minorities as a group, rather than as individuals. The U.S. Supreme Court declined to review the case. In the wake of *Hopwood*, a similar action was filed against the University of Michigan in October 1997 by two unsuccessful applicants for undergraduate admission.

While a number of state legislatures are now considering measures that would alter the existing affirmative action landscape, the nation's most ethnically diverse state, California, is the site of several important activities in this area. In 1995, the Board of Regents of the University of California voted to prohibit its schools from considering race or ethnicity in the admission of students. In the fall of 1996, the voters of California approved Proposition 209, which prohibited the state and local governments from granting preferential treatment based on race or sex in education, contracting, or public employment. Proposition 209 took effect in August 1997 and has withstood judicial challenge. A similar, yet broader anti-affirmative action proposal at the federal level, the Civil Rights Act of 1997, has been reintroduced in Congress.

The dire implications of these decisions for future admission policies of medical and other

health professions schools, and post-secondary education in general, cannot be overstated. These decisions will make it harder to reach the goal of proportional representation in the medical profession. In fact, their impact may have been immediate. From 1996 to 1997, underrepresented minority applicants to medical schools fell 11.1 percent, and the acceptance rate of underrepresented minority applicants fell 6.8 percent.

These recent actions will compel some institutions to develop new affirmative efforts to lift ongoing barriers of minorities in academia and medicine in a way that will not violate constitutional tenets. Historically, federal courts have upheld race-based preferences to cure present effects of past discrimination, to address manifest imbalance in the representation of racial groups within specific categories, and to foster diversity in student admissions. According to Michaelson, courts have looked more favorably on programs that remedy racial imbalance and do not simply maintain racial balance; do not violate the rights of non-minorities; have flexible goals as opposed to quotas; are not arbitrarily structured; are not perpetual; and are alternatives to race-neutral efforts that have failed or are unworkable.¹²⁶

Recent judicial decisions suggest that the sole (and quite narrow) justification for using race that courts will find acceptable is to remedy past wrongs on behalf of the precise, individual entity (e.g., a lone law school rather than a state's entire education system). On the other hand, while *Hopwood* prohibits the use of race per se as a factor in admission, it allows schools to continue to weigh other factors that often correlate with race.

Summary

Despite nearly two decades of efforts to increase minority representation in medicine, black Americans, Mexican Americans, Mainland Puerto Ricans, and American Indians/Alaska Natives today continue to remain underrepresented at every level of medicine. While past efforts to increase minorities in medicine have been effective, they have not addressed fully some of the underlying problems that prevent underrepresented minorities from participating more equally in medicine. The nation has not made concerted efforts to improve mathematics and science curricula in minority dominated schools and communities and to address the costs of education. Nor has the nation engaged in a concerted, coordinated, well-funded effort to address the underrepresentation of minorities in medicine in spite of overwhelming evidence of the need for such efforts to improve this situation. Therefore, although much is known about the types of programs that are effective in improving minority entry into medicine, the efforts made have not kept pace with the obstacles minorities face in succeeding academically at every level.

Poor minority health status looms as a challenge to a nation that is becoming increasingly

diverse. Managed care and other trends in the health care system are forcing rapid changes in a system that has not served minorities well. Minority physicians from every racial and ethnic group have demonstrated a willingness to care for some of the sickest and most underserved populations of patients. Increasing minority representation in medicine is but one way to improve access to care for minority populations. Non-minority physicians must develop cultural competency in medicine, since they are and will continue to be the major providers of care for minority populations.

Recent anti-affirmative action efforts threaten to exacerbate an already dire situation. Affirmative action has been wrongly characterized as being limited to programs that favor minority groups over others. Affirmative action programs aimed at increasing minority entry into medicine have focused on academic enrichment and support of minority students at all levels of education in order to better prepare them for the academic rigors of college and medical school. Both the public and private sectors should make concerted efforts to educate the public about the needs of the minority community and the underrepresentation of minorities in medicine.

Recommendations

Based on its findings, COGME makes the following recommendations in order to move toward greater equity for minorities in medicine and to improve the health status of minorities.

GROUP I RECOMMENDATIONS: *The last 20 years have provided insight into the programs and resources required to facilitate minority entry into medicine. To strengthen and sustain these efforts, and to achieve proportionate minority representation in medicine, COGME makes the following recommendations:*

1. Critically examine the role of standardized test scores and grade point averages for admission to medical school and resident placement. These measures may be more predictive of science achievement than success as a physician. Criteria to determine alternative characteristics desirable in medical students need to be developed.
2. Allow osteopathic medical schools and partners with osteopathic schools to have full access to funds to enhance minority entry into medicine and science careers.
3. Encourage public and private organizations to agree collectively upon a nationwide strategy for duplicating successful models and dedicate a budget to developing, implementing, and evaluating the impact of these strategies. Widely disseminate and publicize successful programs.
4. To continue to make progress toward a more representative participation of minorities in medicine, establish a goal of 4,500 underrepresented minority medical school matriculants by the year 2010 and 6,000 by the year 2020. Resources and efforts to achieve these goals should reflect an understanding of the enormous challenges the nation will face in reaching these objectives. Appropriate targets should be met at every point of the educational pipeline, beginning in middle school.
5. Encourage and reward collaborative efforts to increase the number of academi-

cally prepared minority students, between and among institutions at multiple levels of the education continuum, using governmental matching funds and financial incentives to academic medical centers.

6. Develop partnerships with national and local media, advertising agencies, and video companies to implement innovative, culturally appropriate campaigns describing opportunities in science and health careers for minority and disadvantaged children.
7. Support more research to assess the impact of rising medical student debt on the entry of minorities into medicine and on the future impact of such debt on career choice and place of service.
8. Assure the availability of financial assistance to underrepresented minorities throughout all levels of education through public and private sector scholarships and loans.

GROUP II RECOMMENDATIONS: *Given the changing demographics of the U.S., physicians will care for increasingly diverse populations, but the diversity of the physician workforce is not keeping pace with the diversity of the nation. Physicians need to have competencies that promote high quality care of culturally, racially, and ethnically diverse populations. To address issues of cultural competency in medicine, COGME makes the following recommendations:*

1. Convene a panel to define and develop consensus on the definition of cultural competency in medicine. The Public Health Service of the U.S. Department of Health and Human Services, the Association of American Medical Colleges (AAMC), the Association of American Colleges of Osteopathic Medicine (AACOM), and others concerned with medical education should participate in selecting members for the consensus panel.
2. Private and public organizations should offer funding for the development, implementation, and evaluation of curricula

competency in medical schools, residency training, and practice settings, including managed care.

3. Medical schools, residency programs, medical specialty organizations, and continuing medical education programs should incorporate, as essential elements of their required curricula, teaching methods and experiences that assure cultural competency in medicine.
4. The National Board of Medical Examiners, the National Board of Osteopathic Medical Examiners, and specialty board certification and accreditation bodies should review examinations for appropriate assessment of cultural competency and make appropriate changes to reflect assessment of cultural competency. Accreditation standards for medical schools should also include an assessment of cultural competency.
5. Managed care plans should develop targets for minority physician representation and track their success in achieving these targets. Measures of quality should include the ability of managed care plans to deliver culturally competent care with adequate numbers of minority physicians and staff who demonstrate cultural competency.

GROUP III RECOMMENDATIONS: *Minorities should have access to all specialties and career choices in medicine, including academic medicine. More research is necessary to understand the factors influencing minority specialty choice.*

1. The Bureau of Health Professions (BHP), the AAMC, and the AACOM should sponsor research to identify and eliminate any barriers to underrepresented minority entry into medical and surgical specialties. Medical and surgical specialty organizations and societies should support research to determine whether minorities have the same flexibility in selecting their specialties as do non-minorities.
2. As COGME and others consider policies to decrease the number of federally supported positions in specialty graduate medical education programs, they should track the impact on underrepresented minority participation in medical and

surgical specialties and devise and advocate remedies for any disproportionate impact.

3. By 2010, underrepresented minorities should constitute at least 10 percent of medical school faculty. Every academic medical center should have in place specific programs and a dedicated budget for identifying and supporting underrepresented minority students with an interest in academic medicine.
4. Managed care organizations should develop training and mentoring programs to promote minority physician leadership in these organizations. These organizations should participate in partnerships between medicine and pre-professional educational institutions.

GROUP IV RECOMMENDATIONS: *The health status of minority populations may be improved by increasing access to medical care, by decreasing health professional shortages in minority communities, and by increasing minority representation in medicine. COGME recommends that:*

1. Governmental and private funding sources should provide resources for research to document the impact of minority physicians on minority health status. They should also provide resources to study the impact of culturally appropriate medical education and training on access to care and on minority health status. The targeted minority communities should participate in the design and planning of this assessment.
2. Community service and outreach should be an explicit mission of academic medical centers. These centers should develop criteria to recognize community service among faculty and staff and track the impact of such recognition on career choice and practice location.

GROUP V RECOMMENDATION: *Educational institutions, academic medical centers, and others should continue all constitutional and legal efforts to increase minorities in medicine.*

1. The AAMC and AACOM, with representatives from the Public Health Service, Office for Civil Rights of the Department of Education, and Justice Department,

should educate universities and academic medical centers about effective and legal affirmative action programs. These bodies should develop and issue guidelines for judging the constitutionality of affirmative action programs.

GROUP VI RECOMMENDATION: *Given the changing demographics of the U.S. population and the past and current underrepre-*

sentation of minority groups in medicine, COGME recommends that:

1. The AAMC and the AACOM track and report the participation in medicine of various racial and ethnic subgroups. Policies to promote minority entry into medicine should reflect need as portrayed by these data.

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