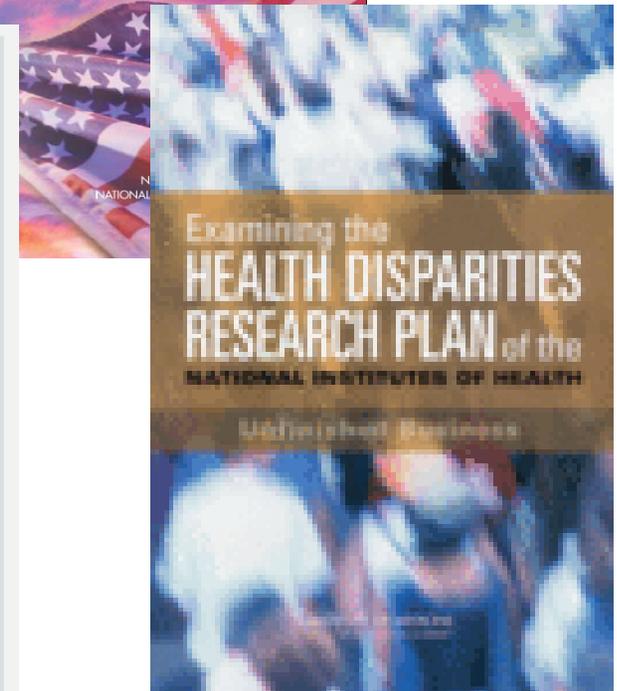
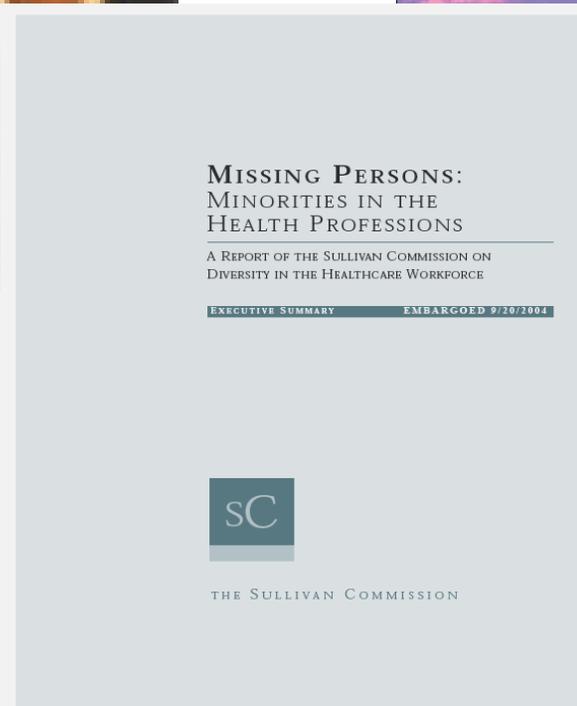
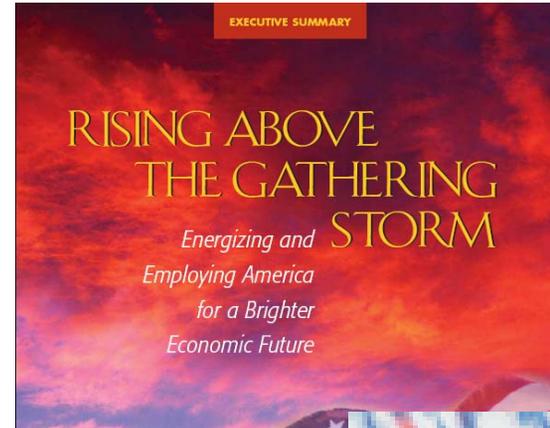
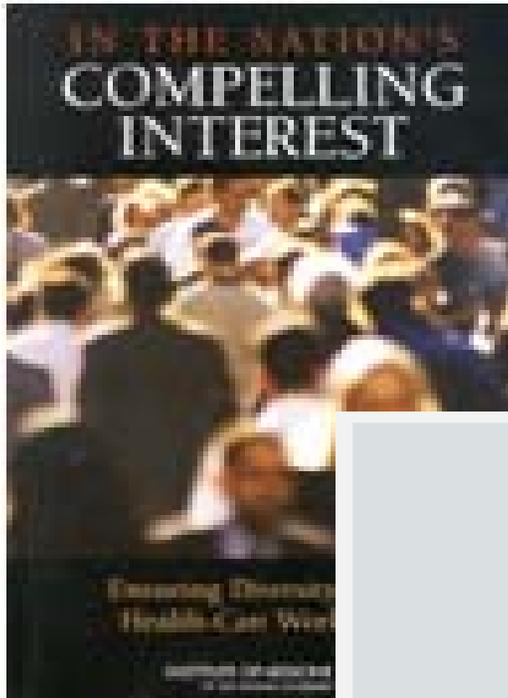


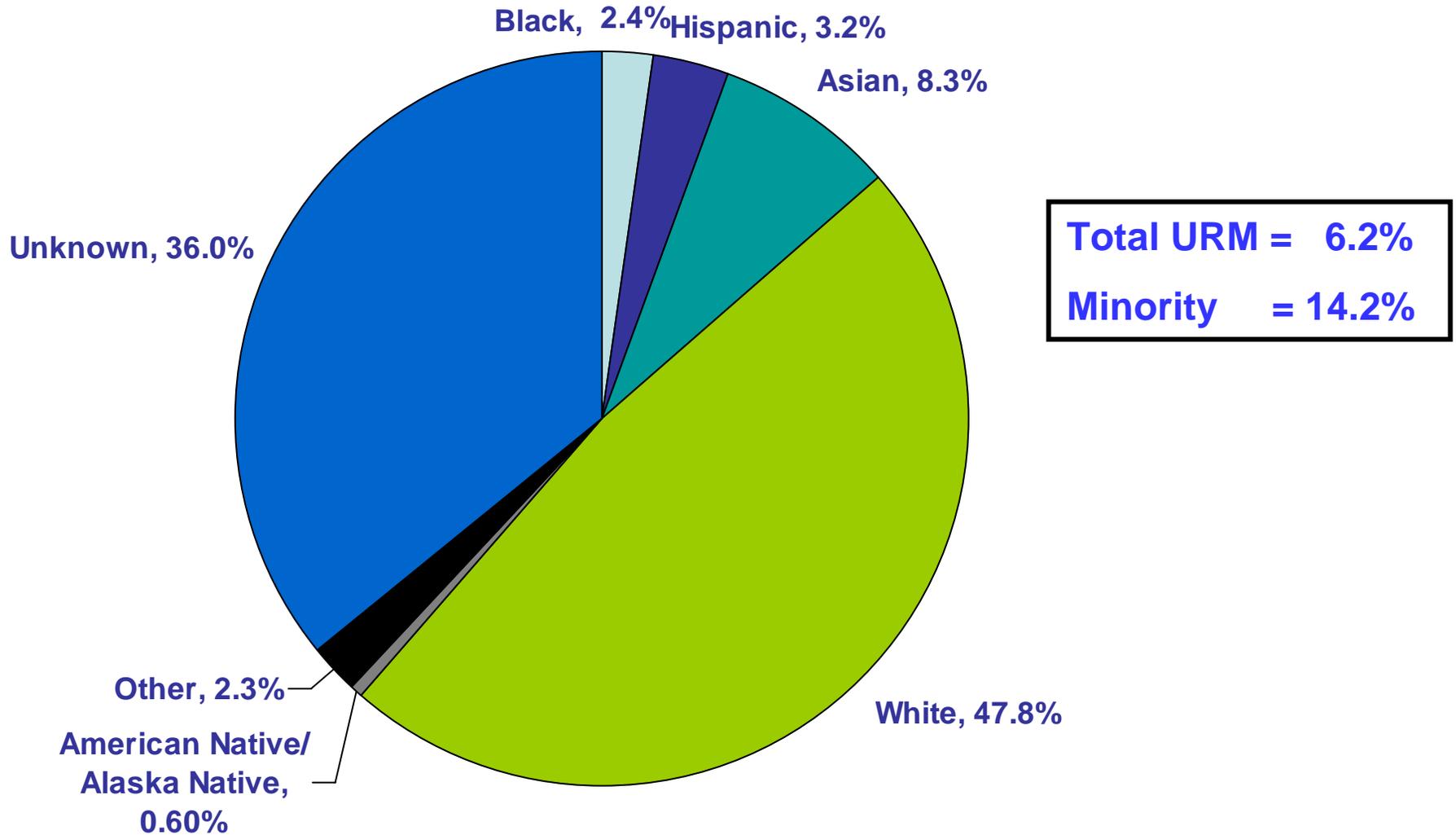
The Changing Demographics of the Physician Workforce

Joan Y. Reede, MD, MPH, MS
Office for Diversity and Community Partnership
Harvard Medical School
May 23, 2007

Diversity in the Medical and Research Workforce

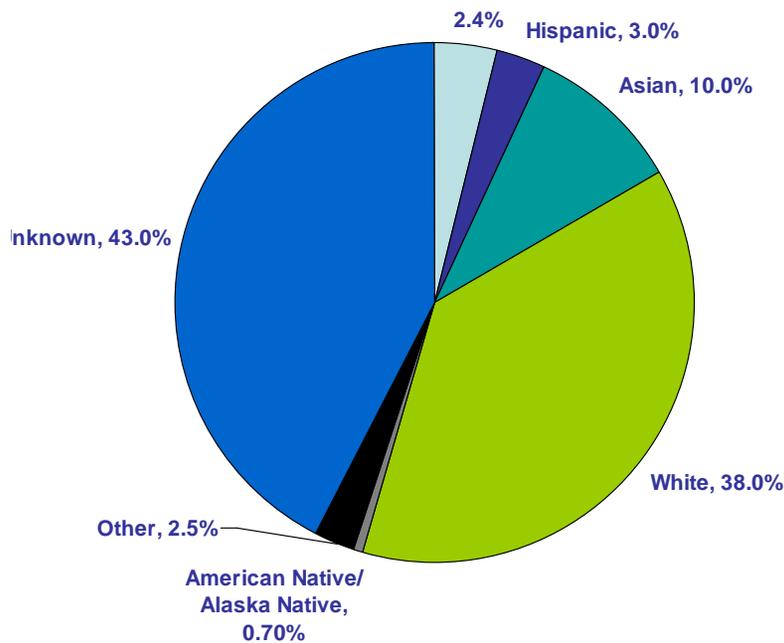


2004 Percentage of U.S. Physicians by Race/Ethnicity



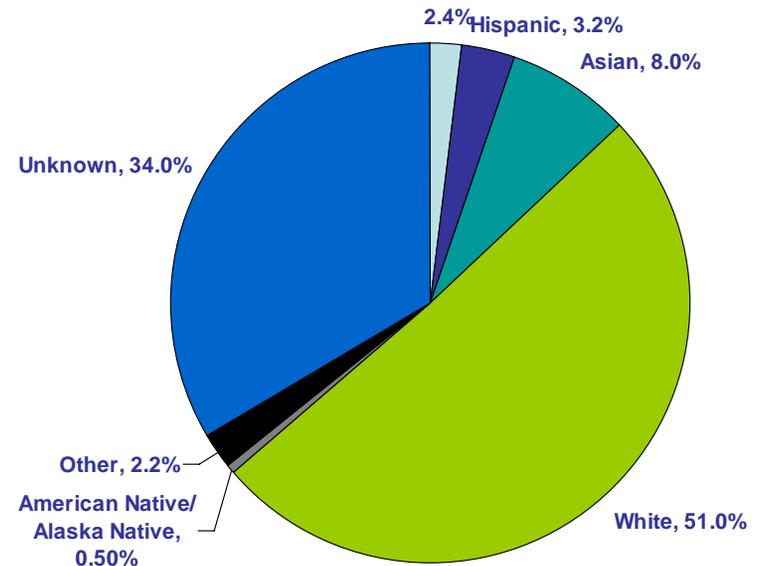
2004 Percentage of U.S. Female and Male Physicians by Race/Ethnicity

Female Physicians



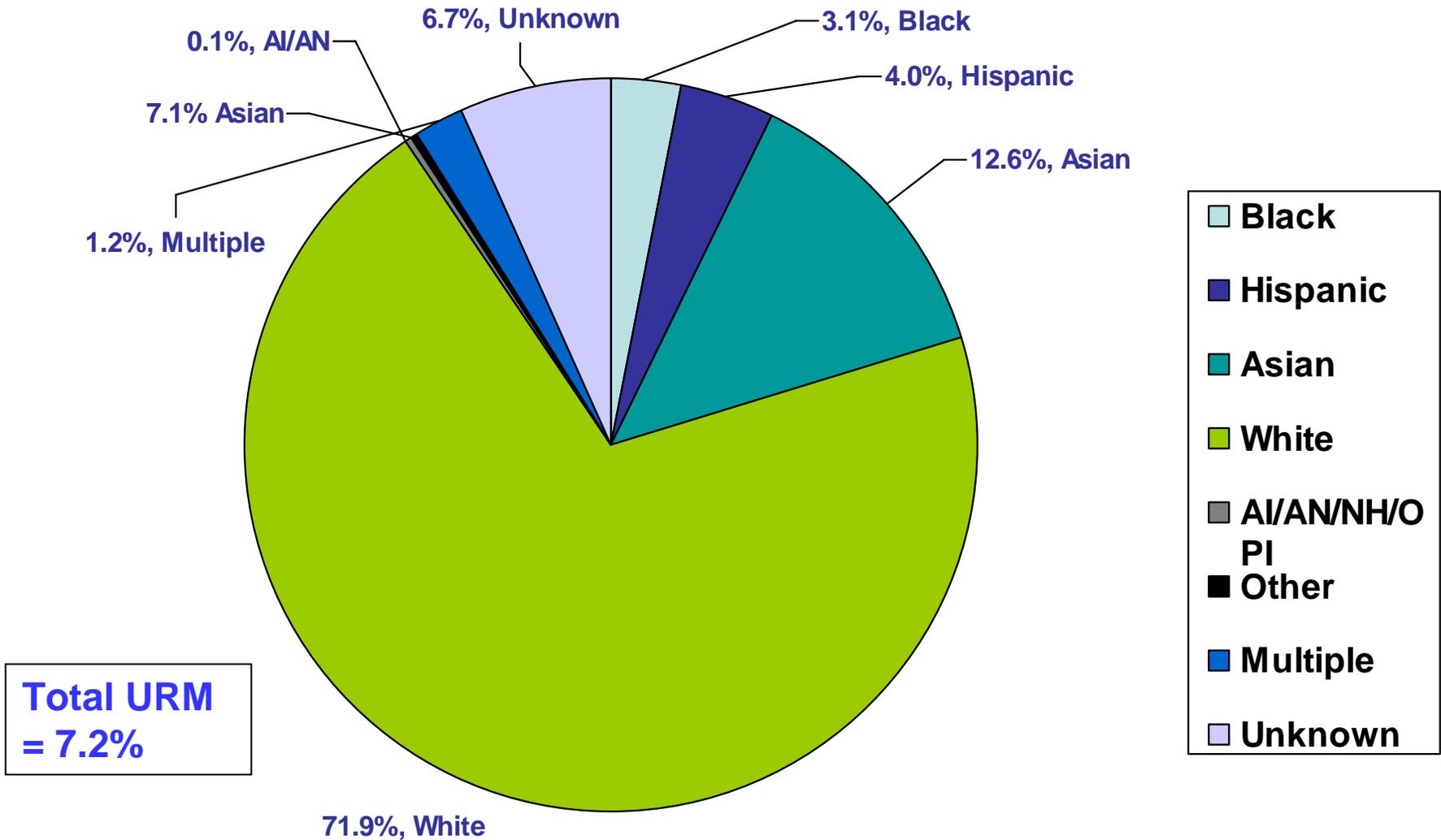
7.1% URM N = 15, 558

Male Physicians

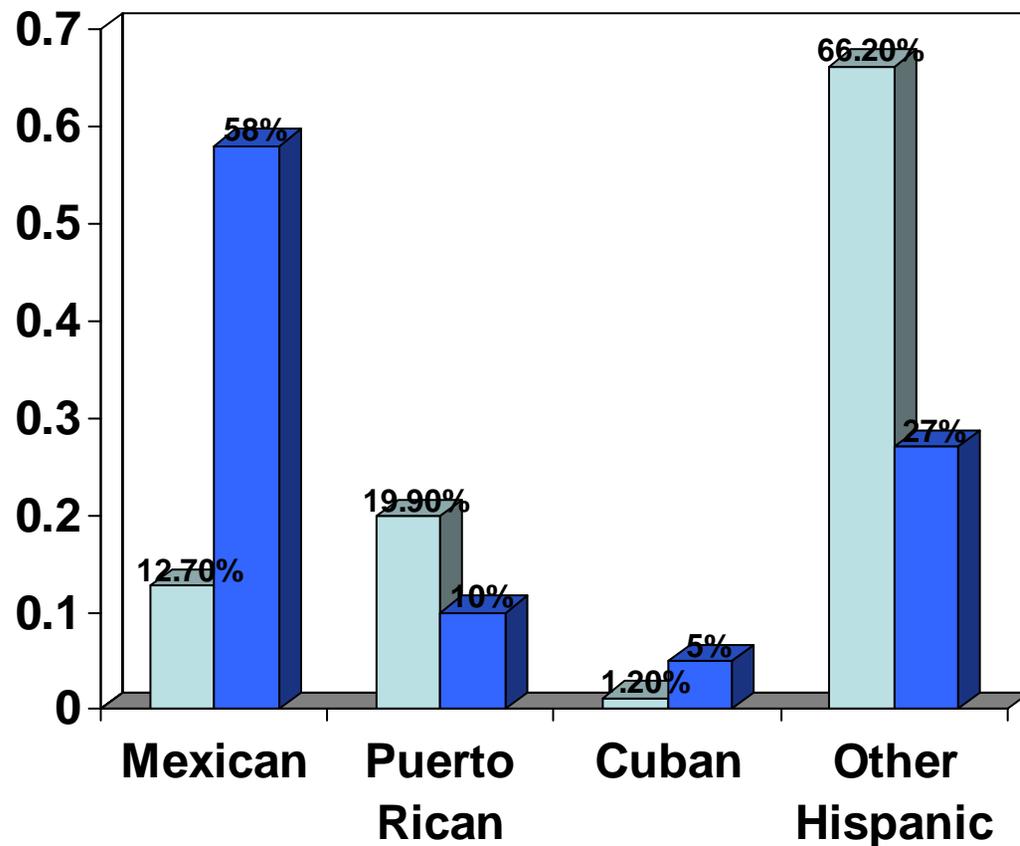


6% URM N = 33,534

Medical School Faculty by Race and Ethnicity, 2006



Race/Ethnicity of Internal Medicine Faculty versus Country of Origin of Hispanic Americans, 2005



Internal Medicine 4.4%
US Population 14 %

Internal Medicine
 US Population

Hispanic Faculty
1999 N = 614
2005 N = 1,176

US Medical School Minority Faculty by Rank, AAMC 2006

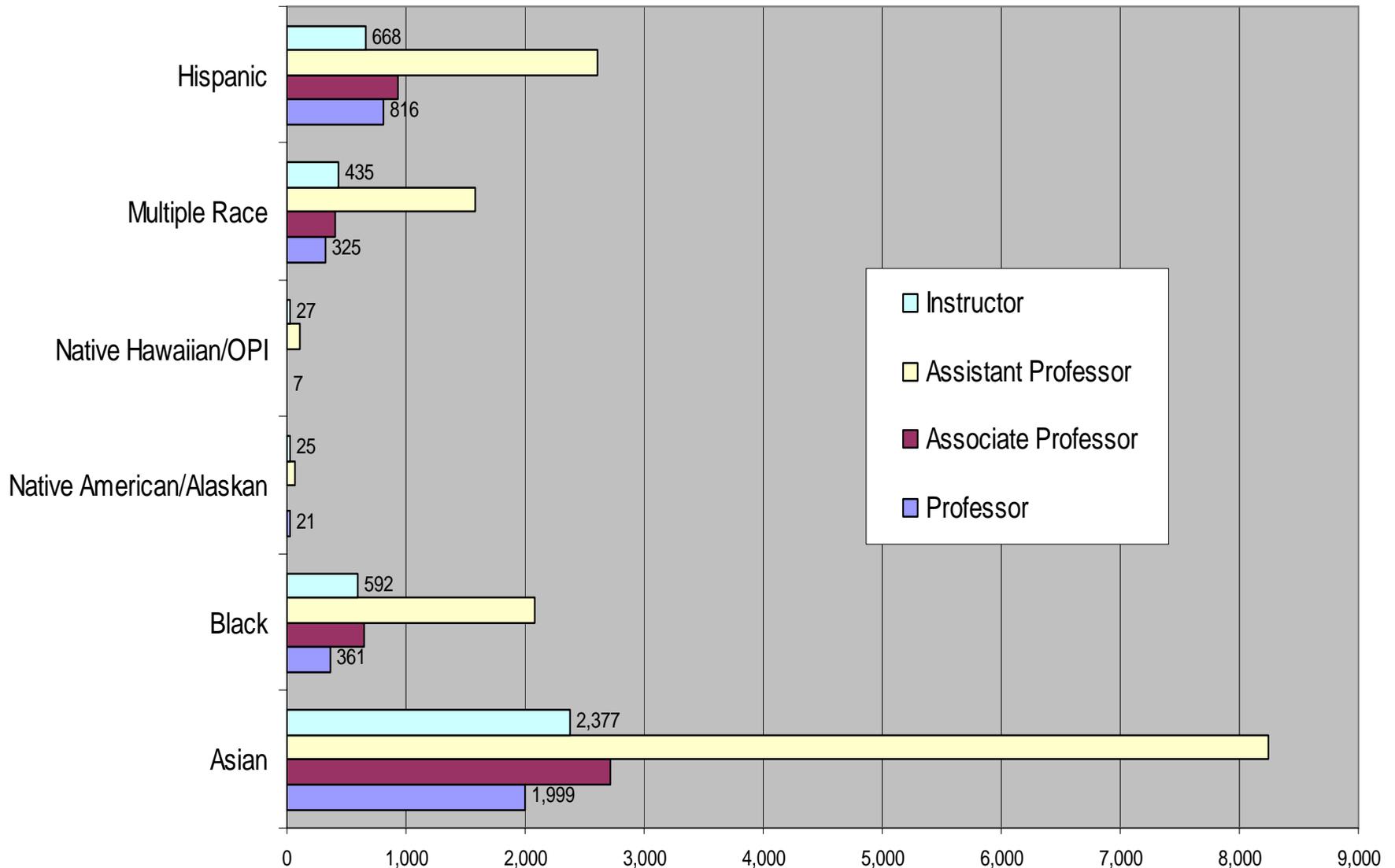
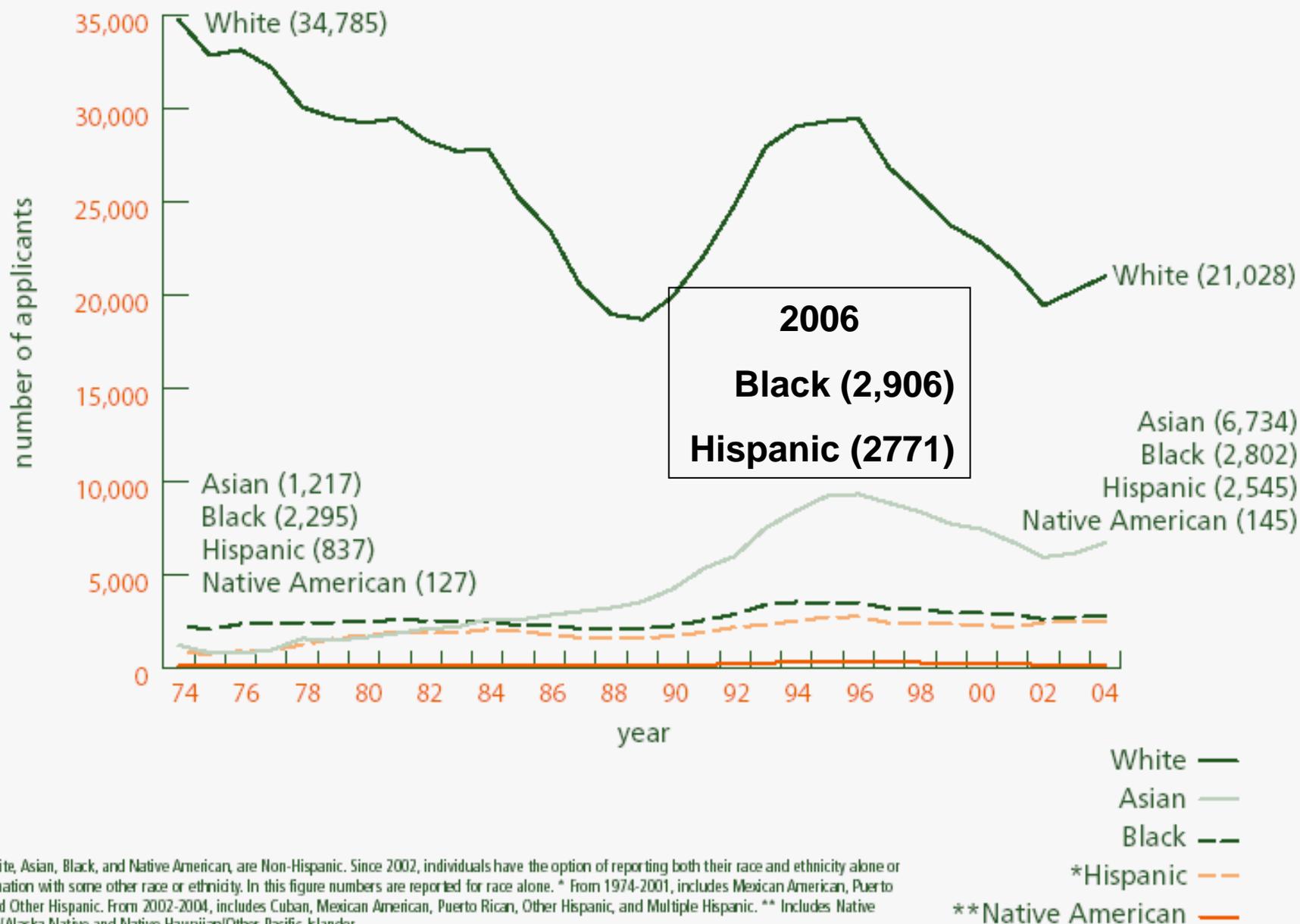


Figure 5: Medical School Applicants by Race and Ethnicity, 1974-2004



Note: White, Asian, Black, and Native American, are Non-Hispanic. Since 2002, individuals have the option of reporting both their race and ethnicity alone or in combination with some other race or ethnicity. In this figure numbers are reported for race alone. * From 1974-2001, includes Mexican American, Puerto Rican, and Other Hispanic. From 2002-2004, includes Cuban, Mexican American, Puerto Rican, Other Hispanic, and Multiple Hispanic. ** Includes Native American/Alaska Native and Native Hawaiian/Other Pacific Islander.

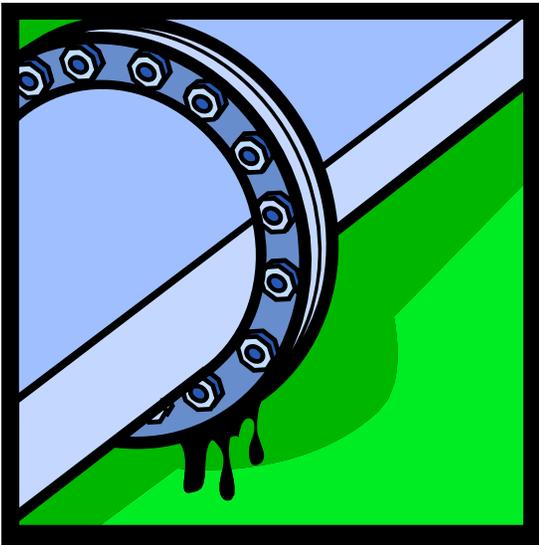
Data Source: AAMC Data Warehouse: Applicant-Matriculant File, as of 11/16/2004.

URM Graduates US Medical Schools, 2002 and 2006

	2002	2006
Black	1,087	1,122 ↑
NA/AK/NH/OPI	178	179
Mexican Am	383	360 ↓
Puerto Rican	284	288
Cuban	0	71 ↑
Other Hispanic	292	344 ↑
Total	2,224 14%	2,364 15%

Harvard Medical School Response: “Diversity Taxes”

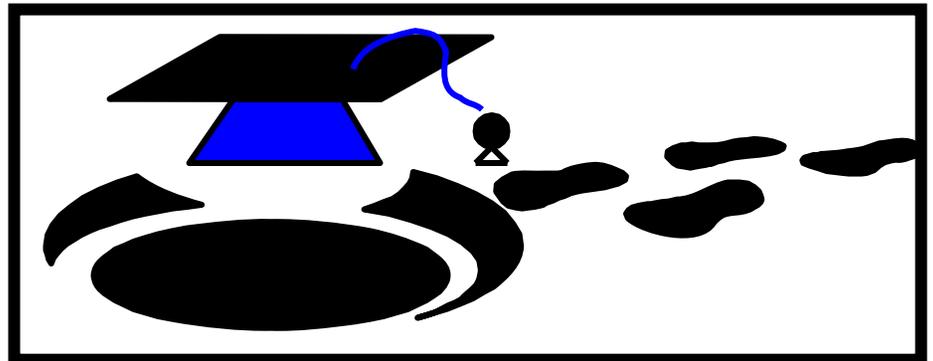
The Science Pipeline



- Access
- Achievement
- Attitude
- Finance

- **Assumptions** & Stereotypes
- **Isolation**
- Excessive **demands** and assignments
- Lack of **mentoring**
- Less extensive informational **networks**
- Alienation and lack of **recognition**
- Personal responsibilities, **priorities** and choices
- Issues of **modesty** and self-promotion
- **Cumulative professional disadvantage**

The Academic Black Hole



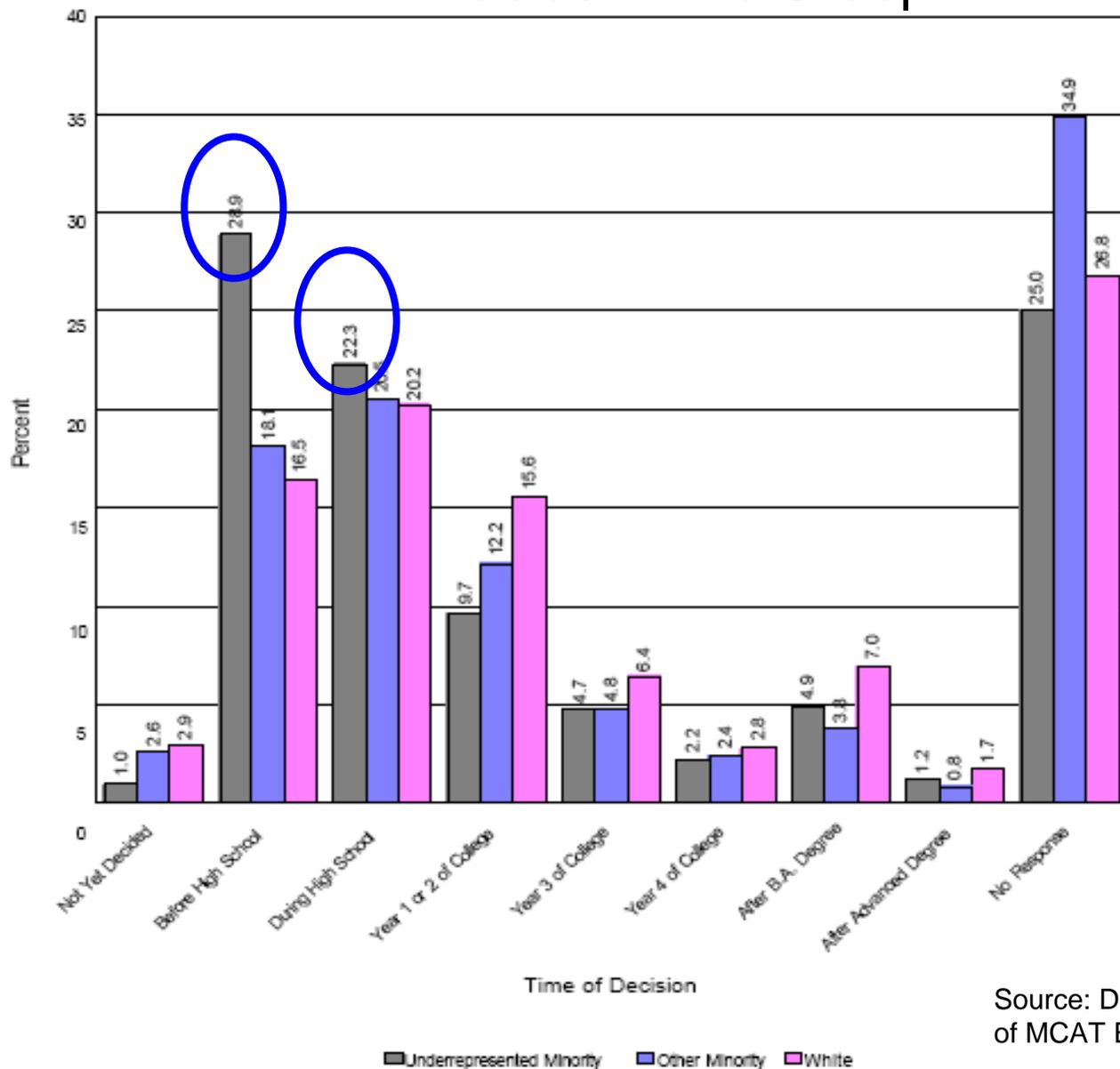
The Pipeline

For Every 100 Kindergartners:

	White (25-29 year olds)	African American (25-29 year olds)	Latino (25 -29 year olds)	American Indian/Alaskan Native (24 year olds)
Graduate from High School	93	87	63	58
Complete at least some College	65	50	32	
Obtain at least a Bachelor's Degree	33	18	11	7

Source: Education Trust, Inc.: US Department of Commerce, Bureau of the Census. March Current Population Surveys, 1971-2001, in The Condition of Education 2002.

1999 MCAT Examinees' Time of Decision to Study Medicine by Racial/Ethnic Group



Source: Demographic Characteristics of MCAT Examinees

Persistence of Minority Students in Science, Technology, Engineering and Math (STEM) Majors

	STEM Interest	STEM Retention	STEM Degrees
	1995-96	1998	2001
White	18%	57%	86.7%
Asian	26.4%	57%	94.8%
Black	18.6%	56%	62.5%
Hispanic	22.7%	56%	62.5%

Source: American Council on Education, "Increasing the Success of Minority Students in Science and Technology", 2006 – based on data from US Department of Education National Center for Education Statistics longitudinal study

Underrepresented Minority Student Perceptions of Barriers to the Medical Profession

- Population - URM students enrolled in a premedical education preparatory program
 - Students perceived anticipated barriers associated with - “If I do go to medical school”...
 - Academic performance (78%)
 - Financing medical education (53%)
 - Social environment / Negative stereotypes (46%)

Students Decisions Not to Apply to Medical School

Figure 22

Respondents were then asked to pick the top two reasons, of the 17 tested, that had the greatest impact on their decision not to apply to medical school. The top two reasons were “the time it takes to become a doctor” and the “cost of attending medical school.” There is a difference in the top three reasons by ethnicity.

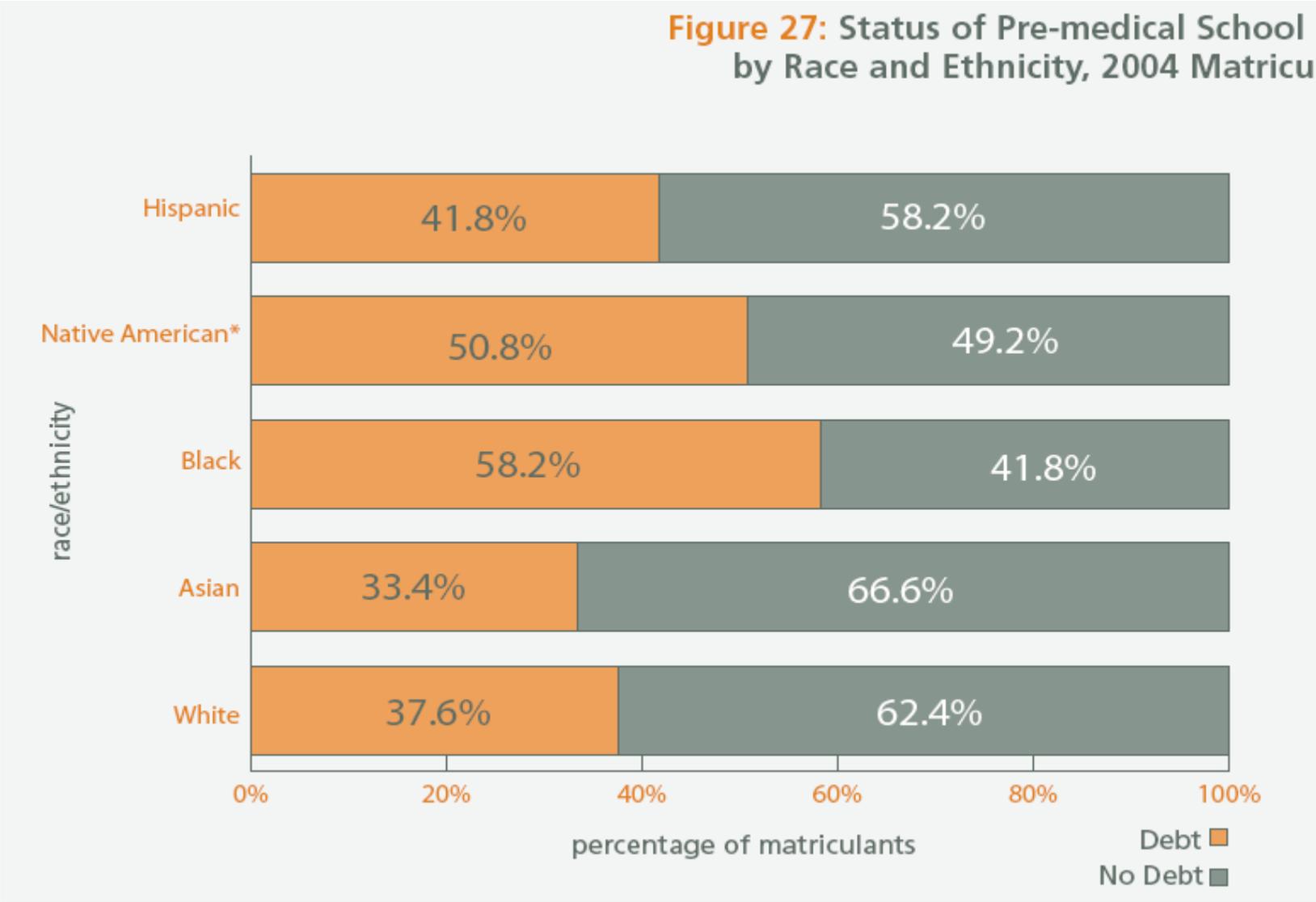
Non-Applicants

(top three reasons shaded for each audience)

Reason	Majority	Minority	Total
Cost of attending medical school	20%	33%	31%
The time it takes to become a doctor	32%	29%	30%
The demands of the physician lifestyle	25%	21%	22%
Concern about not being accepted	13%	19%	18%
Unsure medicine is the right career	19%	17%	17%
The pursuit of another post-graduate degree	20%	14%	16%
The pursuit of another health profession	26%	13%	16%

The Reality of Premedical Debt

Figure 27: Status of Pre-medical School by Race and Ethnicity, 2004 Matricu



Source: AAMC, Minorities in Medical Education: Facts & figures 2005

Frequency of Types of Mistreatment: 2001 Medical Schools Graduation Questionnaire All Schools Report

	2001 N = 14,133 17.1% Perceived Personal Mistreatment			
	Never	Once	Occas.	Freq.
Been denied opportunities of training or rewards because of your gender ?	81.3	6.5	10.6	1.5
Been denied opportunities of training or rewards because of your race or ethnicity ?	87.9	3.5	6.1	2.5
Been subjected personally to racially or ethnically offensive remarks/names ?	82.6	7.0	9.0	1.5
Received lower evaluations or grades solely because of your race or ethnicity rather than performance?	87.0	4.5	6.5	2.0

Racial and Ethnic Discrimination During Residency: Results of a National Survey

- Objective:
 - Establish the current prevalence of racial-ethnic-based harassment or discrimination during residency.
- Design:
 - 13-page anonymous survey instrument sent in 1991 to:
 - 10% random sample of 2nd year residents identified from the AMA Medical Education Research and Information Database of the AMA
 - 2nd year residents who had been senior medical students at schools (n=10) that held an earlier study on medical student mistreatment.
- Results:
 - 72% response rate (n=2,630)
 - **61% of minority respondents reported at least one experience of discrimination**
 - **Over 60% of all residents reported personal observations of racial or ethnic discrimination at their places of work**

Types of Perceived/Observed Racial-Ethnic Discrimination: Racial and Ethnic Discrimination during Residency

	% White (n=1492)	% URM (n=143)	% Asian (n=163)	% Middle Eastern (n=27)
Denied opportunities	7.5	26.4	21.0	25.9
Racial or ethnic slurs	32.1	38.7	33.3	29.6
Racist teaching materials	1.3	5.6	2.5	3.7
Malicious gossip	13.6	17.6	13.6	18.5
Favoritism toward other groups	16.2	32.4	25.3	40.7
Poor evaluations	6.4	26.8	20.4	33.3

Source: Baldwin, Daugherty, and Rowley. Emotional Impact of Medical School and Residency. Racial and Ethnic Discrimination During Residency. Results of a National Survey. Academic Medicine 69:S19-S21, 1994.

Faculty Perception and Experience of Racial/Ethnic Discrimination in Academic Medicine

Peterson et al, J Gen Int Med 2004

	Percent	Adjusted OR	95% CI
Perceived racial/ethnic bias in academic environment			
URM	63	5.4	3.8 to 7.8
NURM	59	2.6	1.8 to 3.7
Majority	29	1.0	-
Personal experience of racial/ethnic bias in professional advancement			
URM	54	12.8	8.7 to 18.7
NURM	36	6.9	4.5 to 10.5
Majority	8	1.0	-
Personal experience racial/ethnic discrimination by a superior or colleague			
URM	48	12.3	8.4 to 18.2
NURM	26	5.0	3.2 to 7.8
Majority	7	1.0	-

Impact of Race on the Professional Lives of Physicians

- Awareness of race permeates the experience of physicians of African descent in the health care workplace
- Race related experiences shape interpersonal interactions and define the institutional climate
- Health care workplace is often silent on issues of race
- Collective race-related experiences can result in “racial fatigue”

Response: Pre-Medical School

- Develop collaborative programs that:
 - Foster interest
 - Increase access to career exploratory opportunities
 - Address educational gaps
 - Provide mentoring
 - Include financial counseling

Response: Medical School and Beyond

- Provide Financial Support
- Address Institutional Environment
 - Mission
 - Recruitment and Selection
 - Students
 - Residents
 - Search for Faculty
 - Consistency with mission
 - Qualifications, definitions, evaluations
 - Monitor and Hold Accountable

Response: Medical School and Beyond

- Make criteria for evaluation and promotion more inclusive, transparent and available
- Equalize distribution of teaching, research and service tasks
- Provide resources and training
- Increase access to networks
 - Informal institutional networks and decision-making
 - Foster mentorship and collaborations
 - Decrease isolation through both formal and informal networking