

# Minorities in the Health Professions

## **The Sullivan Alliance to Transform America's Health Professions**

**Ilana S. Mittman, PhD, MS**

**March, 2009**

# Diversity in Medicine

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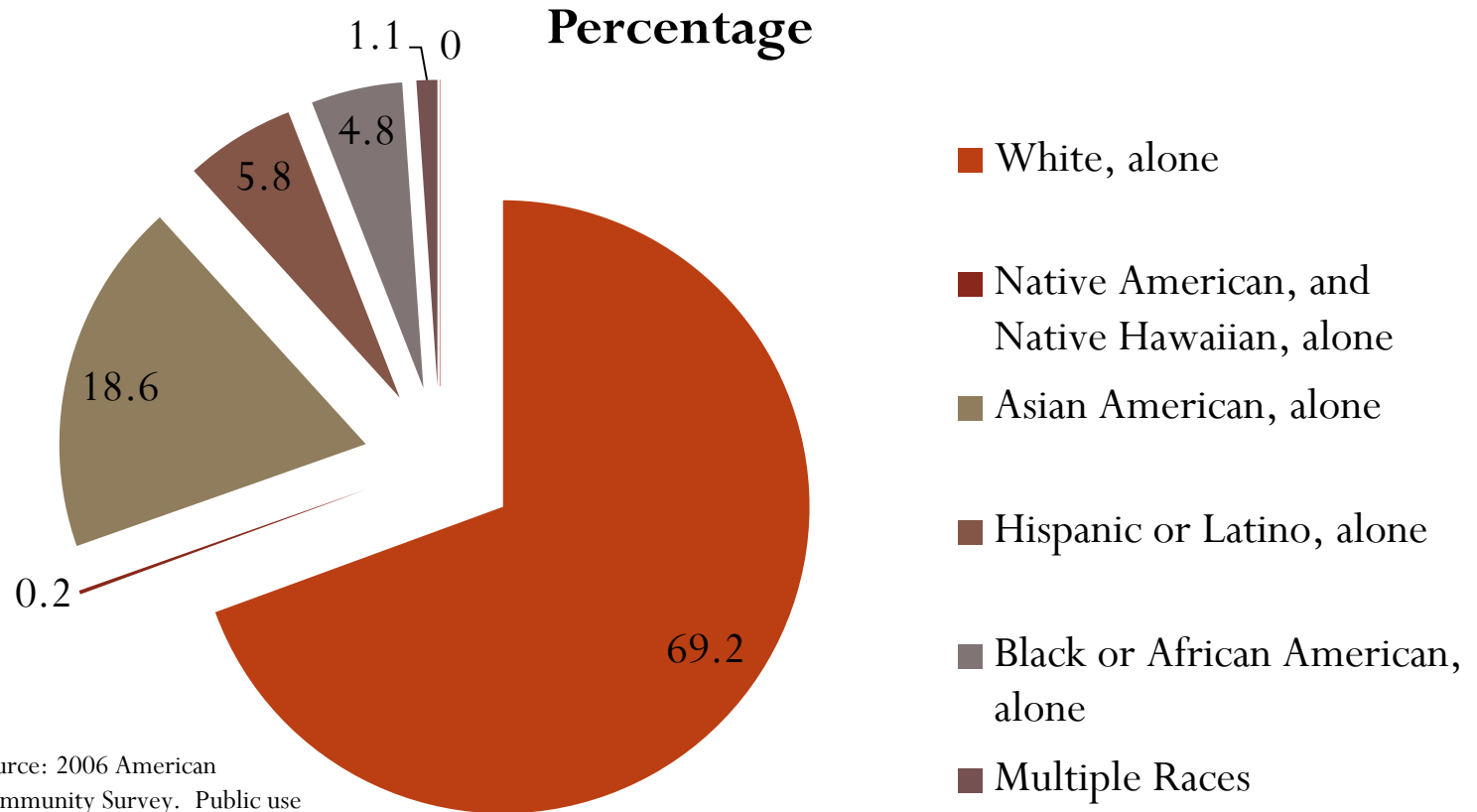
# Total Physicians by Race/Ethnicity - 2006

Race/Ethnicity	Number	Percentage
White	514,254	55.8
Black	32,452	3.5
Hispanic	46,214	5.0
Asian	113,585	12
American Native/Alaska Native	1,444	.02
Other	12,572	1.4
Unknown	201,383	22

Total physicians = 921,904)

Source: *Physician Characteristics and Distribution in the US, 2008 Edition*. American Medical Association

## U.S. Physicians by Race and Ethnicity, 2006\*



\*Includes DOs and IMGs

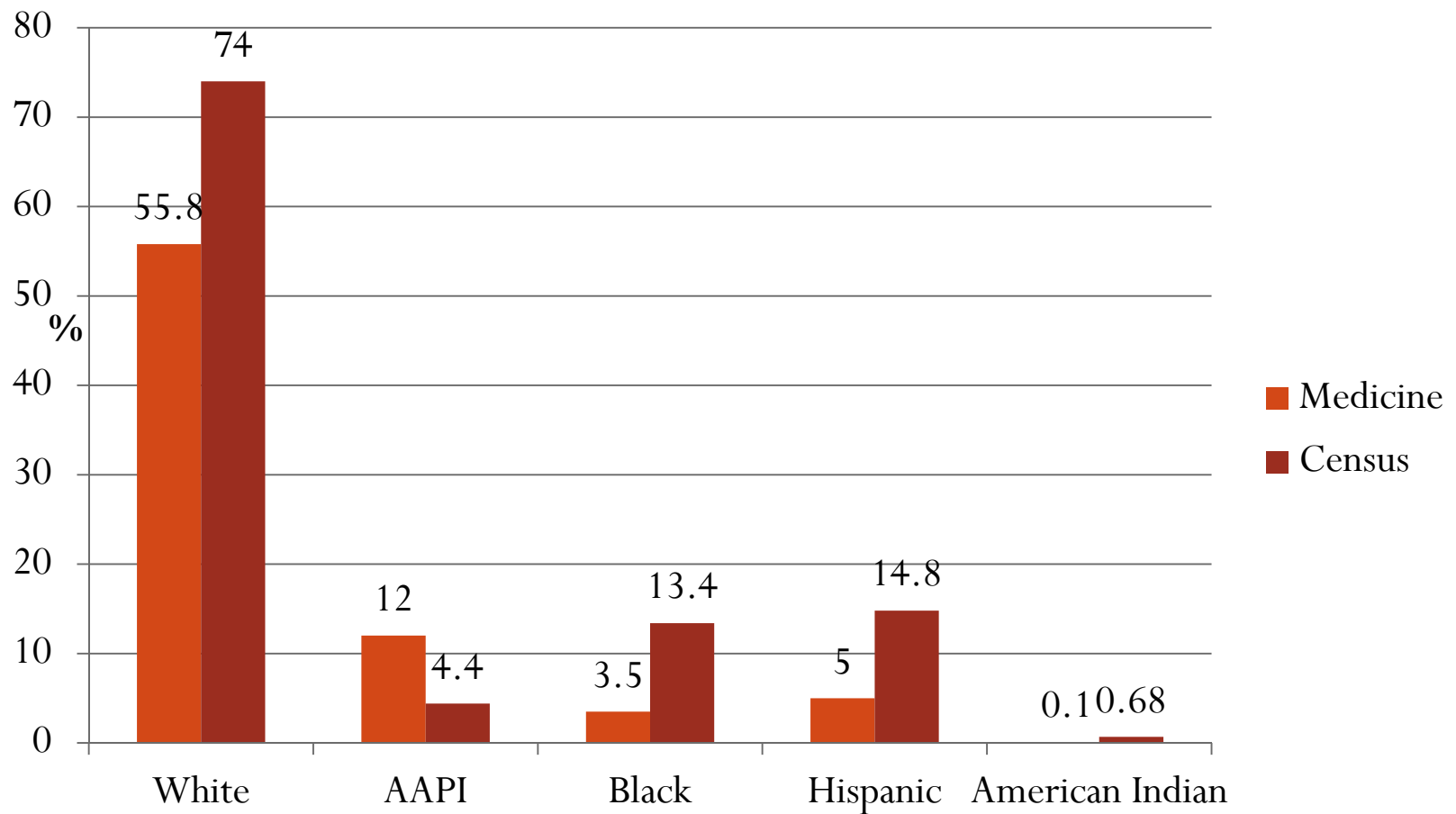
*From: The complexities of Physician Supply and Demand: Projections Through 2025*

## **Non Federal Physicians by Race/Ethnicity – 2007**

<b>Race/Ethnicity</b>	<b>Percentage</b>
White	44
Black	2.0
Hispanic	3.0
Asian	8
American Native/Alaska Native	0
Other	2
<b>Unknown</b>	<b>37%</b>

*Source: Kaiser Family Foundation: State Health Facts, 2009*

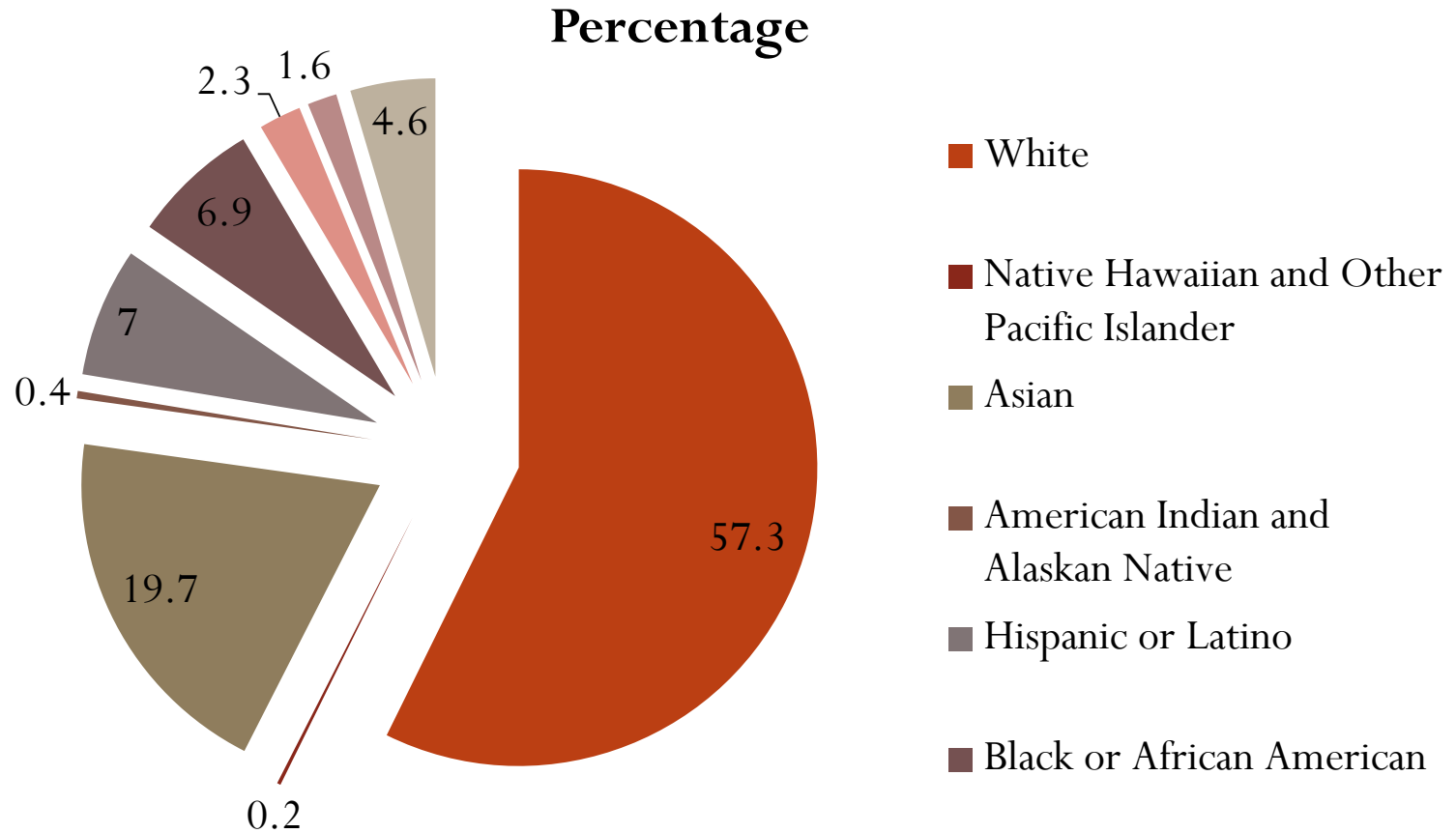
## Race and Ethnicity of Physicians and U.S. Population, 2006



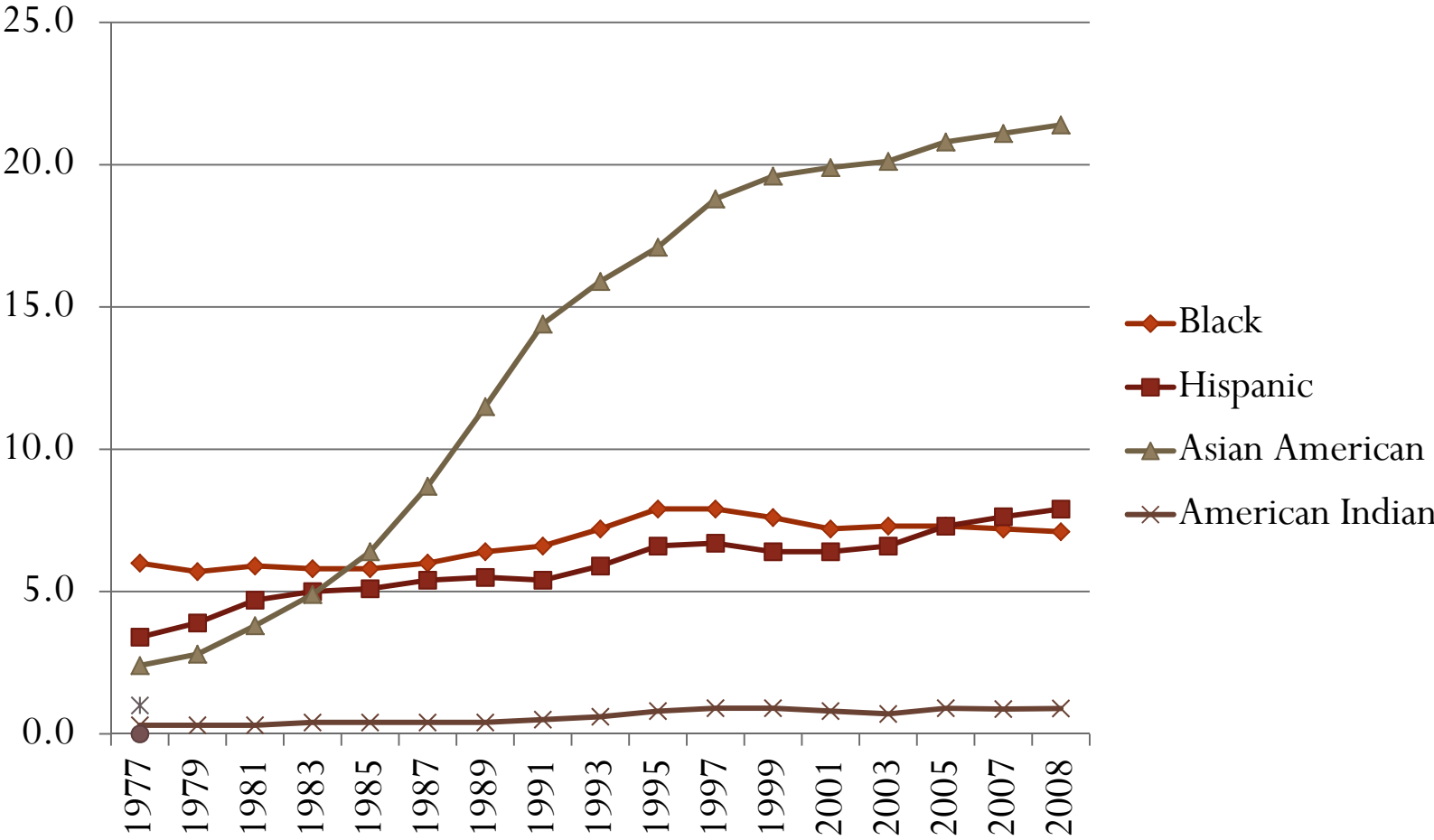
Sources: AMA, 2008 and American Community Survey, 2006

# Percentage of First-Time U.S. Medical School Applicants by Race and Ethnicity, 2007

Source: AAMC – Diversity in Medical Education Facts and Figures 2008



# Trends in U.S. Medical School Enrollees by Race and Ethnicity: 1977-2008

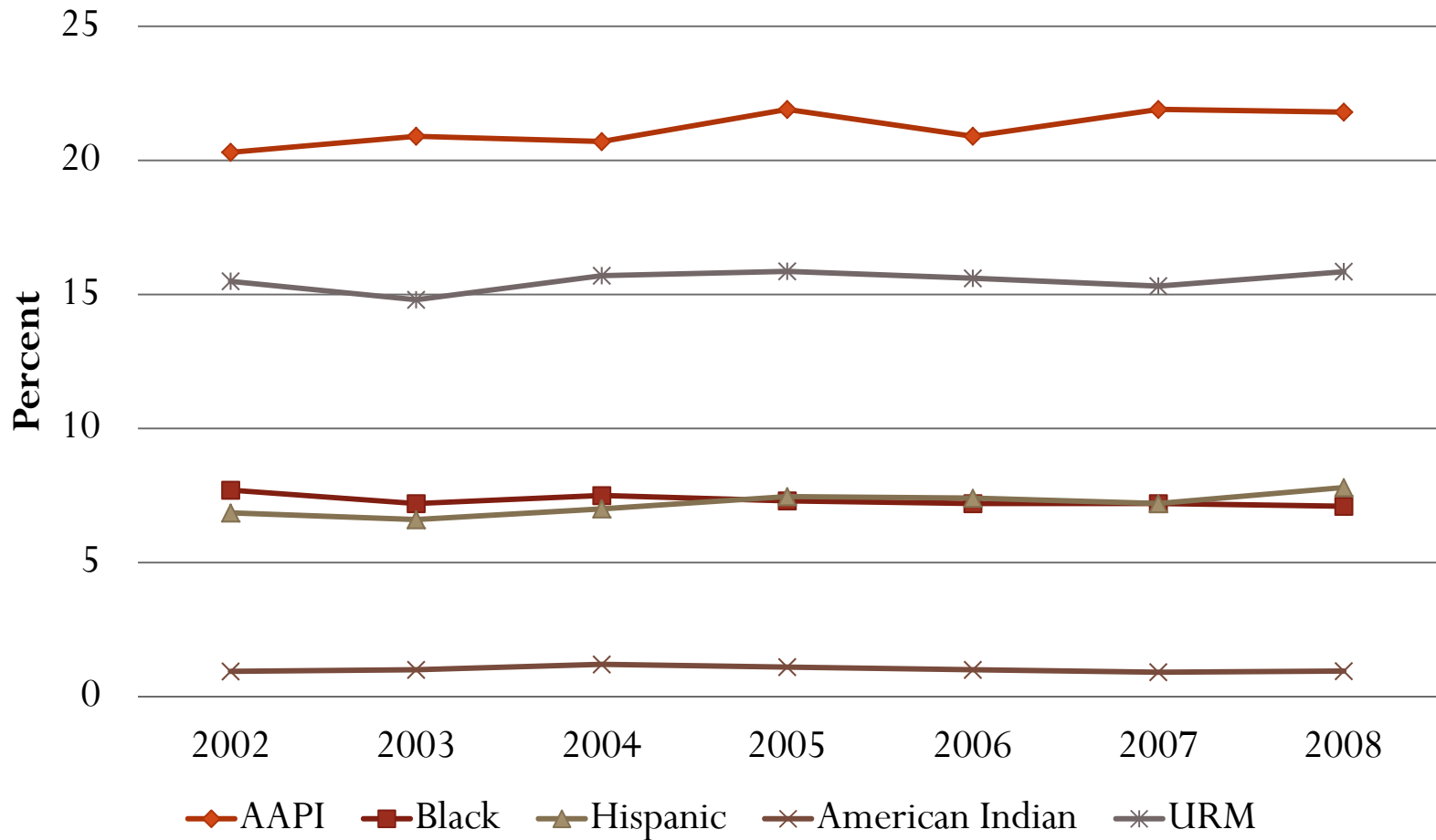


Source: Diversity in Medical Education Facts and Figures 2008

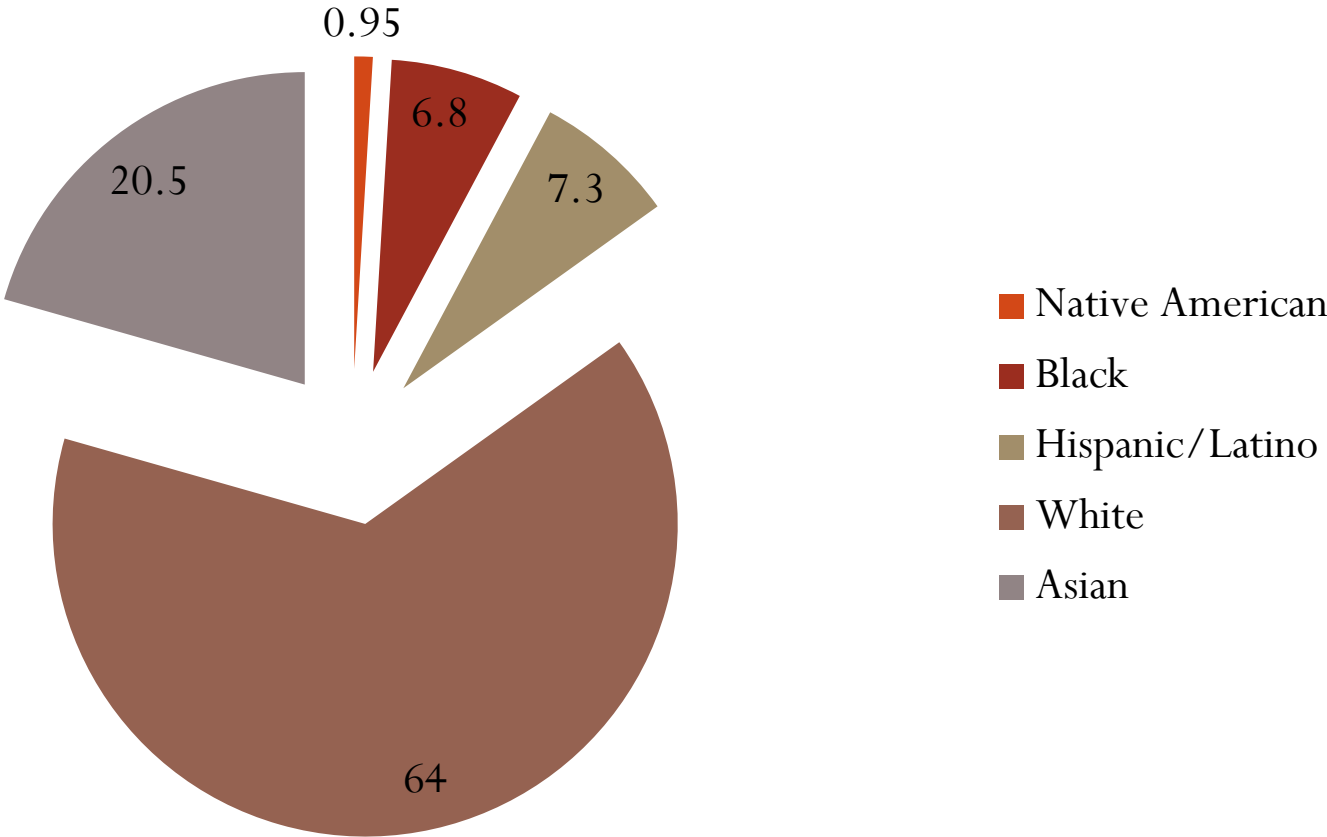


# Medical School Minority Matriculation Trends: 2002-2008

Source: AAMC



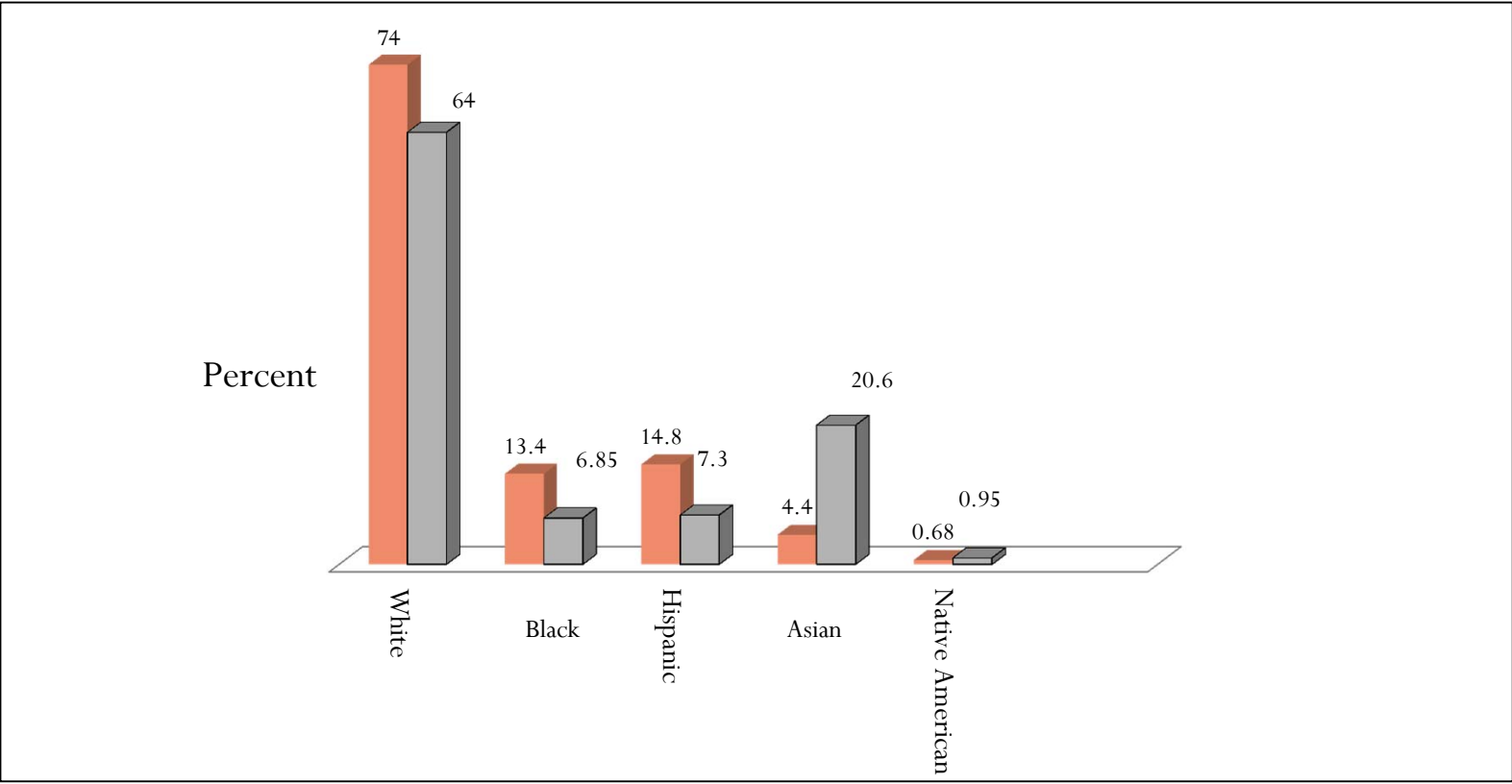
### Total U.S. Medical School Graduates by Race and Ethnicity, 2008



Source: AAMC – [www.aamc.org/facts/2008/gradtraceeth0208.htm](http://www.aamc.org/facts/2008/gradtraceeth0208.htm)

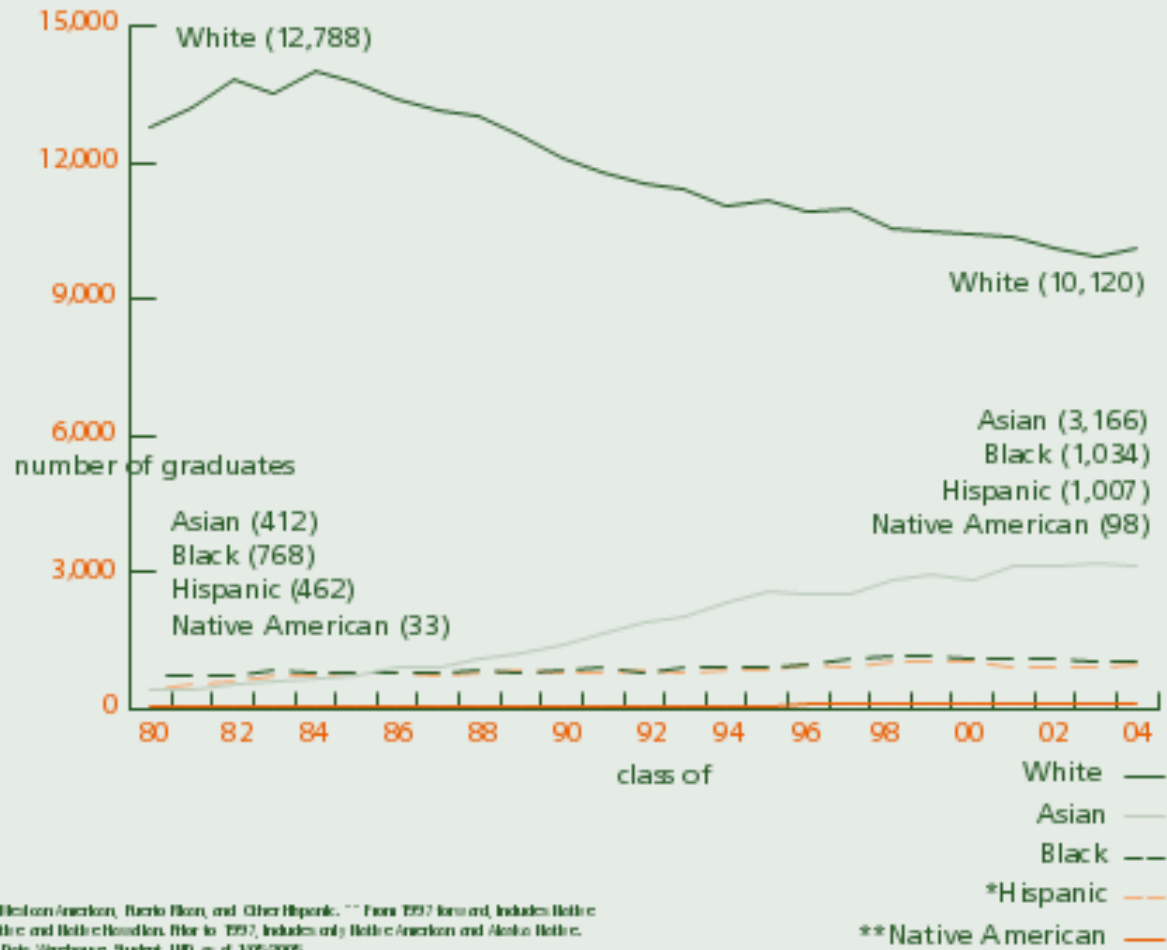
# U.S. Medical School Graduates and Population by Race and Ethnicity, 2008

■ Census 2006 ■ 2008



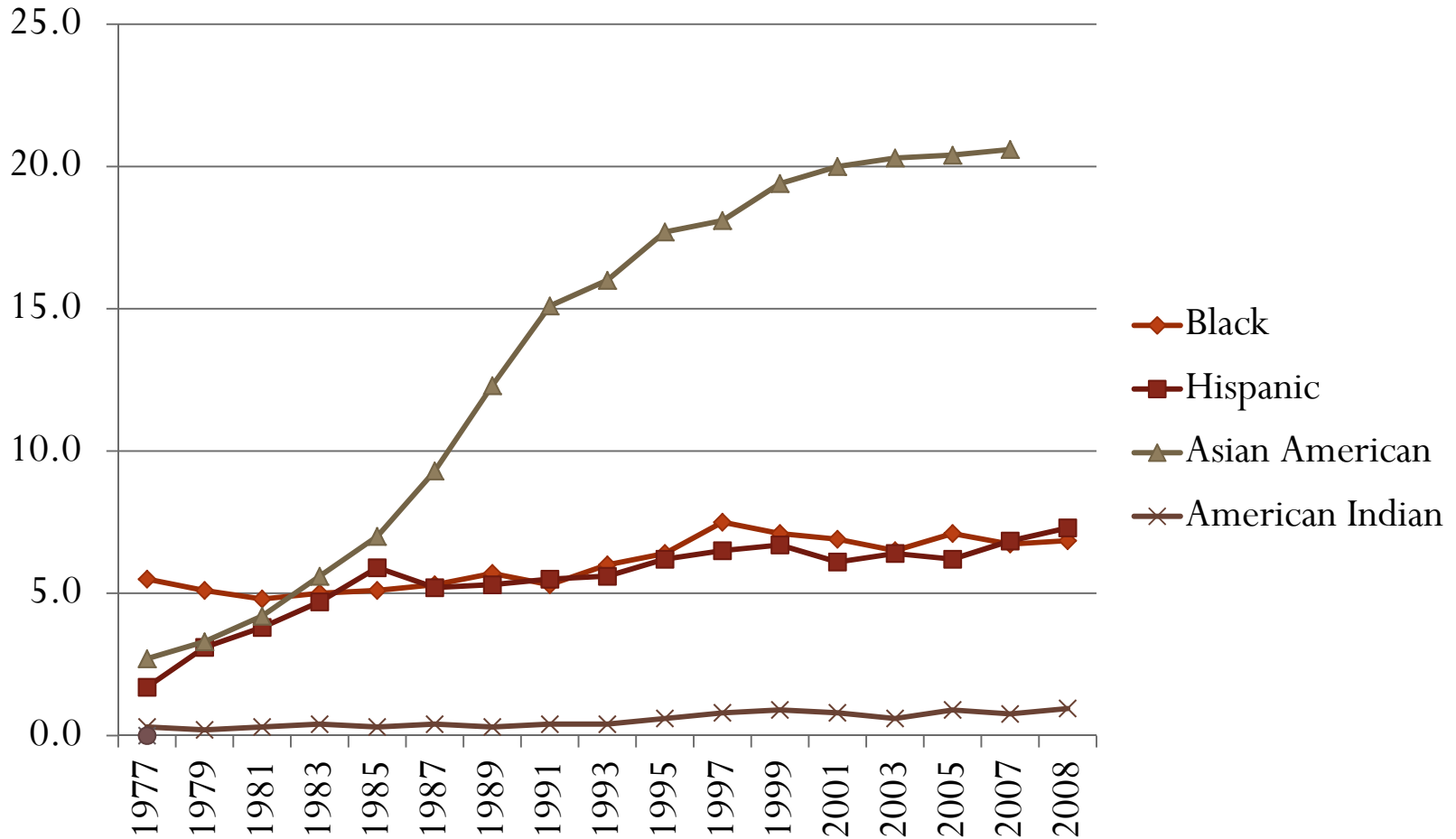
Source: AAMC Data Warehouse; The Kaiser Family Foundation, 2009

**Figure 15: Medical School Graduates by Race and Ethnicity, 1980-2004**



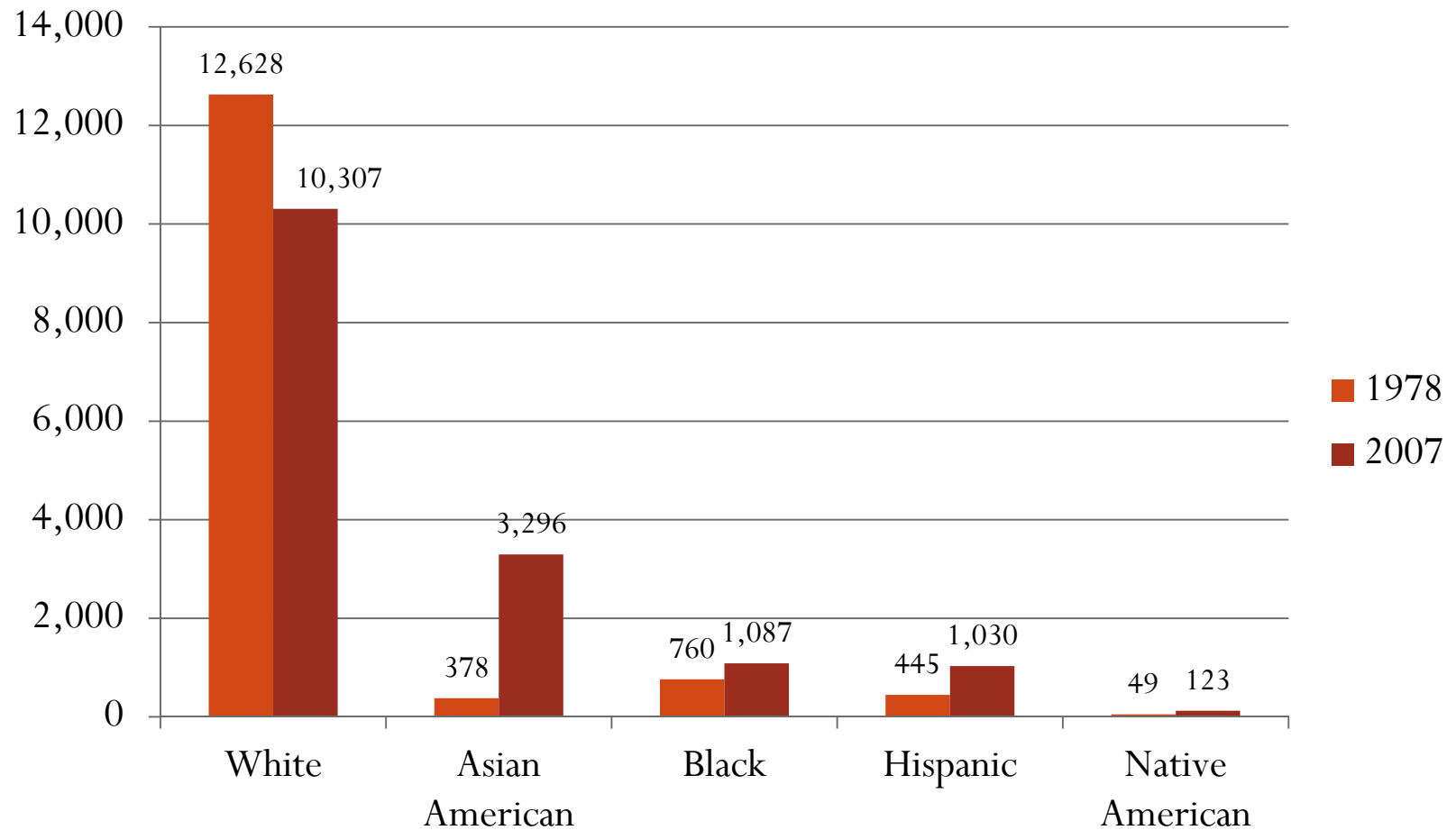
\* Hispanic includes Mexican American, Puerto Rican, and Other Hispanic. \*\* From 1997 forward, includes Native American/Alaska Native and Native Hawaiian. Prior to 1997, includes only Native American and Alaska Native. Data Source: AMEC Data Warehouse: Student\_ID, as of 1/25/2005.

# U.S. Medical School Graduation by Race and Ethnicity: 1977-2008



Source: Diversity in Medical Education Facts and Figures 2008

# U.S. Medical School Graduates by Race and Ethnicity, 1978-2007



Source: *Diversity in Medical Education Facts and Figures, 2008 (AAMC)*

**Figure 16: Medical School Graduates by Hispanic Subgroups, 1980-2004**



# Physician Service Trends

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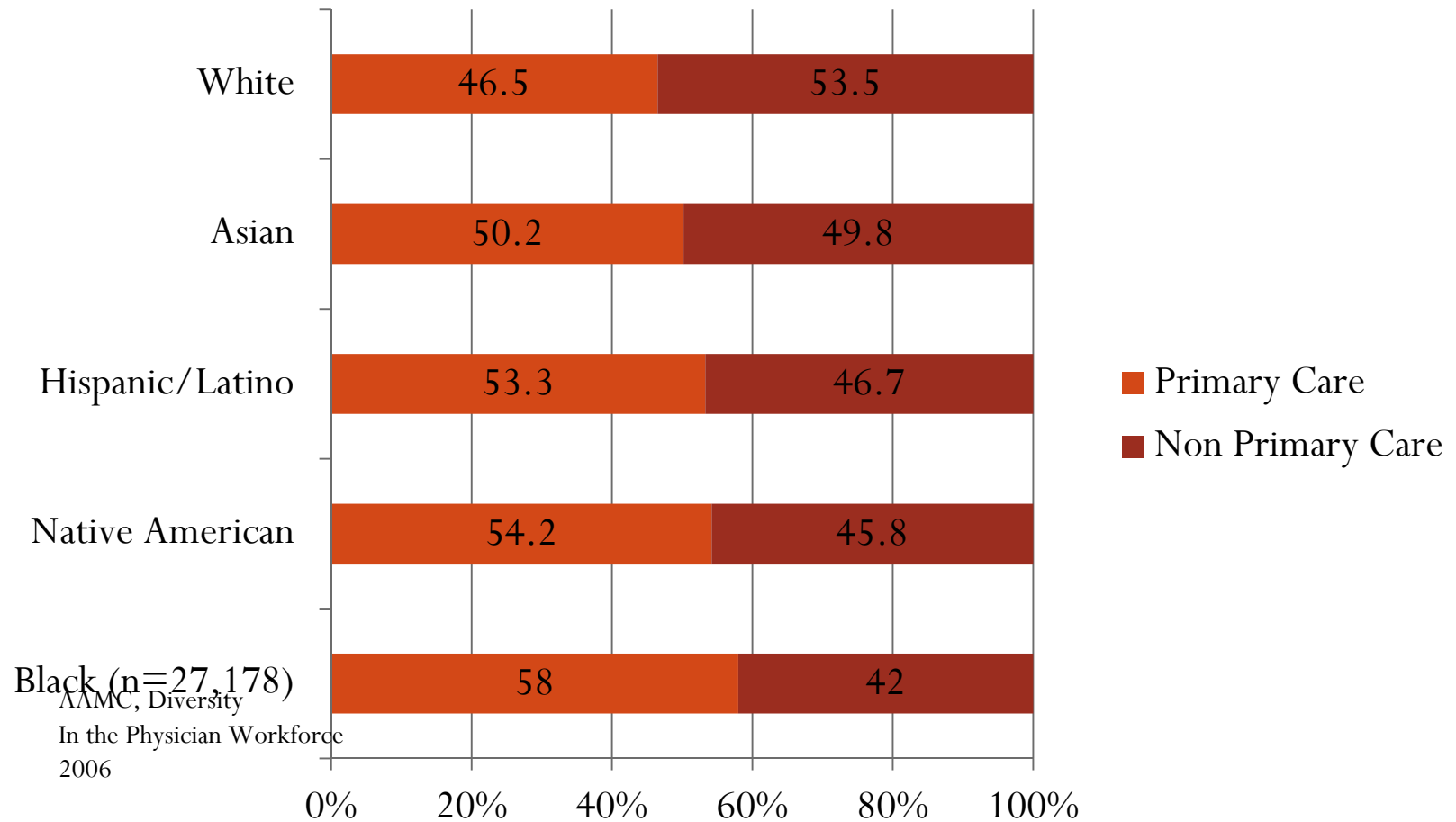


## Percentage of Medical School Graduates Planning to Practice in an Underserved Area by Race and Ethnicity, 2007

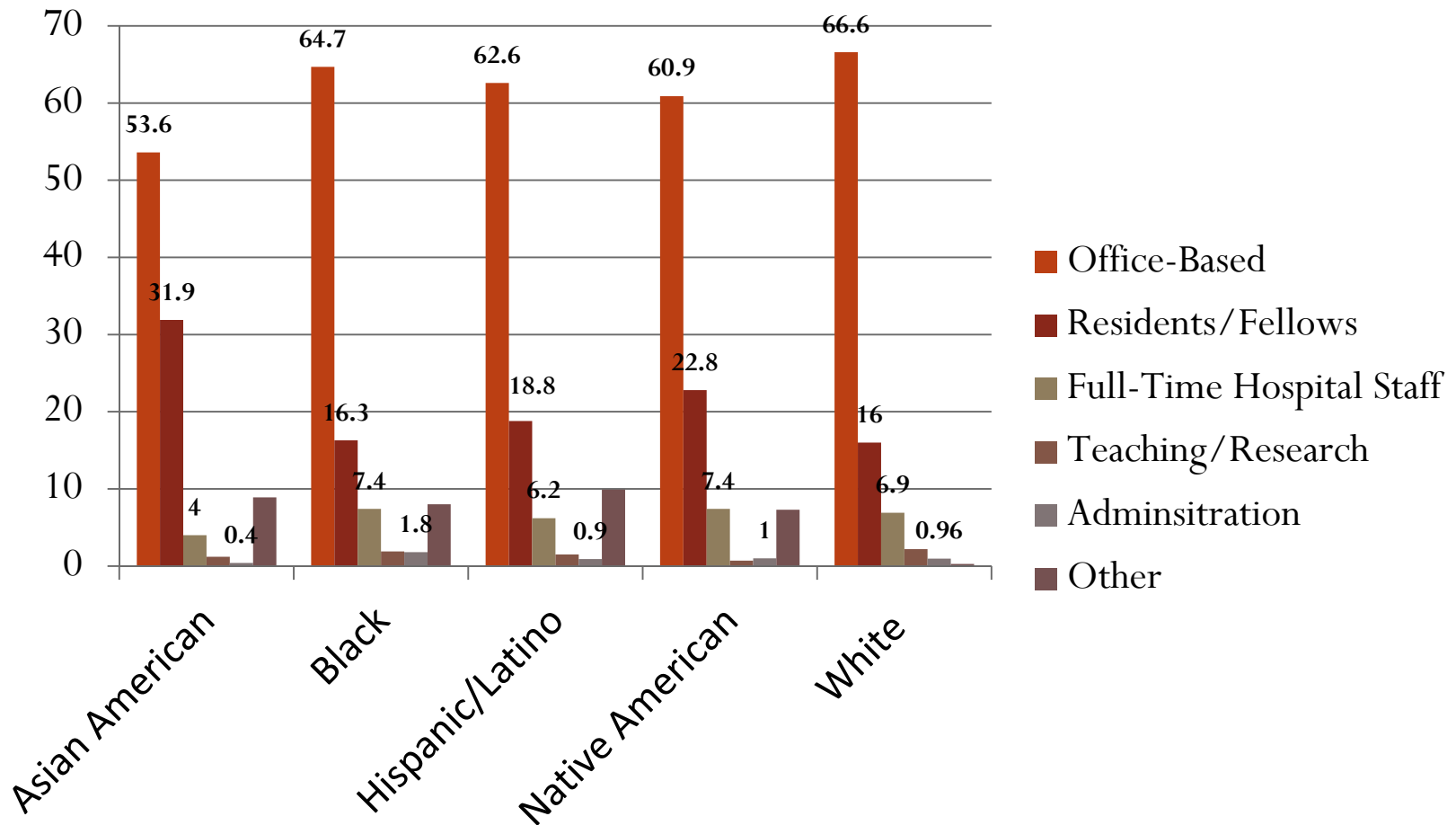


Source: *Diversity in Medical Education Facts and Figures 2008*

## Percentage of Minority U.S. Physicians in Primary Care vs. Non-Primary Care Specialties, 2004



## Major Professional Activity of U.S. Physicians, by Race and Ethnicity, 2004



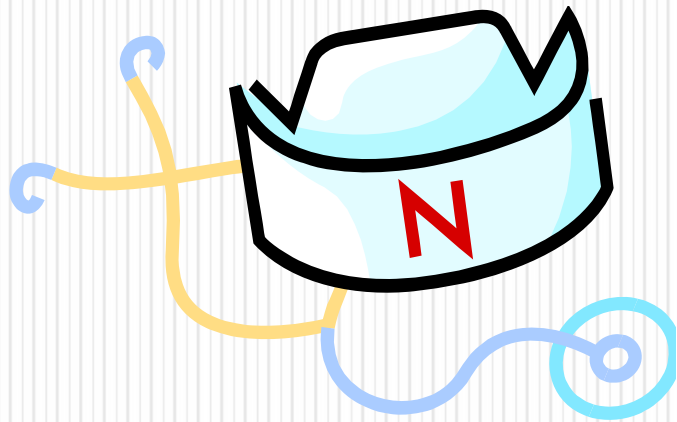
Source: *Diversity in the Physician Workforce: Facts and Figures, 2006* (AAMC)

# Data Highlights

- Difficult to assess physician demographics nationally, because of data limitations
- Several data sources were used with inconsistent findings
- Undocumented race and ethnicity is too high (over 20% in certain data sources)
- The number of black and Hispanic medical school graduates has grown over the past two decades, but disproportionately to their population growth and they are still severely underrepresented
- The total number of Asian graduates (aggregate data) has grown at a higher rate than all other groups

# Nursing

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## U.S. Nursing Program Enrollment by Degree and Race and Ethnicity: Fall, 2006

Race/Ethnicity	UNDERGRDUATE			MASTERS	DOCTORAL		
	GENERIC	RN	TOTAL		%	Research	DNP
American Indian	0.7	0.8	0.7	0.7	0.8	0.7	1.5
Asian Pacific Islander	7.0	3.9	6.3	6.0	5.1	2.2	17.9
Black	12.1	13.3	12.4	11.3	10.6	7.3	13.4
Hispanic	5.4	5.5	5.4	4.8	3.4	2.8	4.5
White	74.8	76.6	75.2	77.3	80.1	87.0	62.7
Total Minorities	25.2	23.4	24.8	22.7	19.9	13.0	37.3
Total	124,680	38,909	163,589	49,460	3,362	763	67

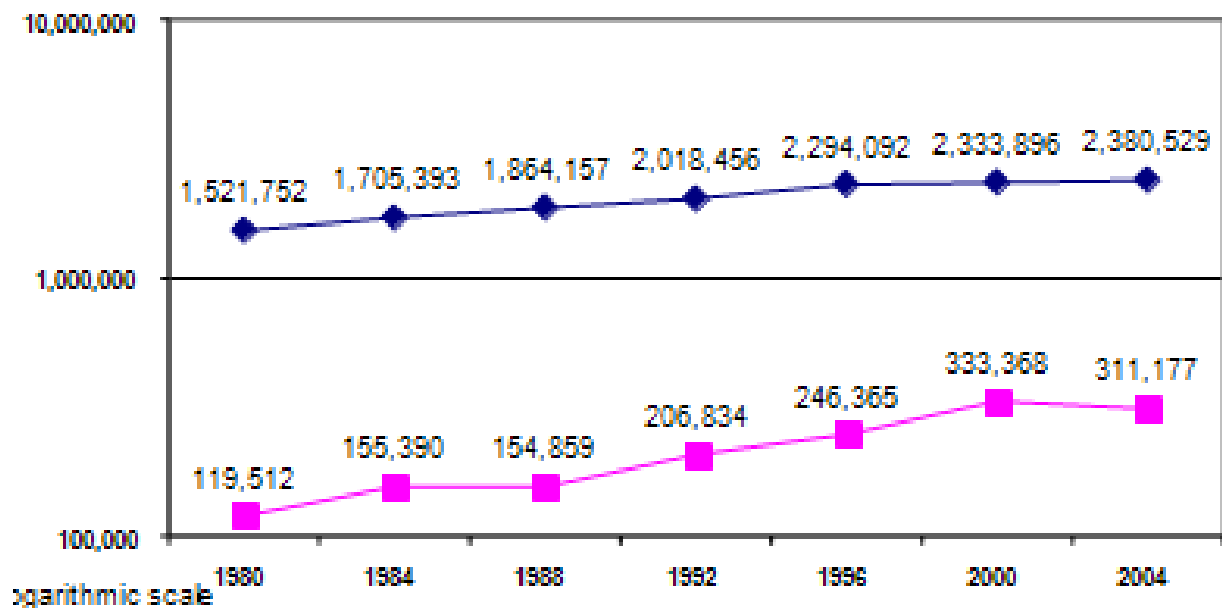
*Resource: American Association of Colleges of Nursing, 2007*

## U.S. Nursing Program Graduation by Degree and Race and Ethnicity: August 1, 2005 to July 31, 2006

Race/Ethnicity	UNDERGRDUATE			MASTERS	DOCTORAL		
	GENERIC	RN	TOTAL		%	Research	DNP
American Indian	0.7	0.9	0.8	0.6	--	--	--
Asian Pacific Islander	5.8	3.7	5.3	6.0	5.3	2.8	18.2
Black	9.8	13.4	10.7	10.2	9.5	8.5	9.1
Hispanic	5.3	5.2	5.3	4.7	2.5	5.6	
White	78.4	76.9	78.0	78.6	82.7	83.1	72.7
Total Minorities	21.6	23.1	22.0	21.4	17.3	16.9	27.3
Total	35,698	11,495	47,193	12,011	359	71	33

*Resource: American Association of Colleges of Nursing, 2007*

Chart 5: Trend in the number of racial/ethnic White, non-Hispanic and non-White, or Hispanic registered nurses, 1980-2004\*



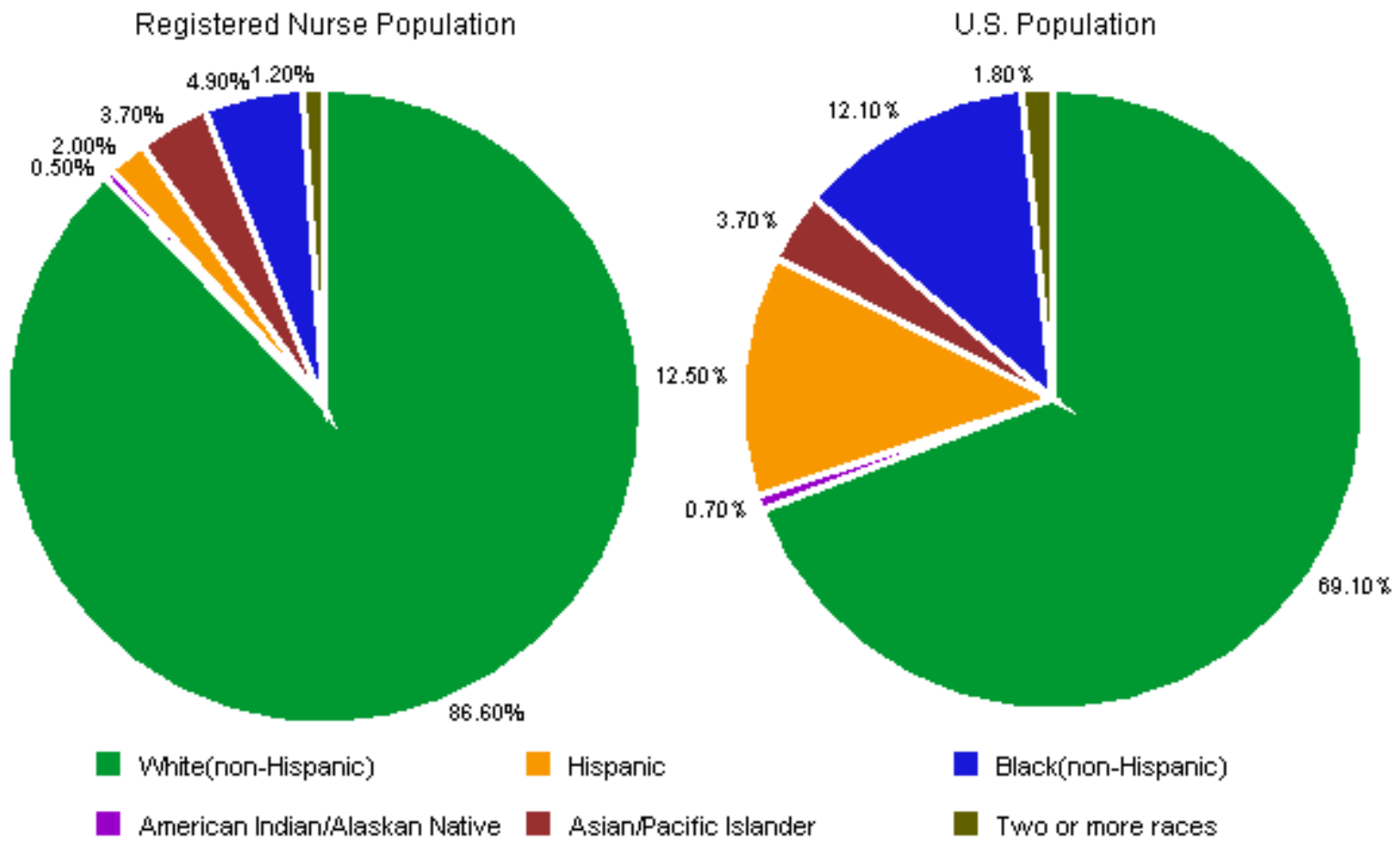
\*The total numbers of RNs across all race/ethnicity combinations may not equal the total numbers of RNs estimated from each survey due to incomplete information provided by respondents and the effect of rounding. Only those who provided both race and ethnicity information are included in the calculations used for this chart.

◆ White, non-Hispanic    ■ Non-white or Hispanic

Source: Findings From the 2004 National Sample Survey of Registered Nurses (HRSA)

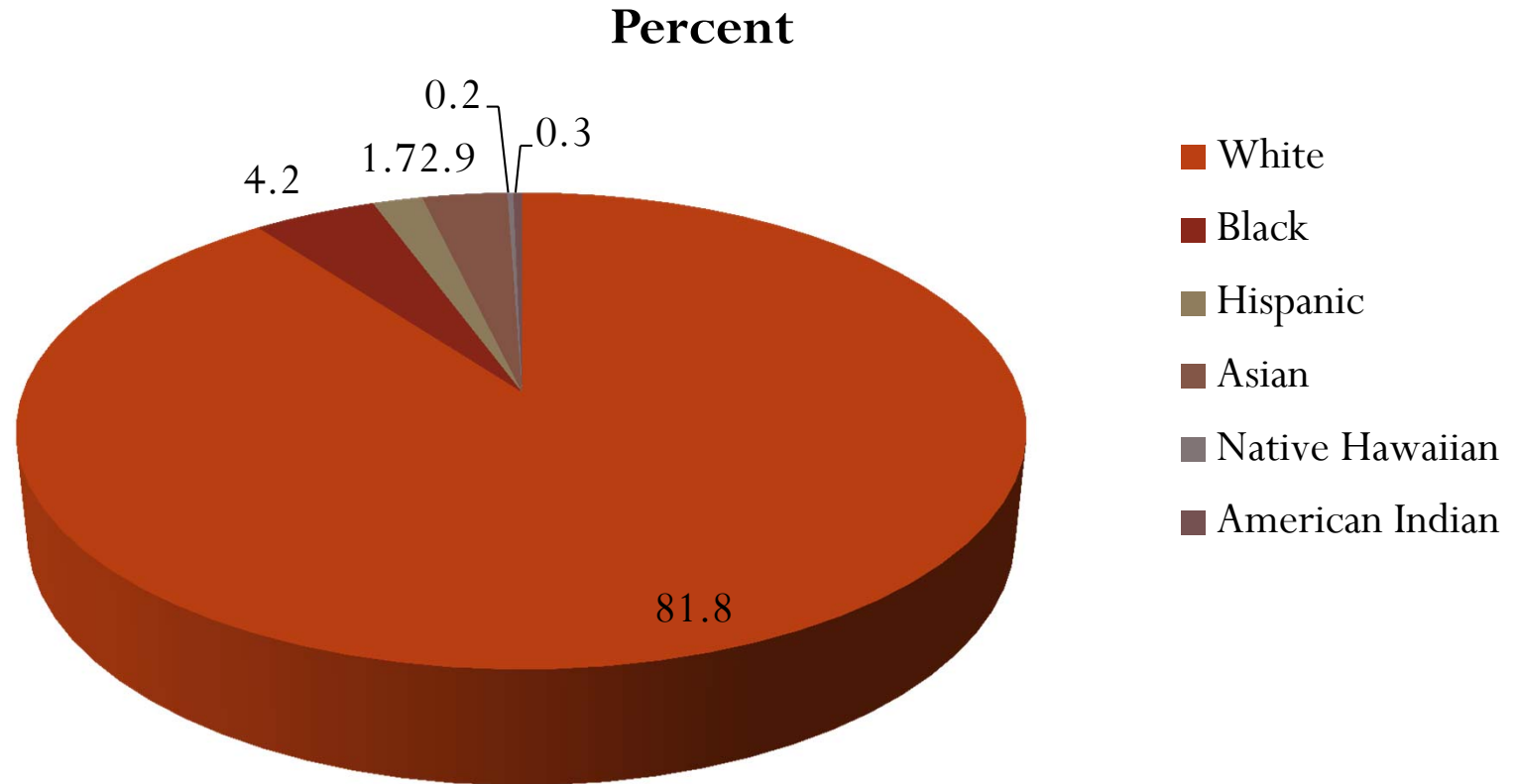


Chart 6. Distribution of Registered Nurses by Racial/Ethnic Background, March 2000



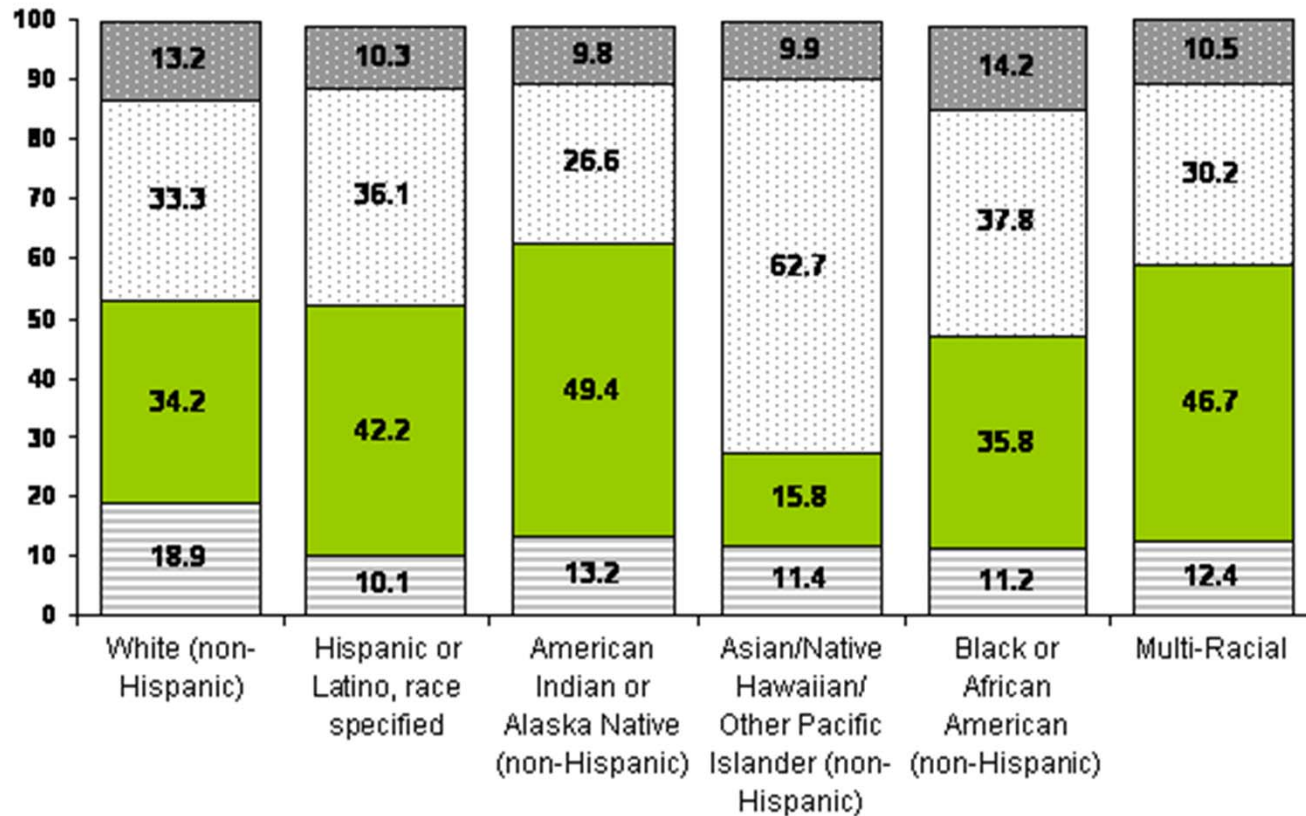
Source: Findings From the 2004 National Sample Survey of Registered Nurses (HRSA)

# U.S. Registered Nurses Demographics: 2004



**The Registered Nurse Population: Findings from the 2004 National Sample Survey of Registered Nurses**

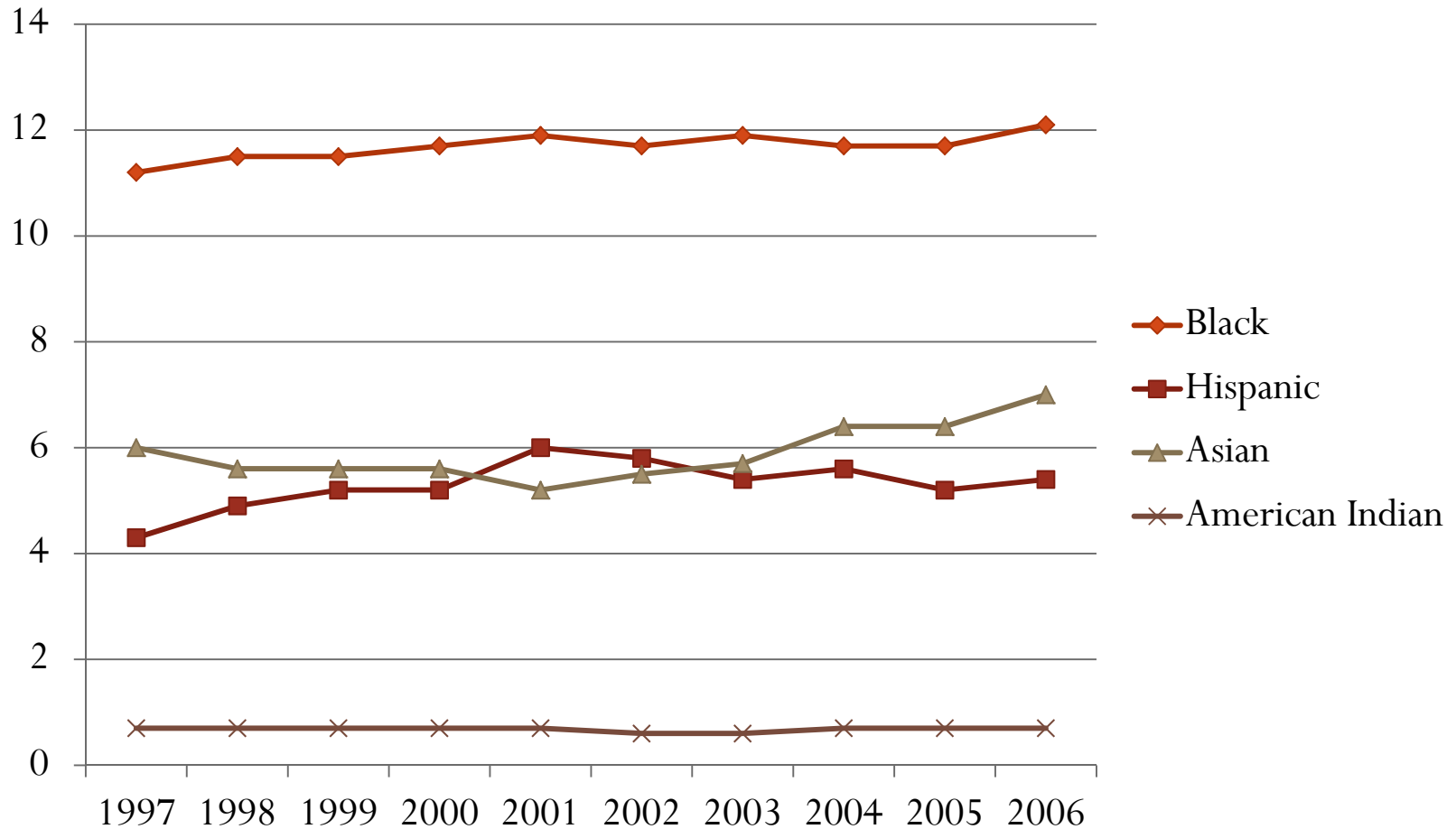
**Chart 12. Percent distribution of registered nurses in each reported racial/ethnic group by highest nursing or nursing-related educational preparation, March 2004\***



\*The totals of the percents in each bar may not equal 100 percent due to the effect of rounding. Only those who provided both race and ethnicity information (such as Hispanic/Latino, race specified), as well as initial educational preparation information, are included in the calculations used for this chart.

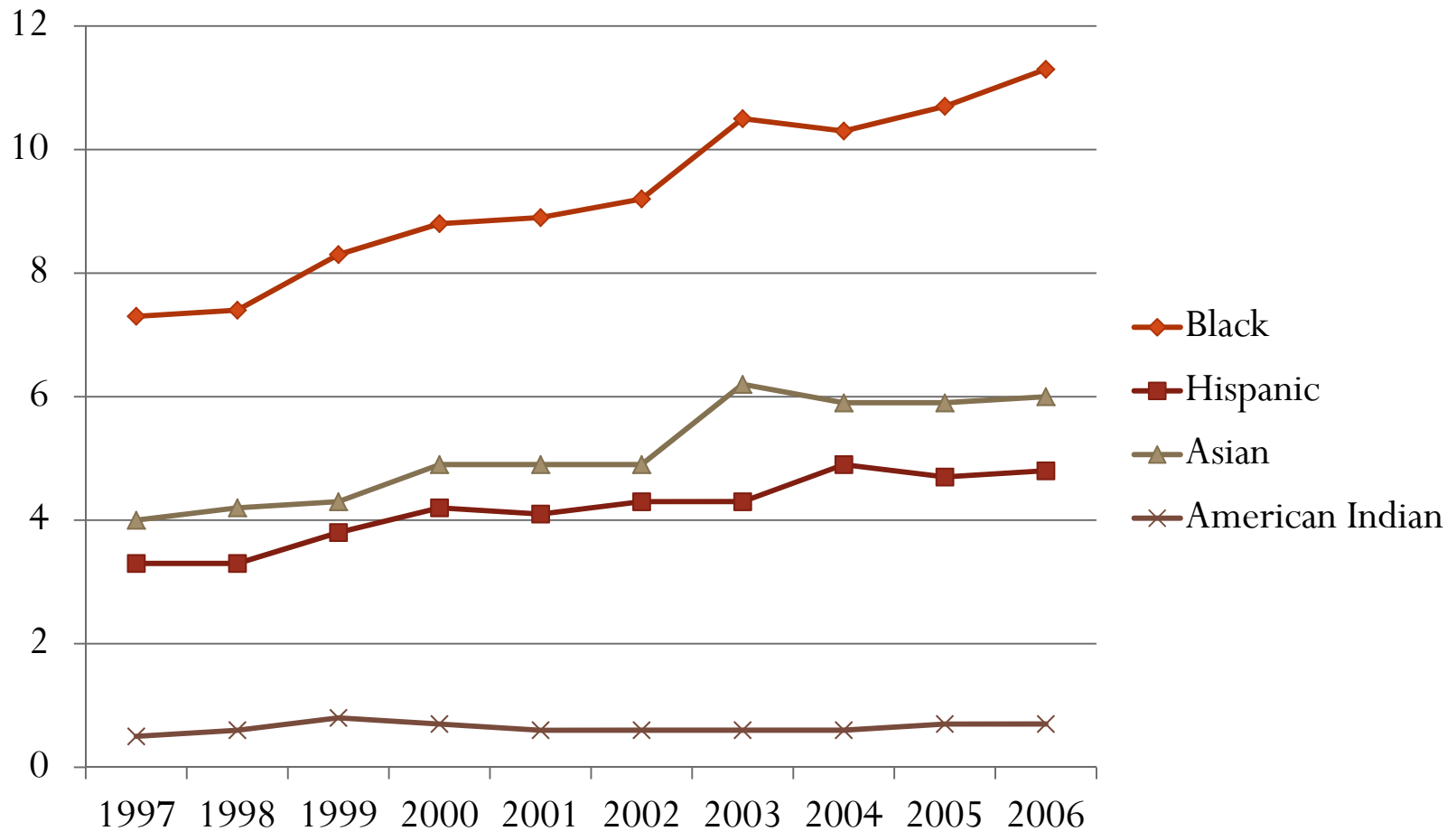
Diploma  
  Associate Degree  
  Baccalaureate Degree  
  Master's/Doctoral Degree

# Trends in Minority Students Enrolled in U.S. Baccalaureate Nursing Programs:1997-2006



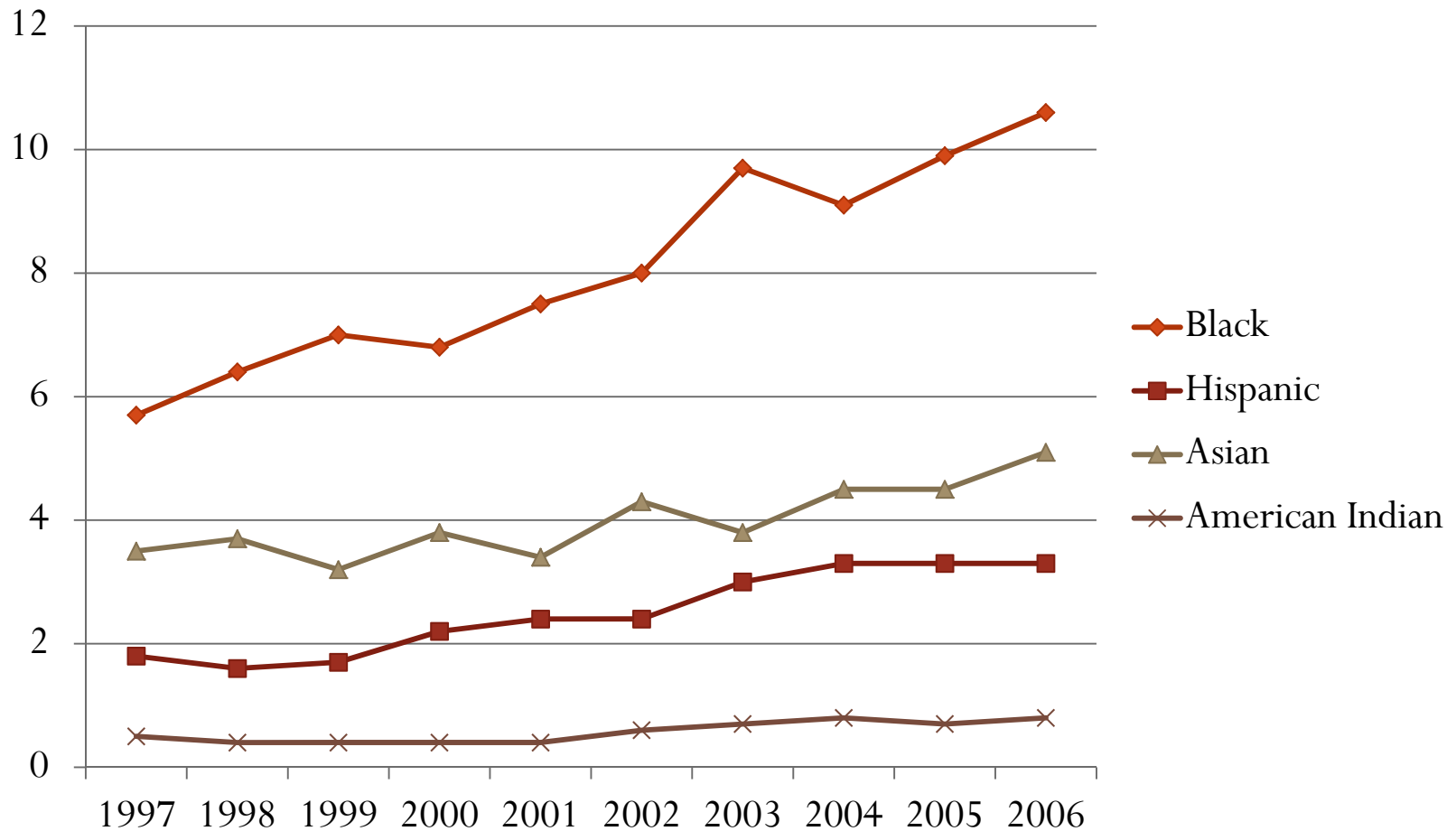
Source: American Association of Colleges of Nursing (AACN), 2007

## Trends in Minority Students Enrolled in U.S. Masters Level Nursing Programs:1997-2006



Source: American Association of Colleges of Nursing (AACN), 2007

## Trends in Minority Students Enrolled in U.S. Doctoral Level Nursing Programs:1997-2006

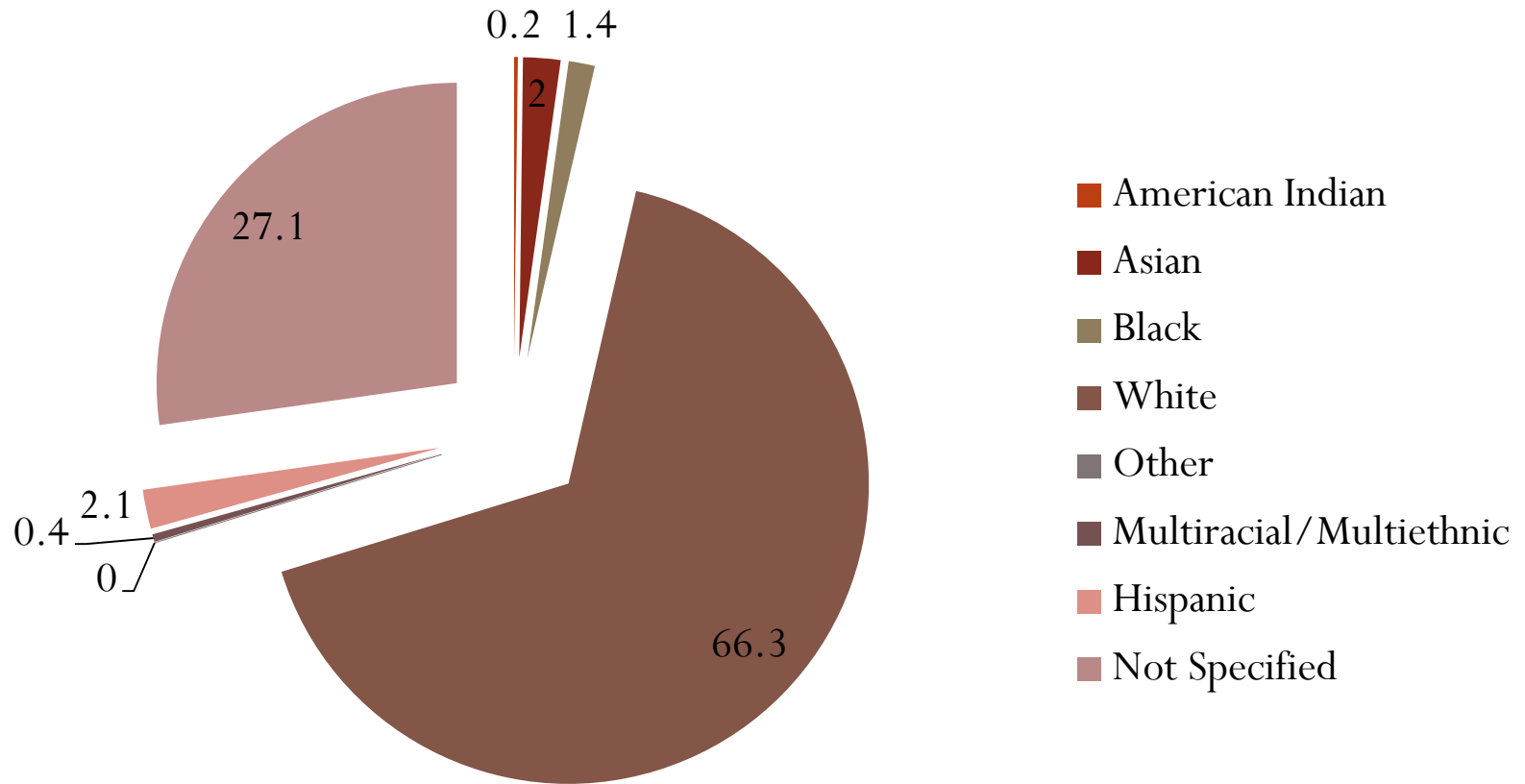


Source: American Association of Colleges of Nursing (AACN), 2007

# The Counseling Professions

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# Ethnic/Racial Characteristics of APA Members



Source: 2007 APA Directory. Compiled by Center for Psychology. Workforce Analysis and Research

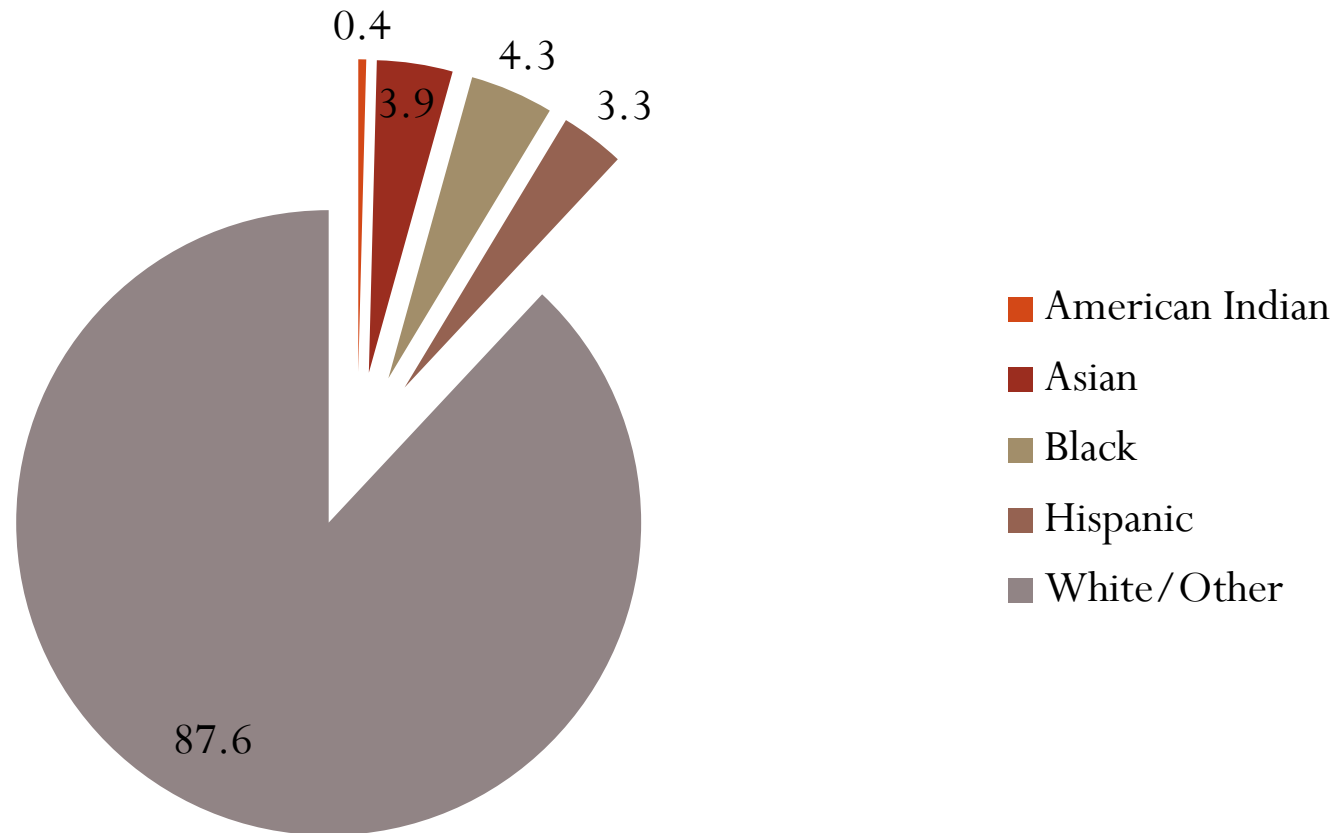


### National Data on Health Workforce Diversity, by Gender, Race and Ethnicity

Source: Bureau of Labor Force Statistics (BLFS), *Current Population Survey, 2004*

<b>Profession</b>	<b>Men (%)</b>	<b>African American (%)</b>	<b>Hispanic/Latino (%)</b>	<b>Asian American (%)</b>	<b>Total Minorities (%)</b>
Social Workers	22.3	20.4	10.9	2.9	34.2
Clinical Laboratory Technicians	28	14.6	6.9	10.2	31.7
Physician Assistants	32.7	6.8	9.4	7.6	23.8
Physical Therapists	34.6	7.1	3.3	10.3	20.7
Occupational Therapists	7.3	5.1	3.7	8.8	17.6
Medical Geneticists	50.0	1.0	2.0	8.0	11.0
Psychologists	33.3	3.3	4.6	1.4	9.3
Speech Language Pathologist	4.9	6.0	2.1	0.5	8.6
Genetic Counselors	9.0	1.0	1.0	5.0	7.0

## Percentage of Ethnic Minority Full-Time Psychology Faculty, 2005



Source: 2007 APA, Office of Ethnic Minority Affairs, 2008. *A Portrait of Success and Challenge, Progress Report: 1997-2005*

## Recipients of Doctoral Degrees in Psychology: 1995/1996 – 2003/2004

Race & Ethnicity	1995/1996		2003/2004	
	n	%	n	%
American Indian	17	<1	13	<1
Asian American	121	3.8	153	5.7
Black	152	4.7	204	7.6
Hispanic	173	5.4	170	6.3
Total Minorities	463	14.4	540	20.1
White	2,744	85.6	2,141	79.9

Source: 2007 APA, Office of Ethnic Minority Affairs, 2008. *A Portrait of Success and Challenge, Progress Report: 1997-2005*

## Recipients of Master Degrees in Psychology: 1995/1996 – 2003/2004

Race & Ethnicity	1995/1996		2003/2004	
	n	%	n	%
American Indian	78	<1	108	<1
Asian American	322	2.7	580	4.3
Black	870	7.2	1,923	14.1
Hispanic	667	5.6	1,085	8.0
Total Minorities	1,937	16.1	3,696	27.2
White	10,071	83.7	9,901	72.8

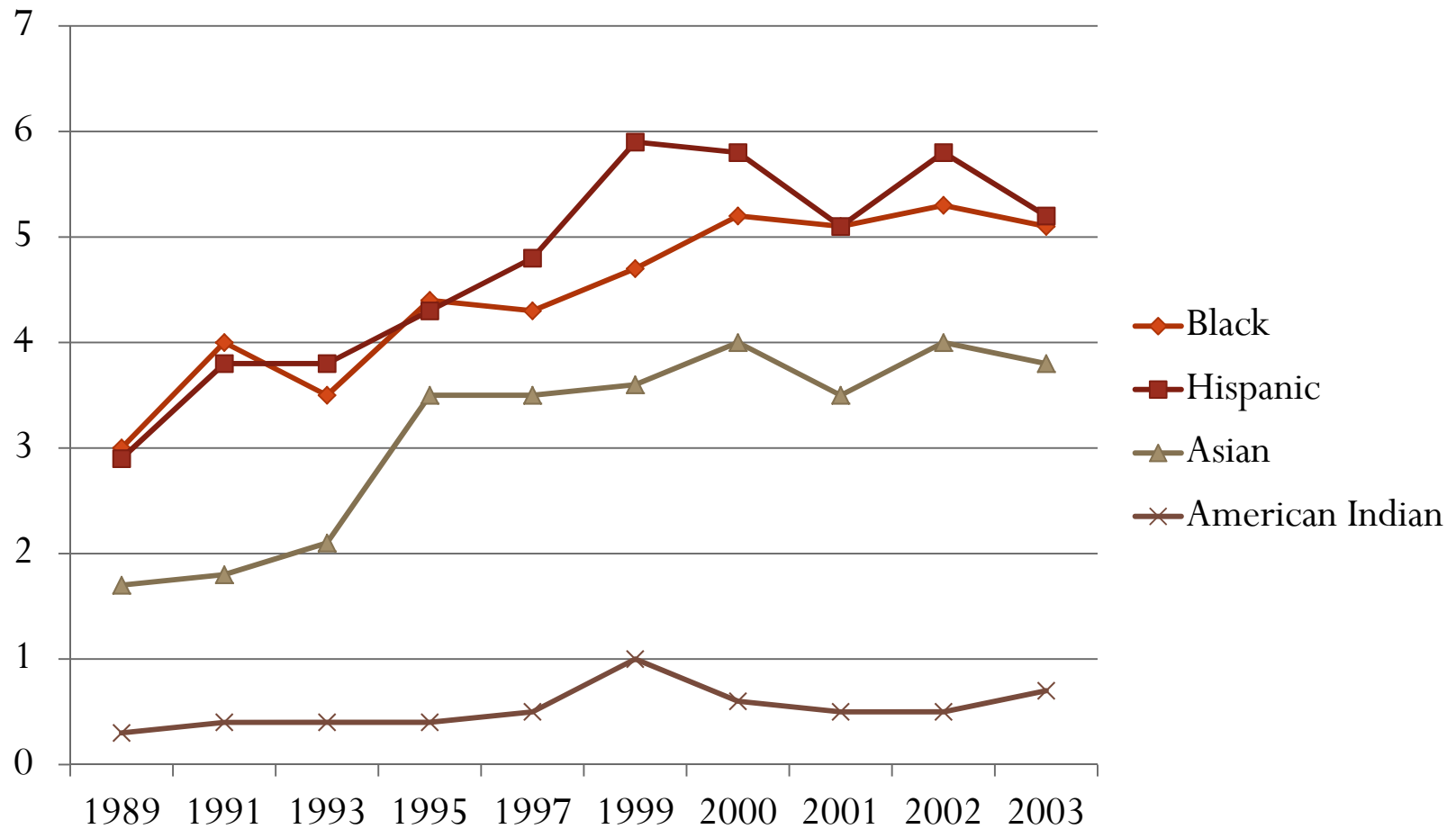
Source: 2007 APA, Office of Ethnic Minority Affairs, 2008. *A Portrait of Success and Challenge, Progress Report: 1997-2005*

## Percentage of Clinically Trained Mental Health Personnel, by Discipline and Race

Race/ Ethnicity	Gender	Psychiatry 2000	Psychology 2002	Social Work 2000	Counseling 2000	Marriage And Family Therapy 2000	Psychosocial Rehab 2000	School Psychology
American Indian/ Alaskan Native	Male	0.1	0.3	0.0	0.5	1.3	0.4	0.2
	Female	0.1	0.3	0.2	0.5	0.5	0.7	0.3
Asian/Pacific Islander	Male	8.4	1.3	1.5	0.7	1.6	2.0	0.6
	Female	13.2	1.8	1.1	0.0	0.8	0.8	0.8
Hispanic/Latino	Male	4.5	2.1	4.3	1.9	1.8	6.4	1.6
	Female	4.4	2.9	2.6	1.5	2.1	2.1	0.6
Black/African American	Male	1.9	1.5	6.4	3.8	1.3	20.8	1.3
	Female	4.0	2.6	4.2	4.7	4.2	0.2	2.0
Non Hispanic White	Male	75.7	94.7	85.1	80.0	91.5	69.8	95.1
	Female	73.6	92.3	89.3	90.2	82.6	93.8	83.8
Not Specified	Male	9.4	0.0	2.7	13.1	0.8	0.6	1.2
	Female	4.7	0.0	2.5	3.0	9.8	2.9	12.7

Source: SAMHSA National Mental Health Information Center, 2004

## Receipt of PhD in Psychology by Race and Ethnicity: 1989-2003



Source: Maton et al, 2006

# Dentistry

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## Percent of Professionally Active Dentists by Gender and Race/Ethnicity, 2001

Male	85.9%
Female	14.1%
Native American	0.1%
Asian/Pacific Islander	6.9%
Black/African American	3.4%
Hispanic/Latino	3.3%
White/Caucasian	86.3%

**Source: American Dental Association  
Bureau of Health Professions, HRSA**

©ADEA 2001

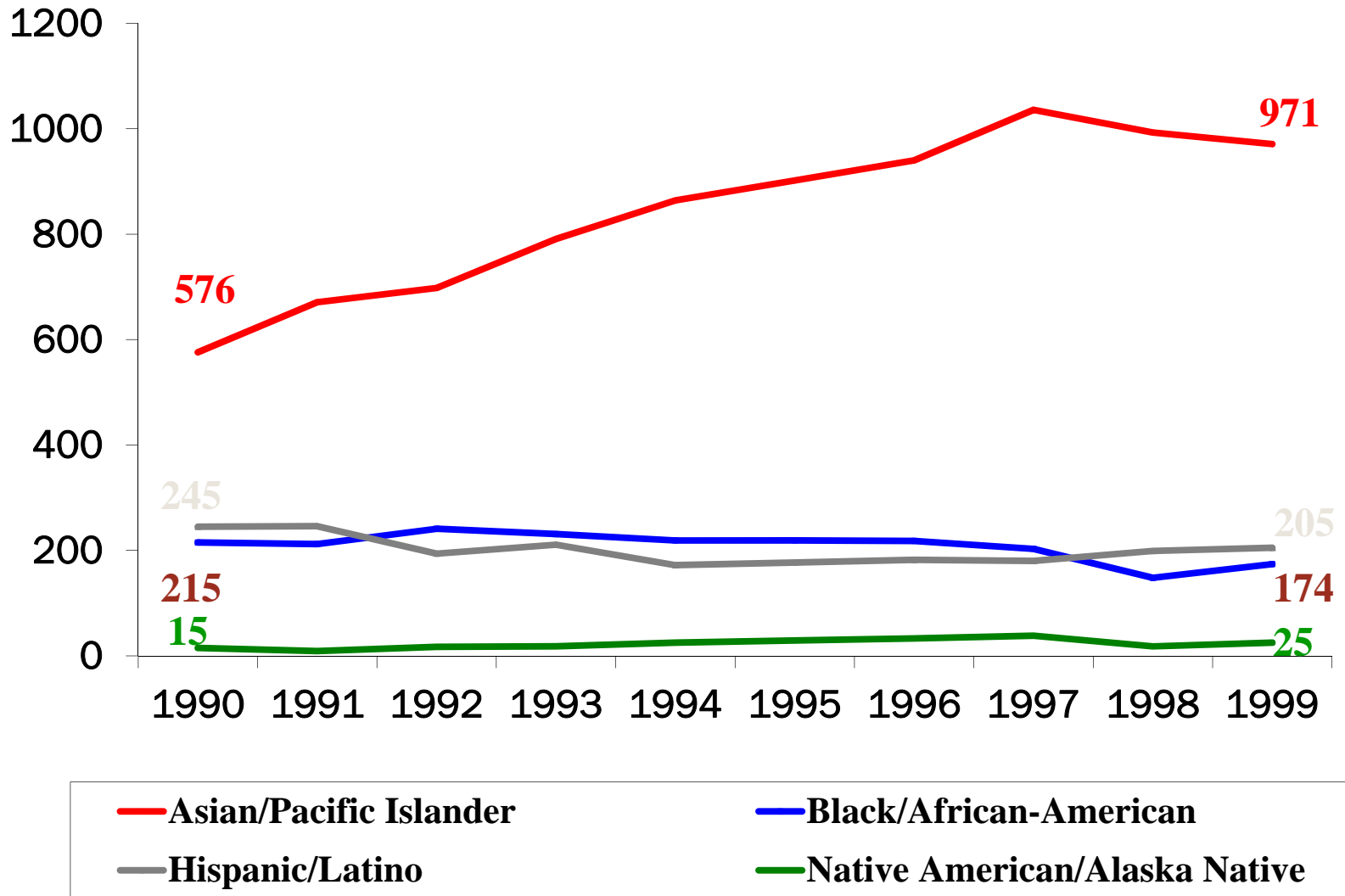


## Members of the American Dental Association by Race and Ethnicity, 2008

Race/Ethnicity	N	%
Native American	320	0.3
Asian/Pacific Islander	9,967	9.46
Black/African American	2,741	2.6
Hispanic/Latino	3,563	3.38
White/Caucasian	88,700	84.2
Unknown	24,000	22.8

**Source: American Dental Association  
Personal Communication 10/21/08**

## First-Time, First-Year Minority Enrollees in U.S. Dental Schools: 1990-1999



Source: American Dental Education Association

## First Time Enrollees in U.S. Dental Schools by Race and Ethnicity, 2006 & 2007

Race/Ethnicity	2006	2007
American Indian/Alaskan Native	0.8 (35)	0.6 (27)
Asian/Pacific Islander	20.3 (934)	20.2 (932)
Black/African American	6.1 (282)	5.8 (266)
White, Non Hispanic	59.7 (2,741)	59.8 (2,762)
Hispanic/Latino	6.2 (287)	6.7 (308)
Other	4.6 (210)	4.7 (219)
Non Reported	2.3 (129)	2.3 (104)
Total	100.0	100.0

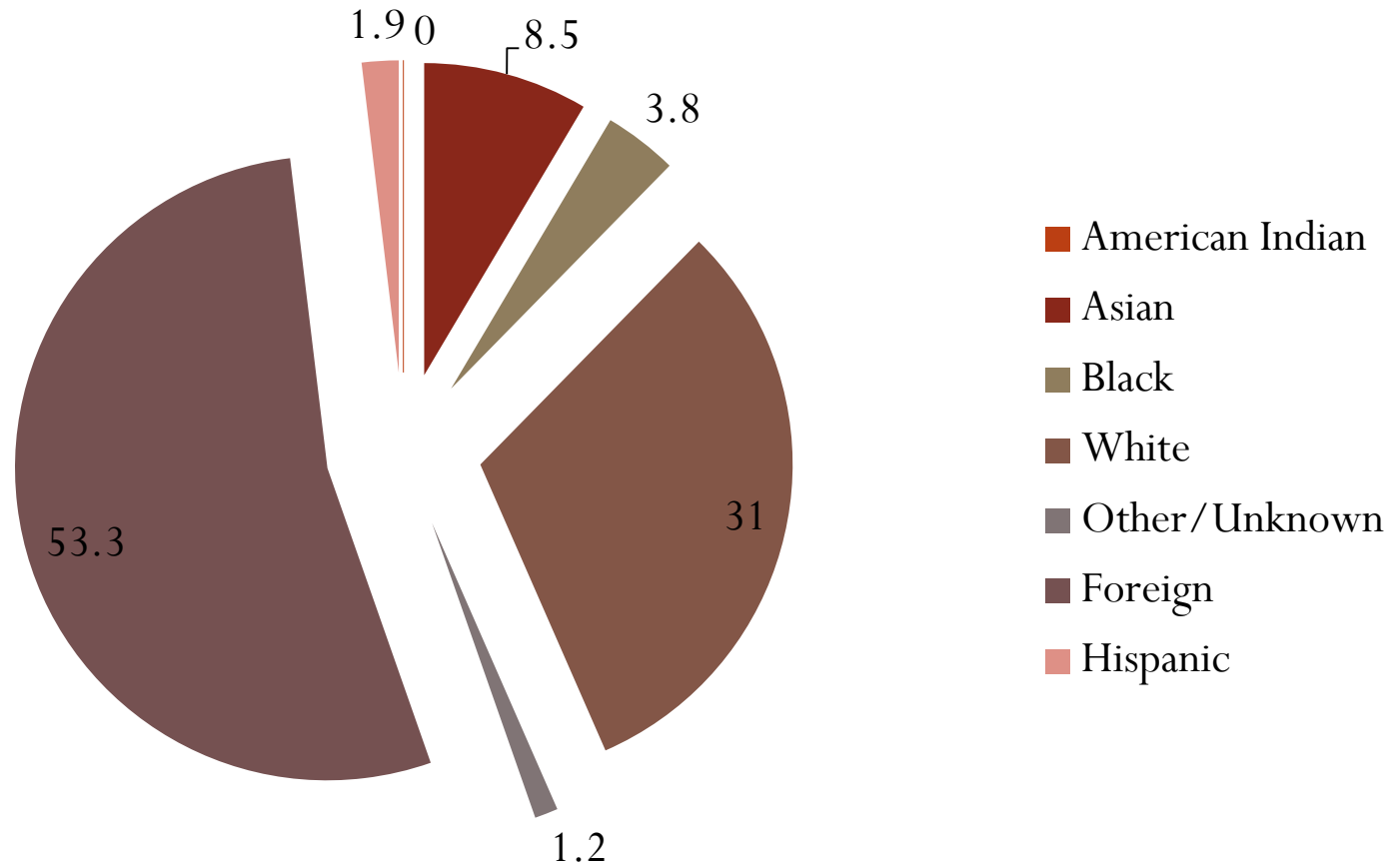
Source: *J of Dental Education*, Vol 72, Number 11 pp 1350-1391

# Pharmacy

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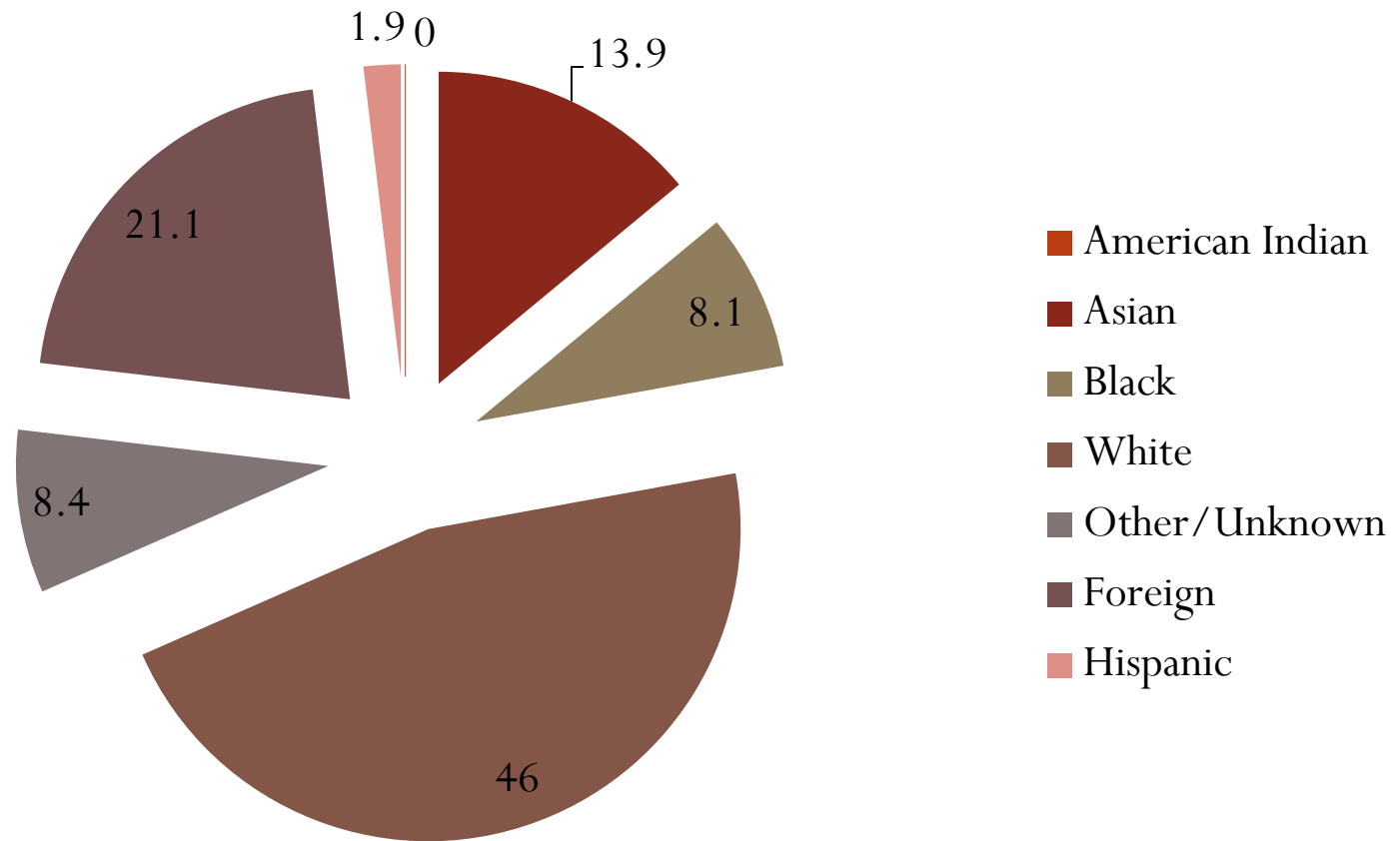


## PhD in Pharmacy by Race and Ethnicity, 2006-2007



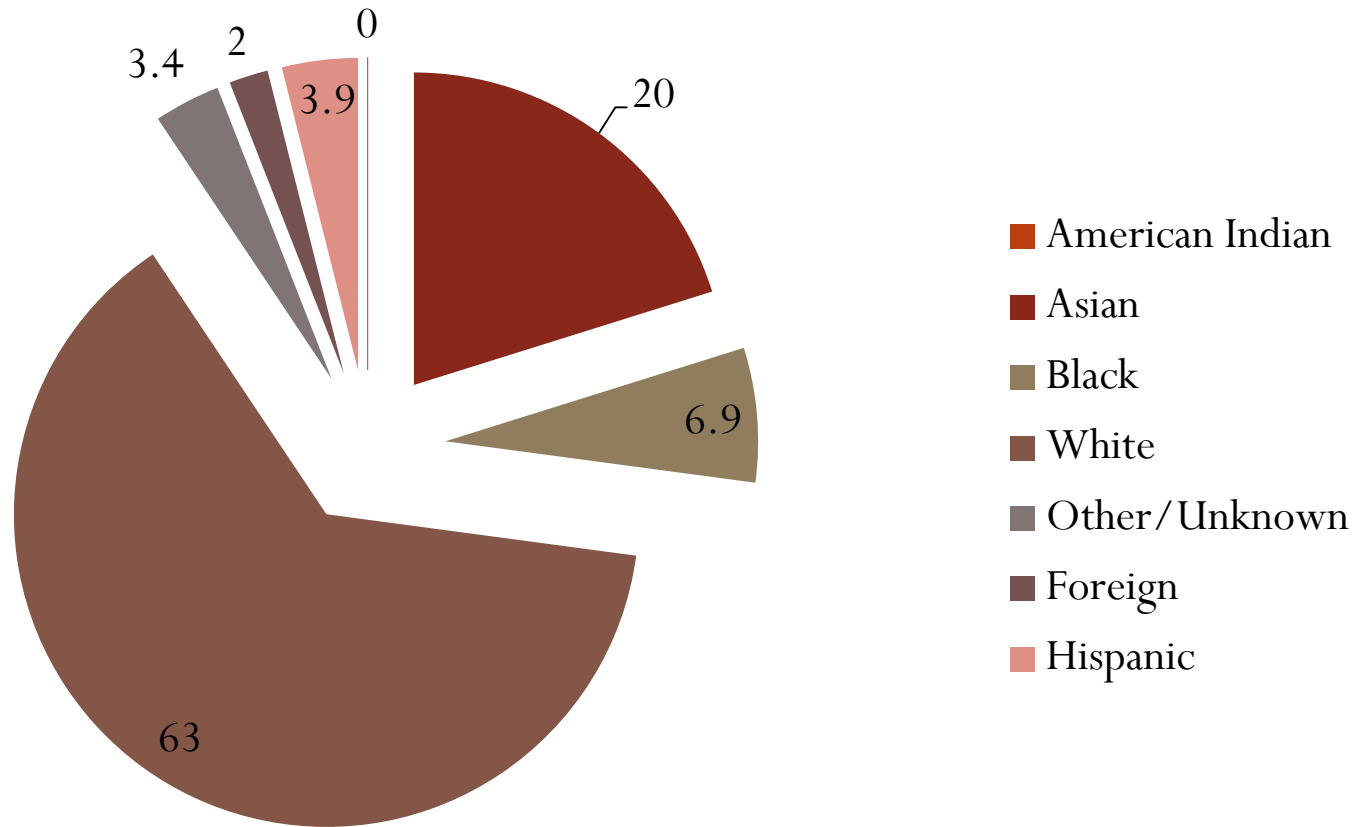
Source: 2007-08 Profile of Pharmacy Students, AACP

## Masters of Science in Pharmacology by Race and Ethnicity, 2006-2007



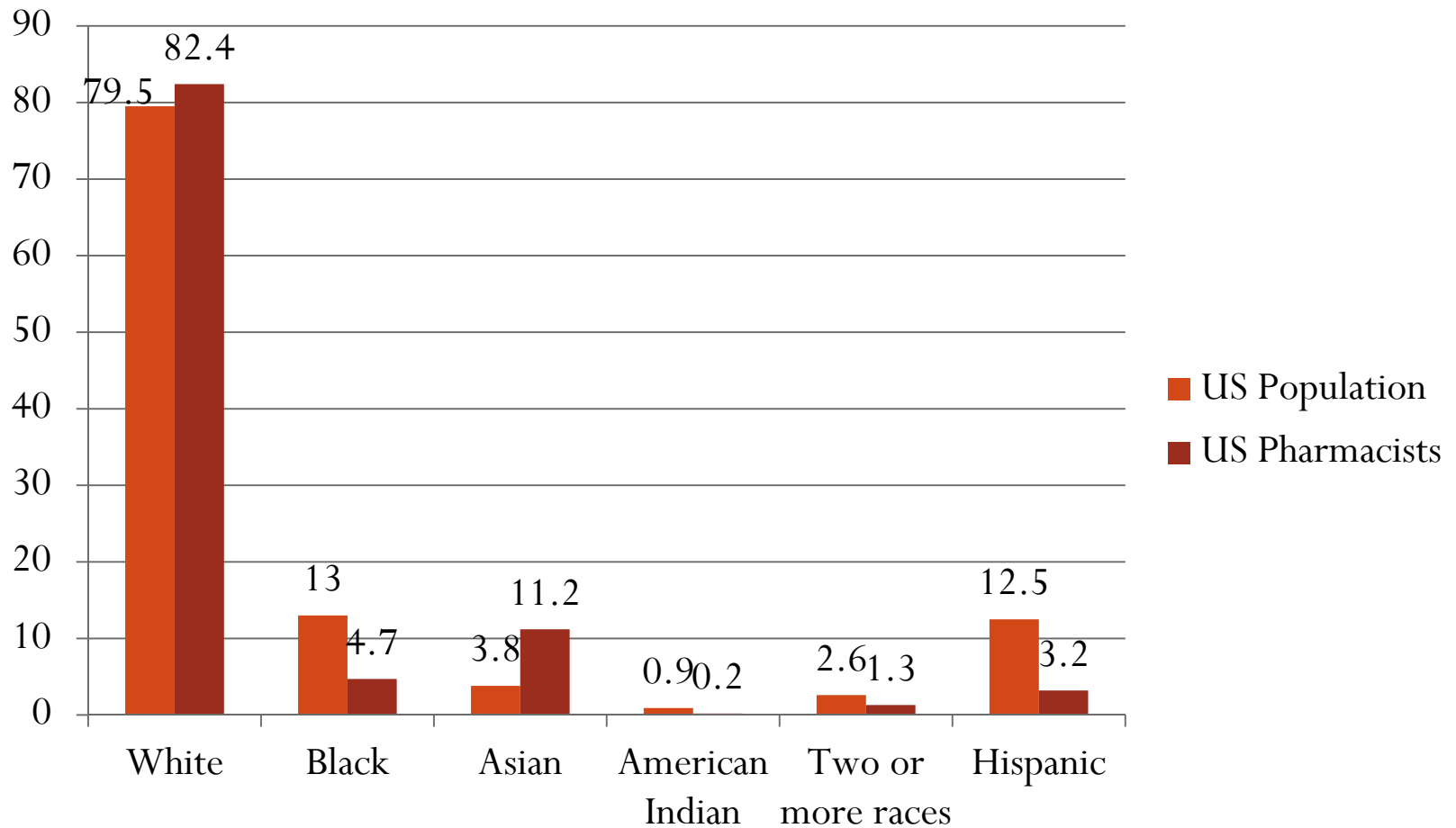
Source: 2007-08 Profile of Pharmacy Students, AACP

## Pharm.D .by Race and Ethnicity, 2006-2007



Source: 2007-08 Profile of Pharmacy Students, AACP

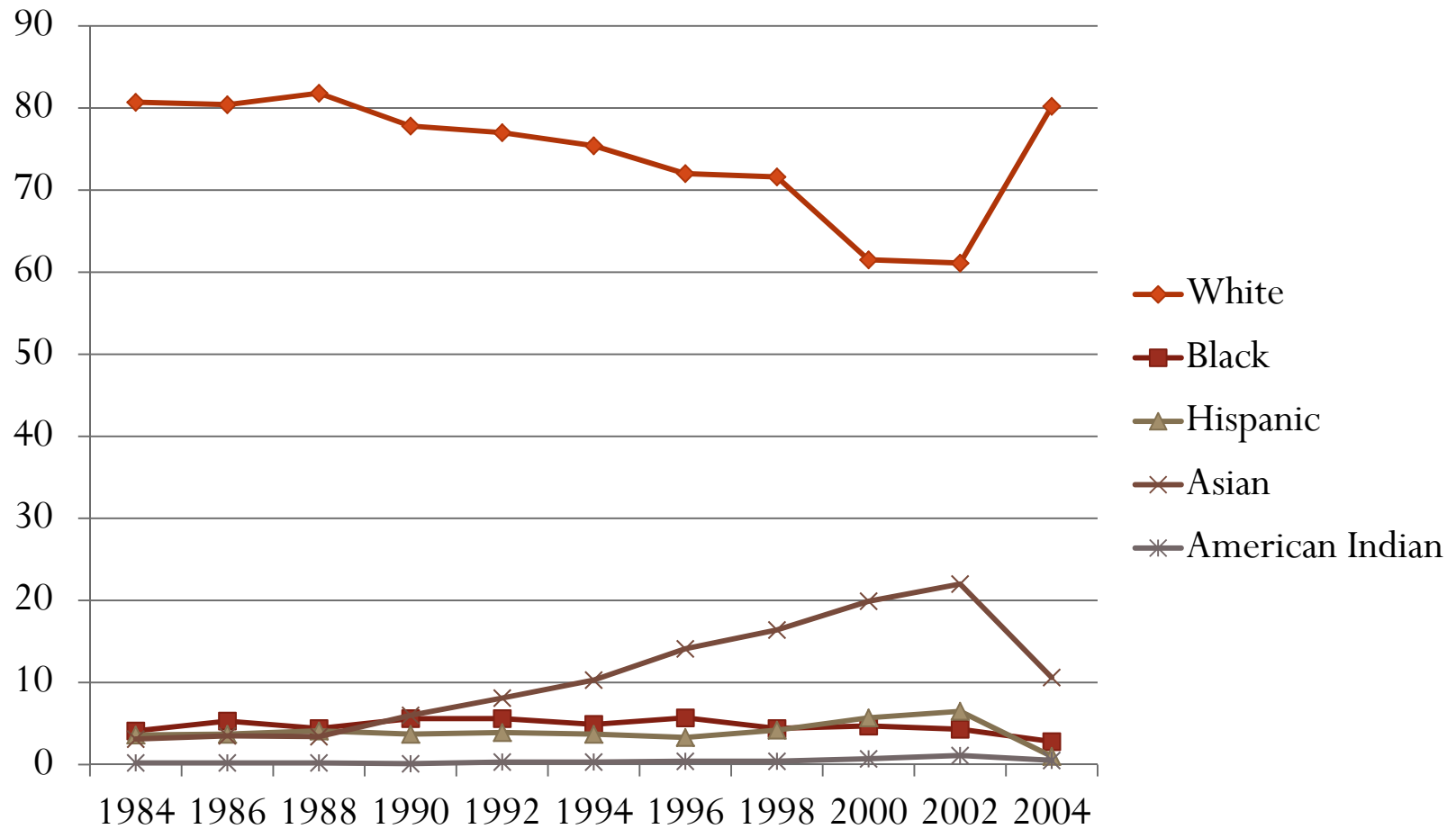
## Pharmacist Race Distribution: 2000



Source: *The Adequacy of Pharmacist Supply: 2004 to 2030. (HRSA)*

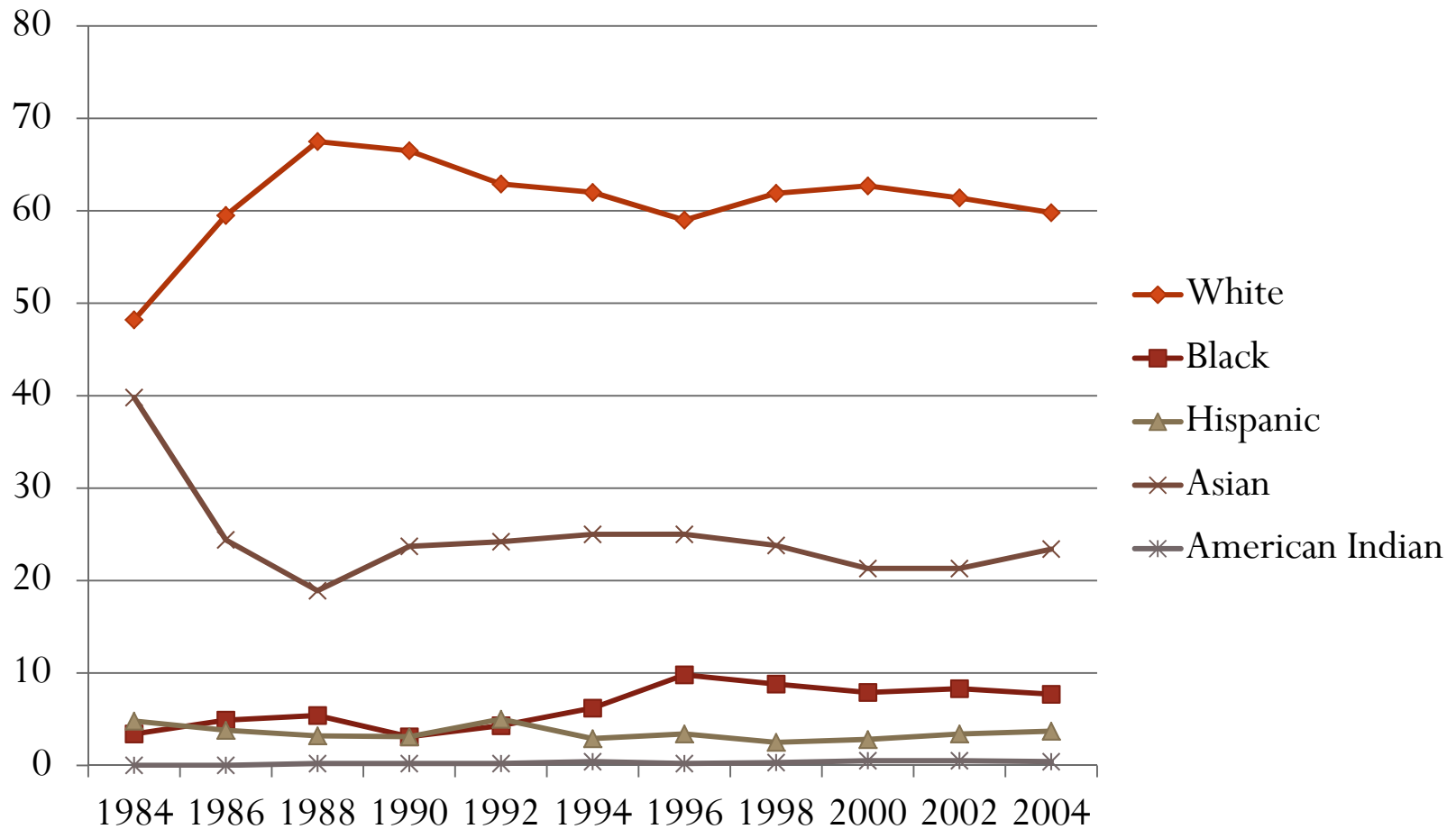


## Percent of Baccalaureate (B.S. Pharmacy, B.Pharm.) Recipients 1984-2004 by Race/Ethnicity



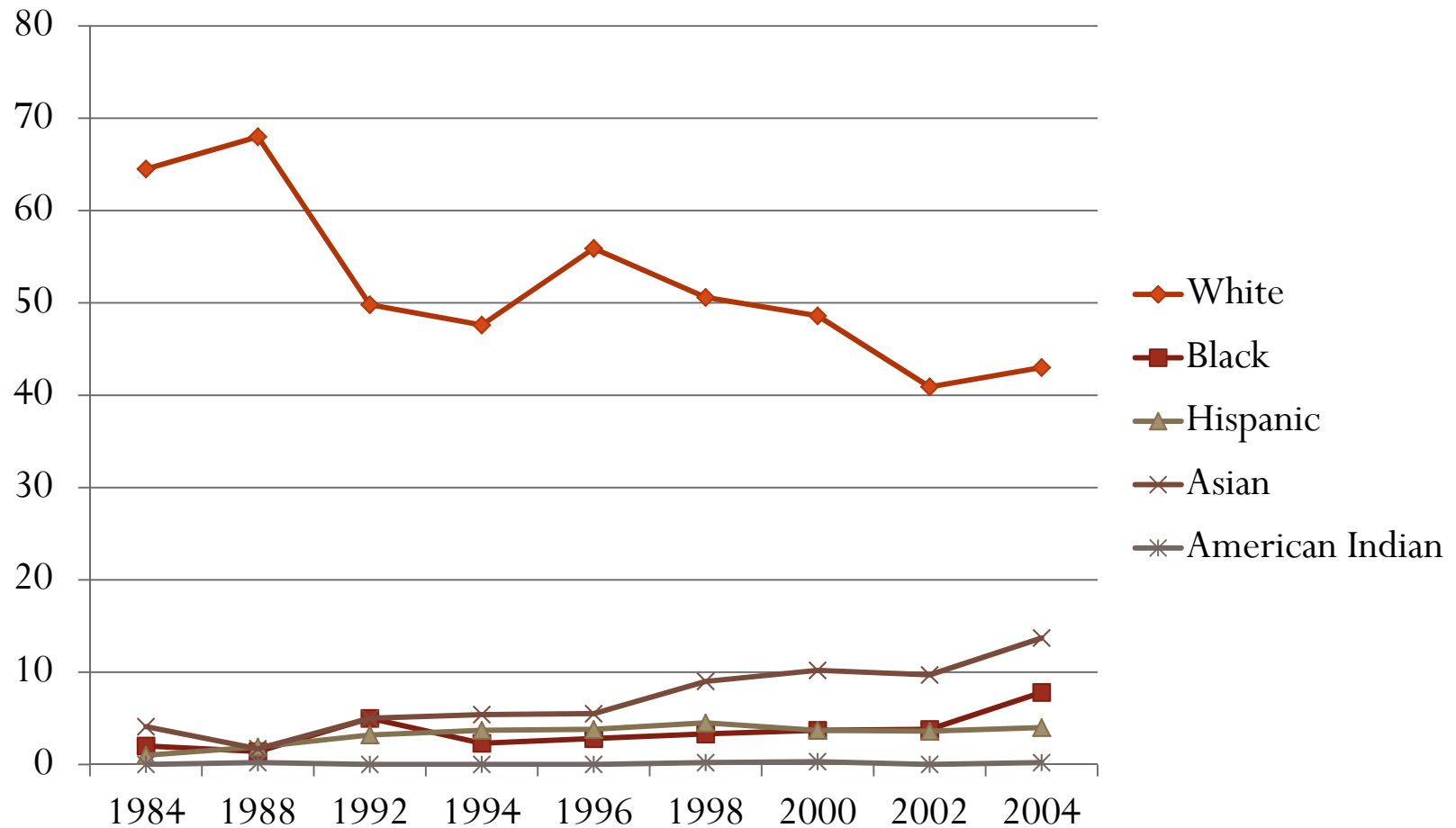
Source: AACP: Profile of Pharmacy Students, Fall 2004

## Percent of Degrees Conferred as the First Professional Degree (PharmD.1) 1984-2004 by Race/Ethnicity



Source: AACP: Profile of Pharmacy Students, Fall 2004

## Percent of Masters Degree in Pharmacology, 1984-2004 by Race/Ethnicity



Source: AACCP: Profile of Pharmacy Students, Fall 2004

# Hispanics in Higher Education

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## Educational Disparities for Latinos

- Between 1990 and 2000 the rate of native born Hispanic high school students declined from 15.2 to 14.0 percent
- Hispanic populations increased by 3.3% 2006-2007
- Latino students lag behind their peers in reading and math scores
- Latino are the largest minority group and are among the fastest growing populations expected to make up one fourth of the student population by 2025
- One third of Latinos age 16-19 drop out of high school
- Considering those attending US schools, the high school drop out rate is 15% for Latinos

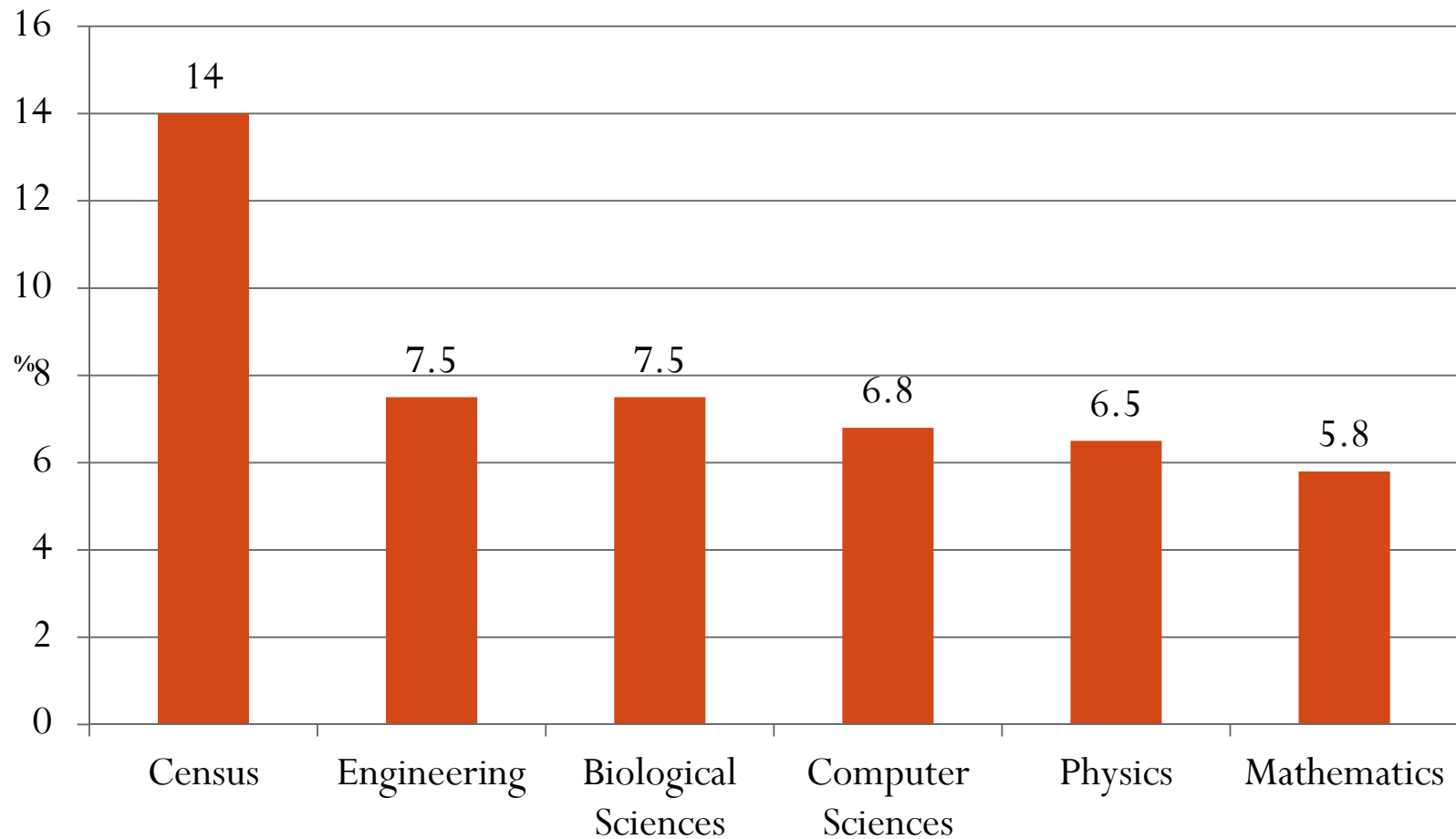
*Source: The Pew Hispanic Center Report, 2003*

## Educational Disparities Hispanics (Continued)

- Hispanics are more likely than other groups to be the first in their family to enroll in higher education
- Hispanics are far more likely than other groups to enroll in community colleges
- Hispanics are more likely to go to school part-time
- Hispanics are more likely to work part time while in school
- Hispanics are more likely than other groups to not complete college graduation

Source: [www.diverseeducation.com](http://www.diverseeducation.com) (2009)

# Hispanics in STEM Careers, 2005



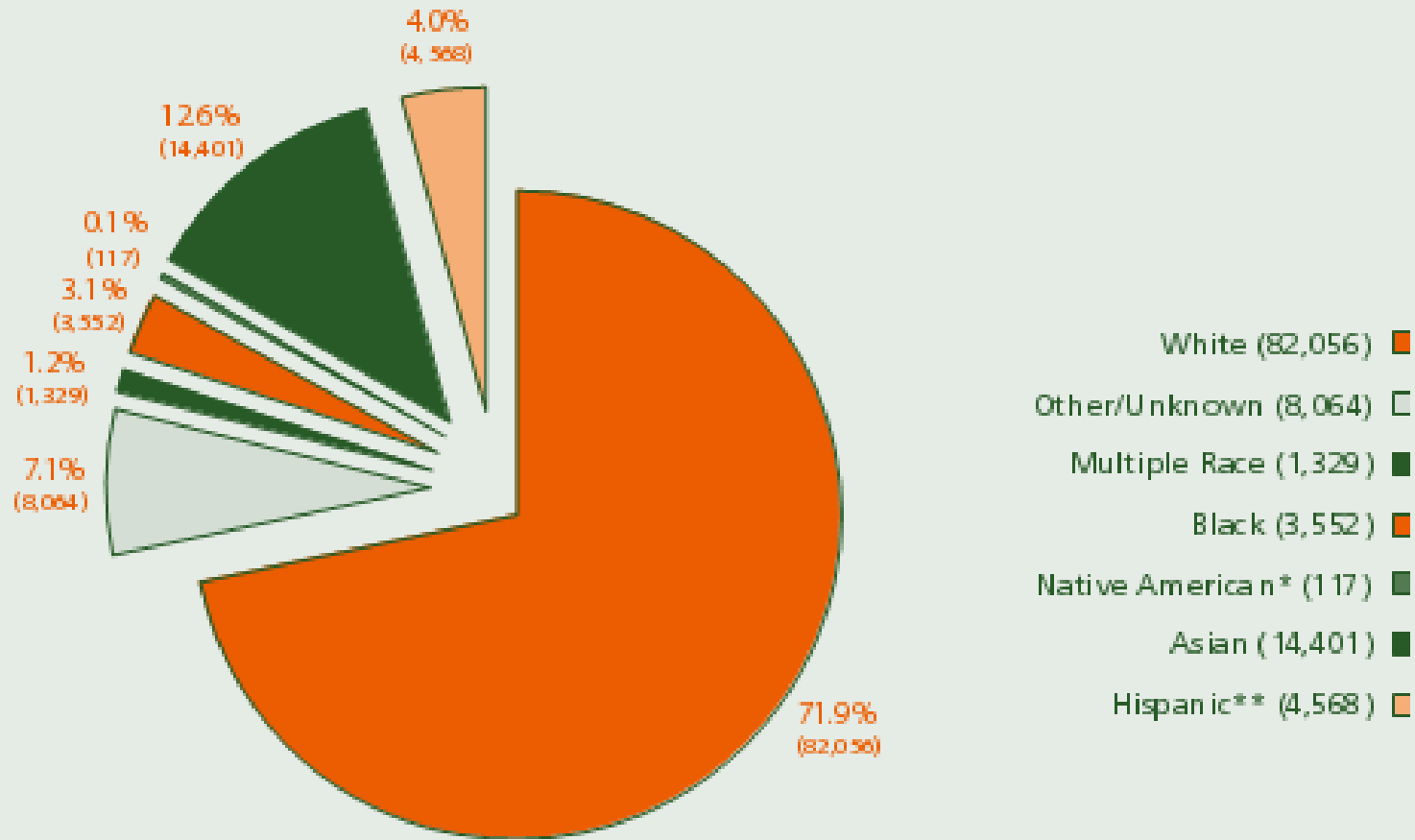
Source: *Diverse Issues in Higher Education*, March 2009

# Minorities in Academic Medicine

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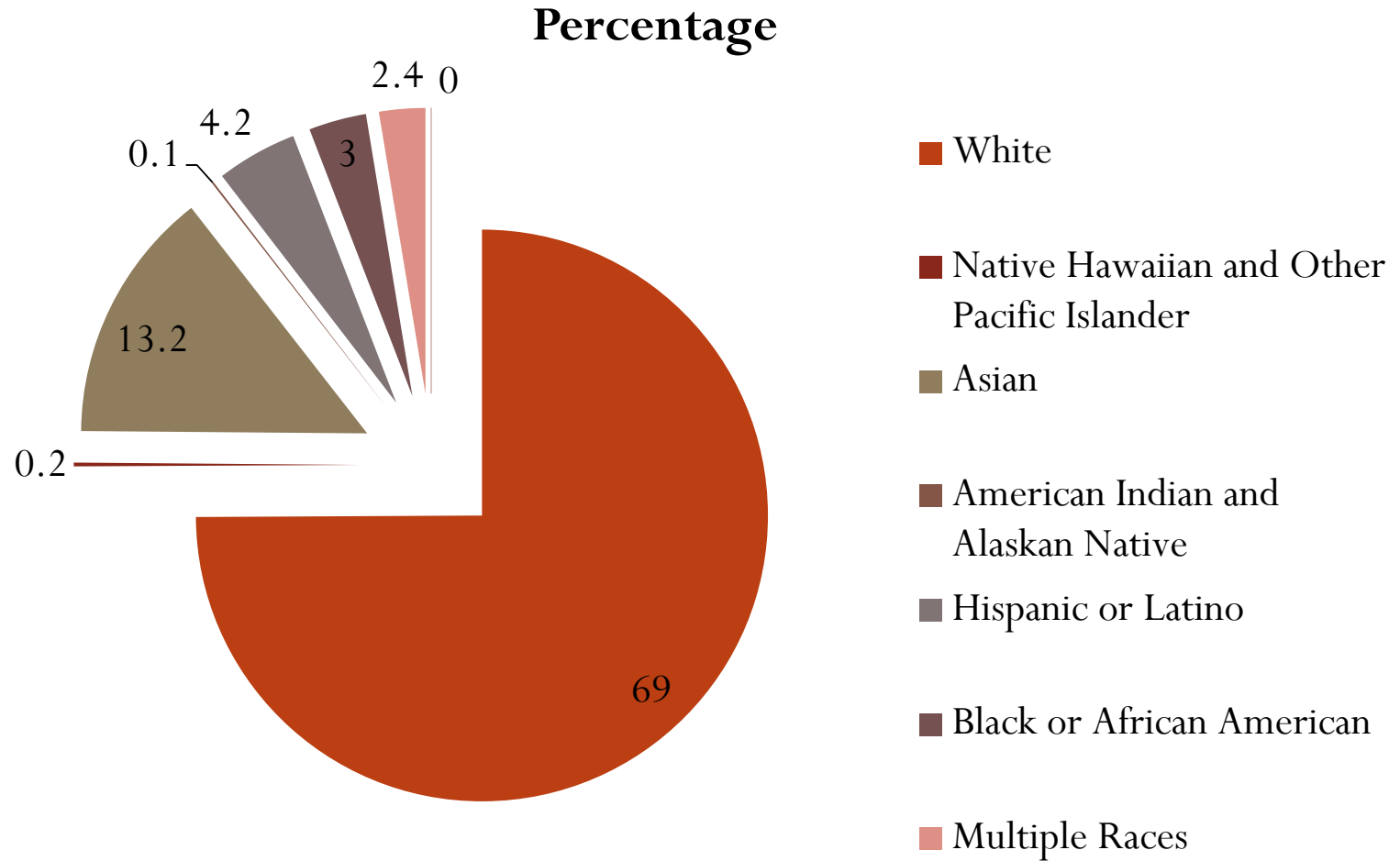
**Figure 18: Medical School Faculty by Race and Ethnicity, 2004**



note: Since 2002, individuals have the option of reporting both their race and ethnicity, done or in combination with some other race or ethnicity. In this figure numbers are reported for race done; those that reported more than one race or ethnicity are included under Multiple Race. \* includes both on and off campus. \*\* includes both on and off campus. Excludes: American Indian, Alaska Native, Pacific Islander, Cuban, Other Hispanic, and Multiple Hispanic.

# Percentage of U.S. Medical School Faculty by Race and Ethnicity, 2007

Source: AAMC – Diversity in Medical Education Facts and Figures 2008



# Medical School Faculty by Race and Ethnicity and Rank, 2007



Source: *Diversity in Medical Education Facts and Figures 2008*

# Minorities in Science and Technology

The Sullivan Alliance to Transform America's Health  
Professions

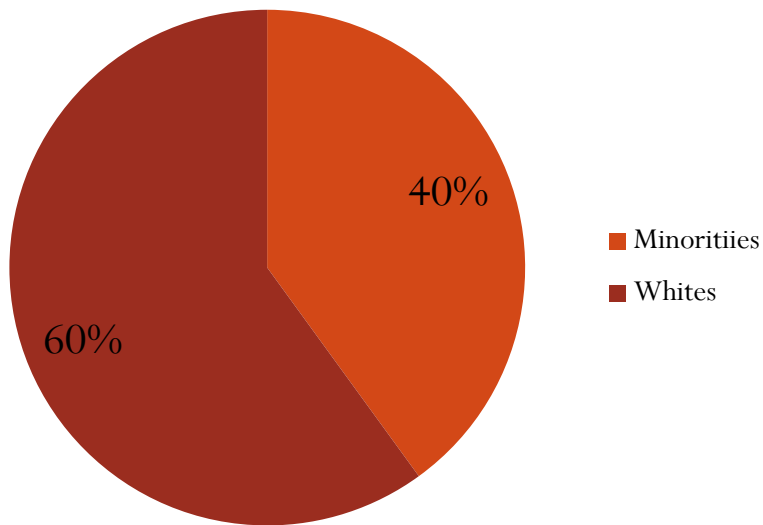


# National Trends Related to Science and Engineering

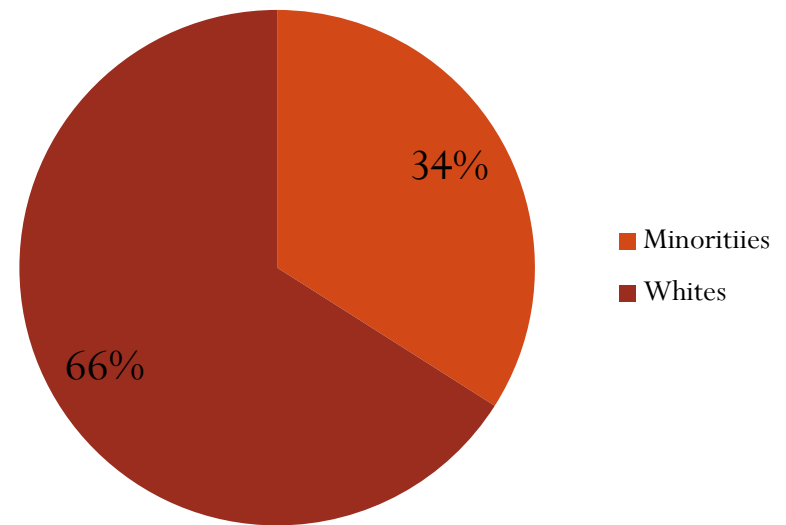
- Demographic shifts: URMs constitute a growing population of school-aged persons
- Scientists and engineers important in *health, energy challenges, environmental issues, global economy, national security and the technological industry*
- Looming loss of science and technology workforce as baby boomers retire
- Minority students are underprepared in science and mathematics
- Slight increases in minorities with doctoral degrees in S&E do not translate to increases in minority faculty members

# Ethnic/Racial Minorities

**People under 20**

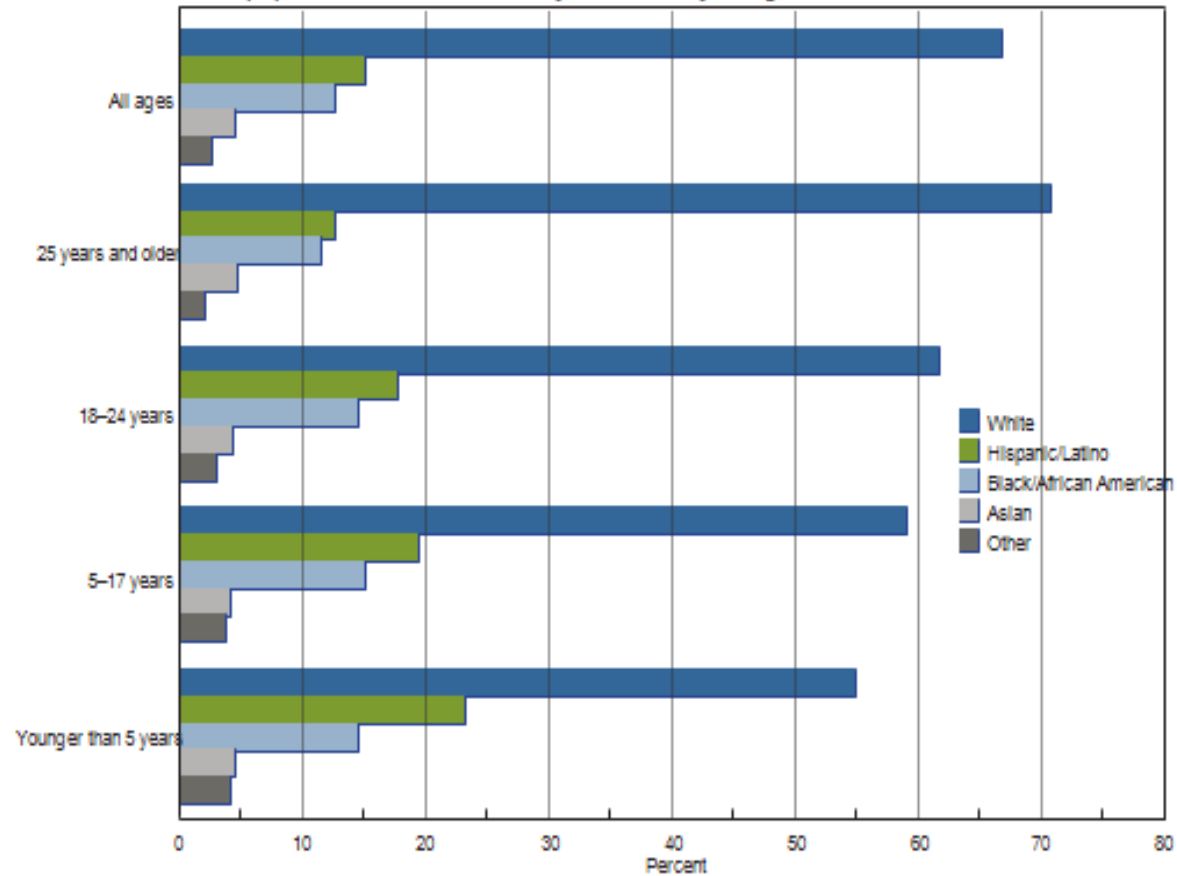


**U.S. Population**



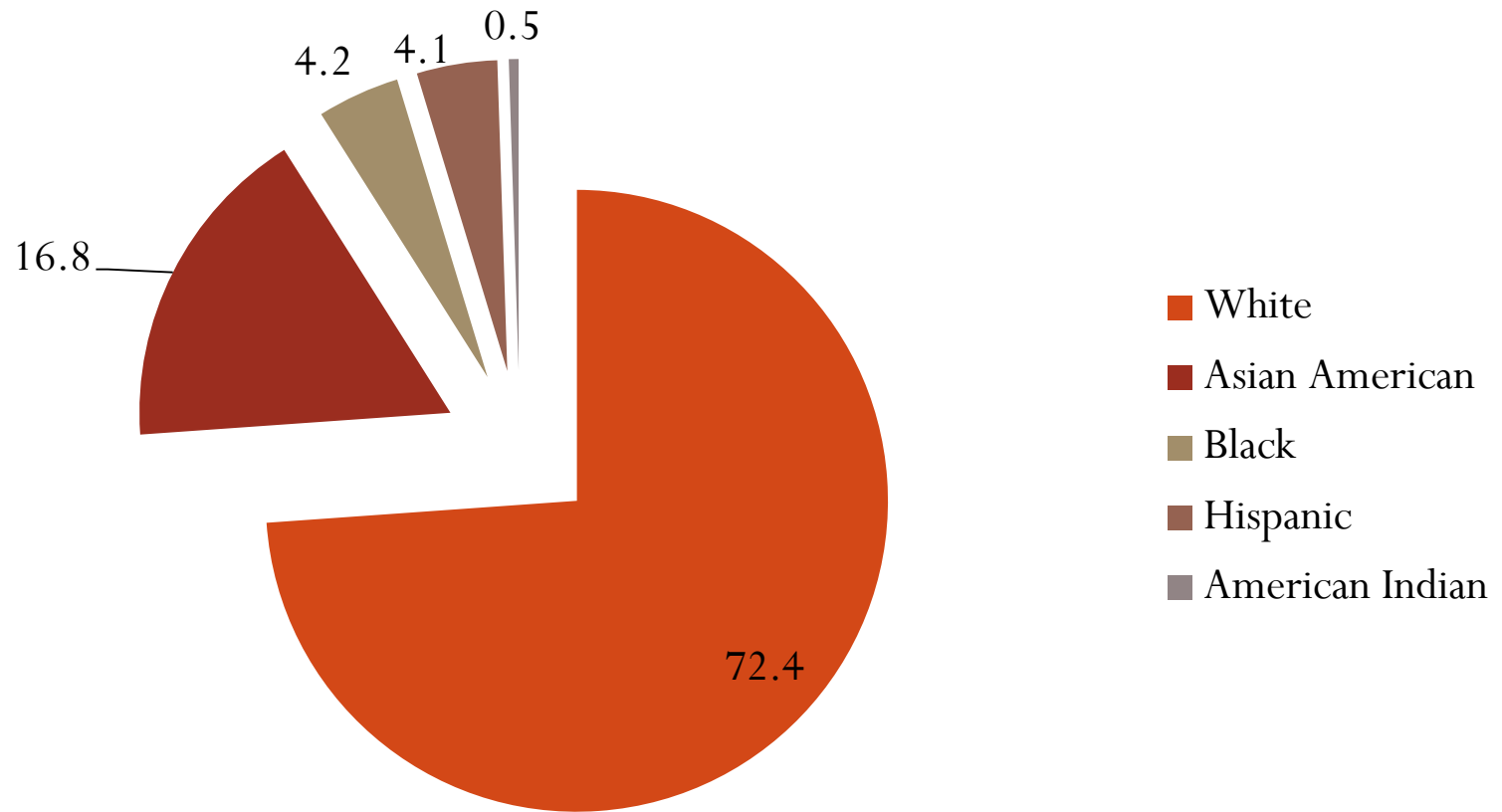
American Community Survey - 2005

FIGURE A-1. Resident population of United States, by race/ethnicity and age: 2006



Source: *Women, Minorities and Persons with Disabilities in Science and Engineering, 2009 (NSF)*

## Employed Scientists by Race and Ethnicity, U.S. 2006



Source: *Women, Minorities and Persons with Disabilities in Science and Engineering, 2009 (NSF)*



# U.S. Doctorate Recipients in Science, 2005 (NSF)

N= 21,570

Citizenship/Residency	%
U.S. Citizens	59.8
Permanent residents	3.8
Temporary residents	30.8
Unknown citizens	5.5
All recipients	100.0

## U.S. Doctoral Recipients in Science by Race and Ethnicity, 2005

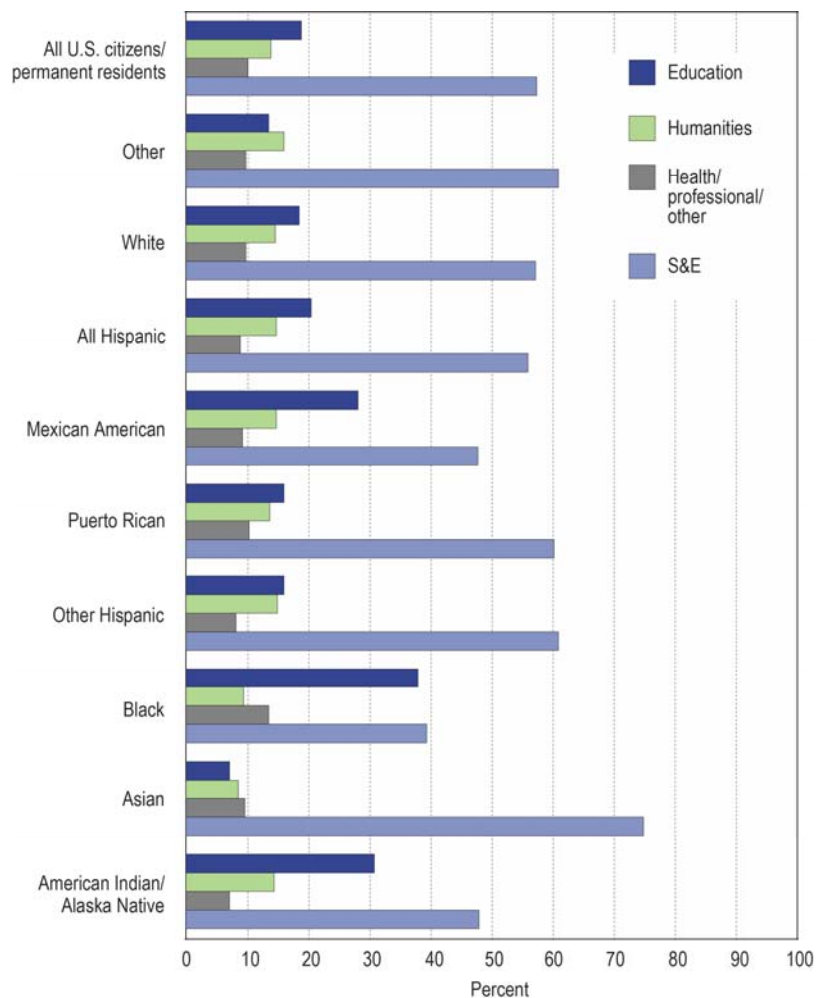
Race/Ethnicity	%
White	58.3
Asian	23.8
Black	3.7
Hispanic	5.5
American Indian/Alaskan Native	0.27
Other/Unknown	8.4
Total	100.0

## U.S. Science Doctoral Recipients by Race and Ethnicity and Citizenship, 2005

Race/Ethnicity	Temporary Resident
White	8.6
Asian	75.8
Black	24.0
Hispanic	40.2
American Indian/Alaskan Native	--
Other/Unknown	11.8

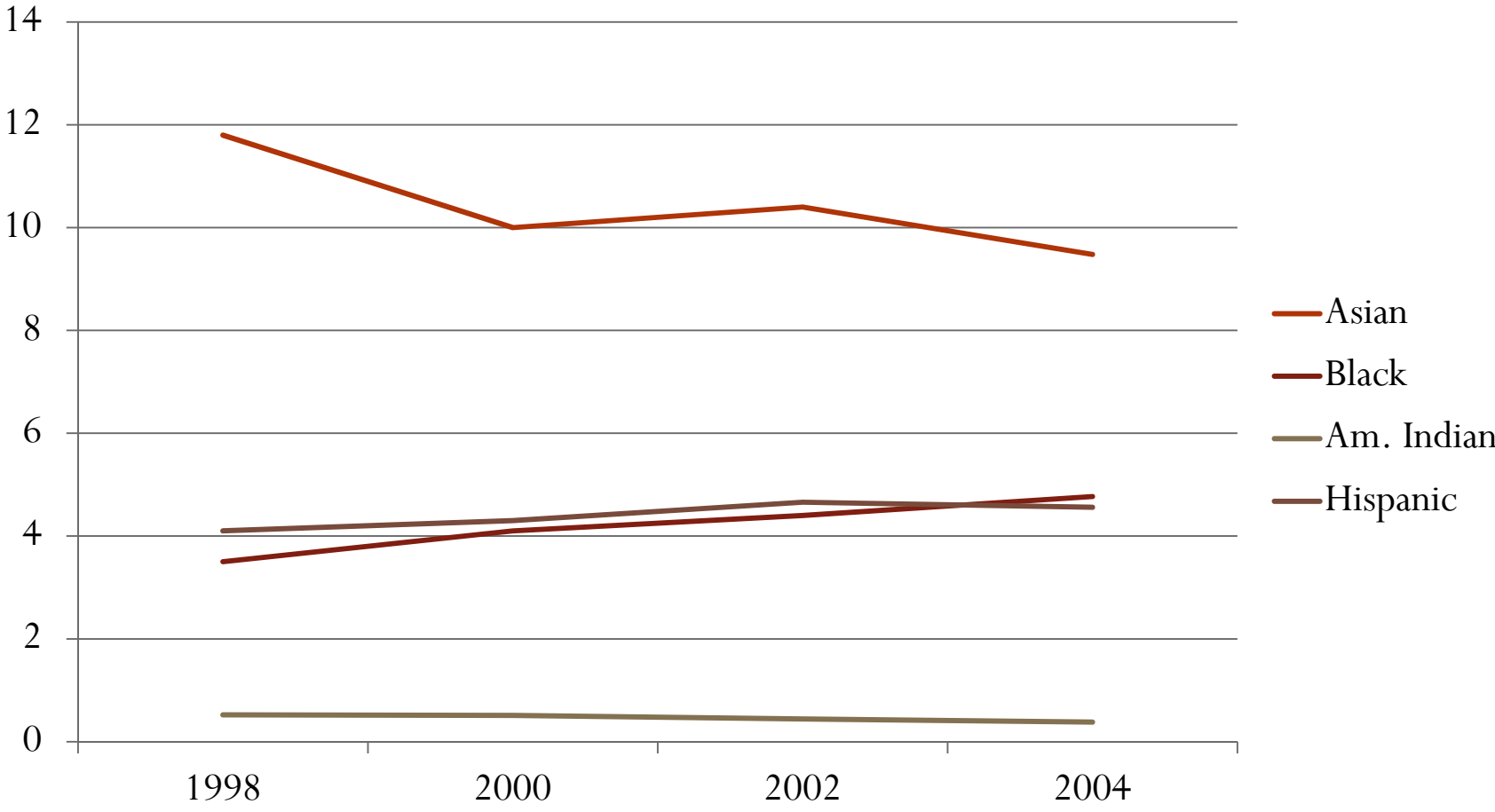


## Field distribution of S&E and non-S&E doctoral degrees awarded to U.S. citizens and permanent residents, by race/ethnicity



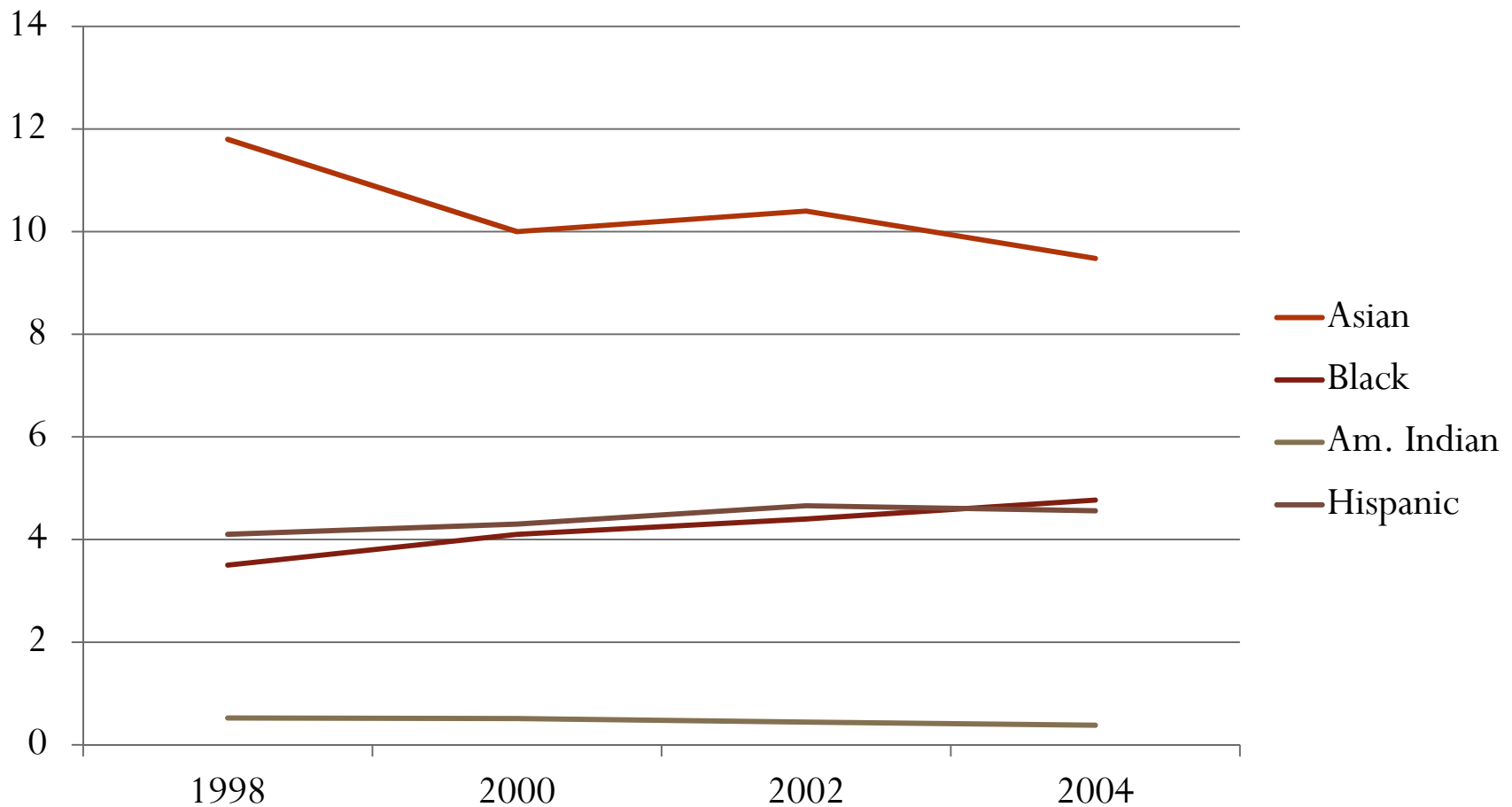
Source: Women, Minorities and Persons with Disabilities in Science and Engineering (October, 2007)

# Minorities Recipients of a Doctorate Degree in Science and Engineering 1998-2004



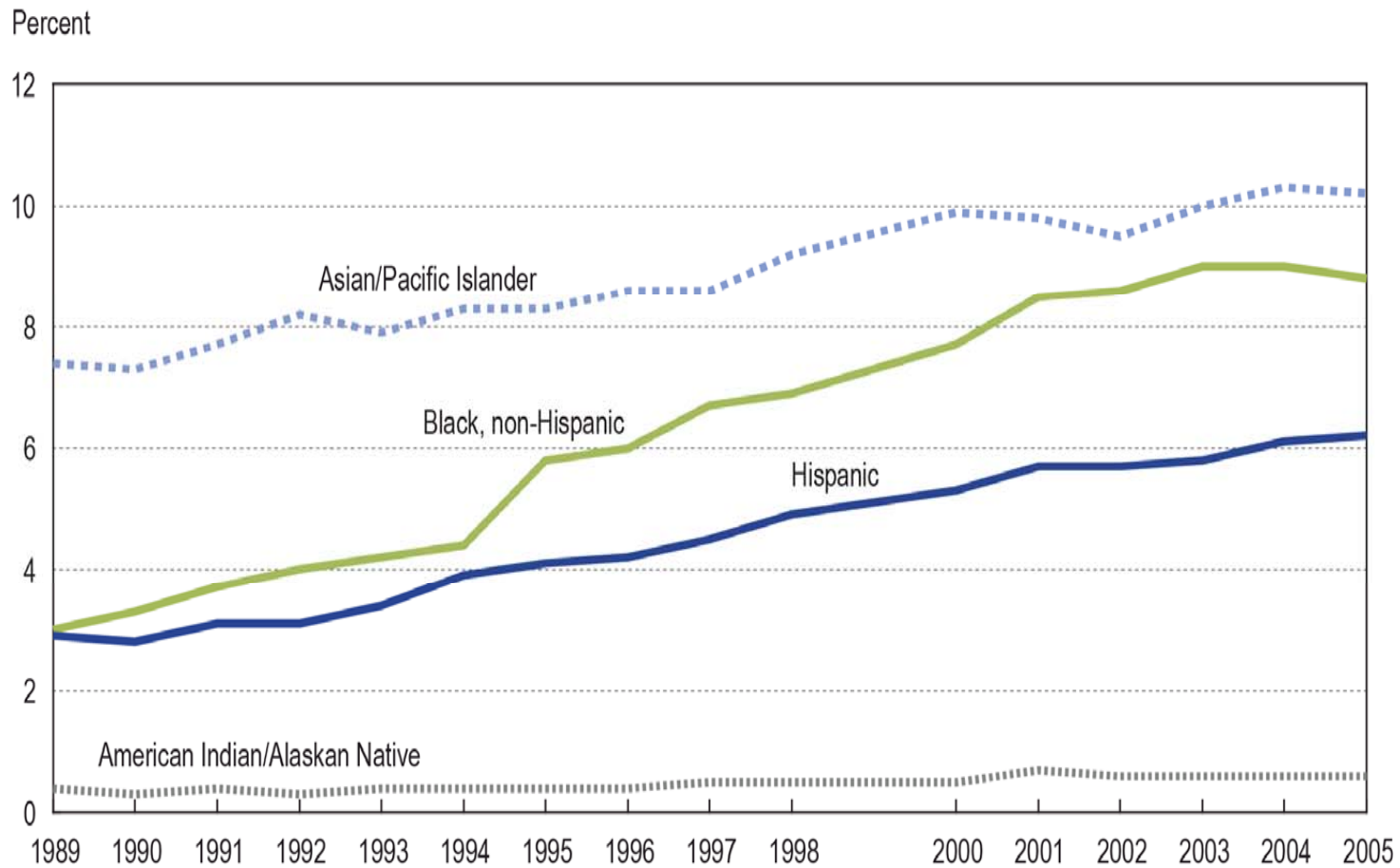
Source: National Science Foundation, 2009

# Minorities Recipients of a Doctorate Degree in Science and Engineering: 1998-2004



Source: National Science Foundation, 2009  
U.S. Residents and Permanent Residents

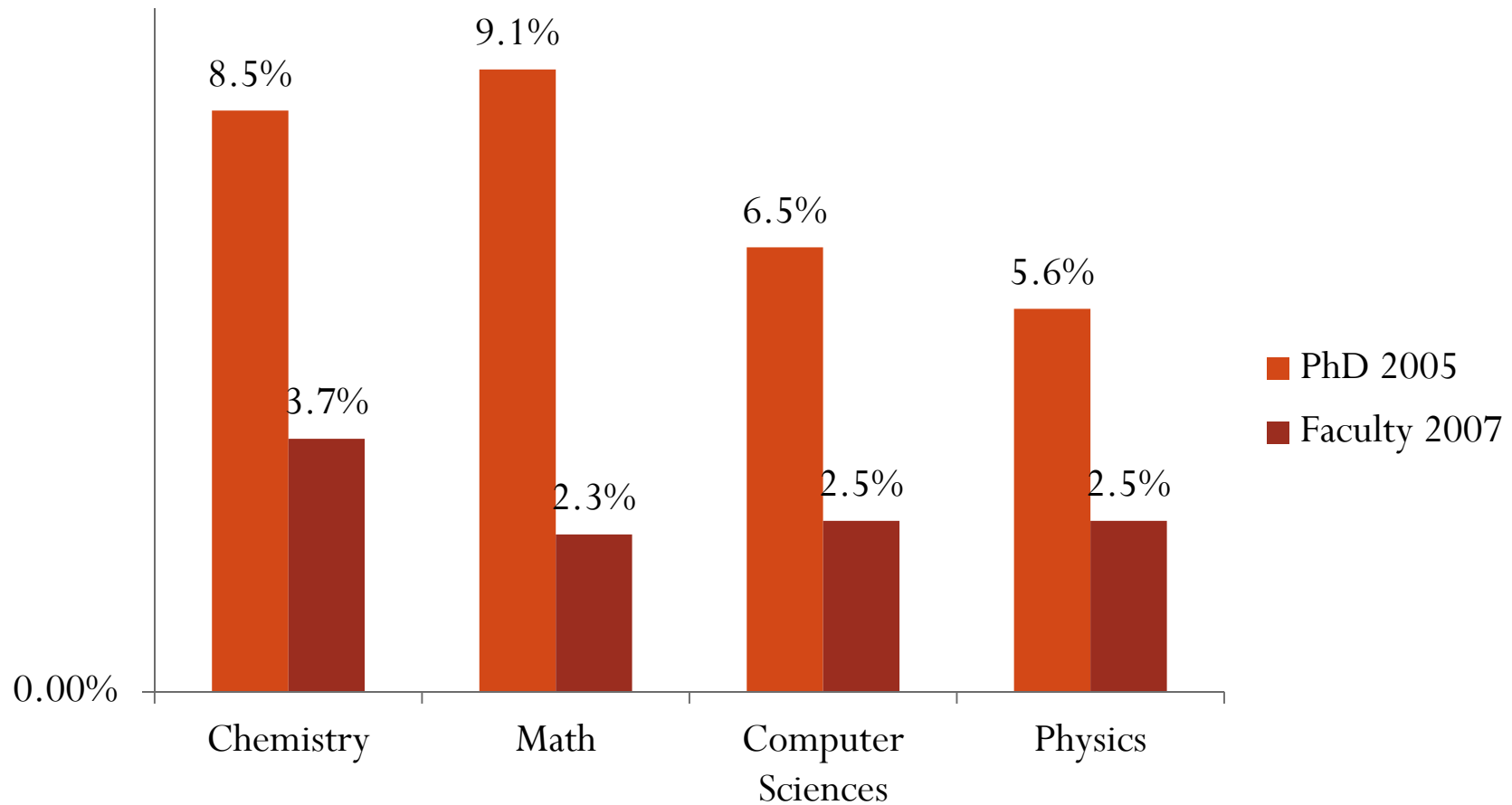
## Minority share of S&E master's degrees awarded to U.S. citizens and permanent residents, by race/ethnicity: 1989–2005



Source: Women, Minorities and Persons with Disabilities in Science and Engineering (May 2006)



# URMs Among Degree Recipients and Faculty in Sciences



Source: Dr. Donna J. Nelson: A National Analysis of Minorities in Science and Engineering Faculties at Research Universities Based on a national survey of 50 top departments nationally of 14 science and engineering disciplines

# Minority Faculty Characteristics

Donna J. Nelson, 2007

- Minority faculty are usually concentrated in lower ranks
- Promotion rate is slower than non-minorities
- Minority faculty lack tenure
  - Lack of autonomy
  - May be unable to challenge an unfavorable environment
  - May have limited ability to improve environment for other minority faculty and students
  - May be identified with “diversity” initiatives regardless of their own preferences

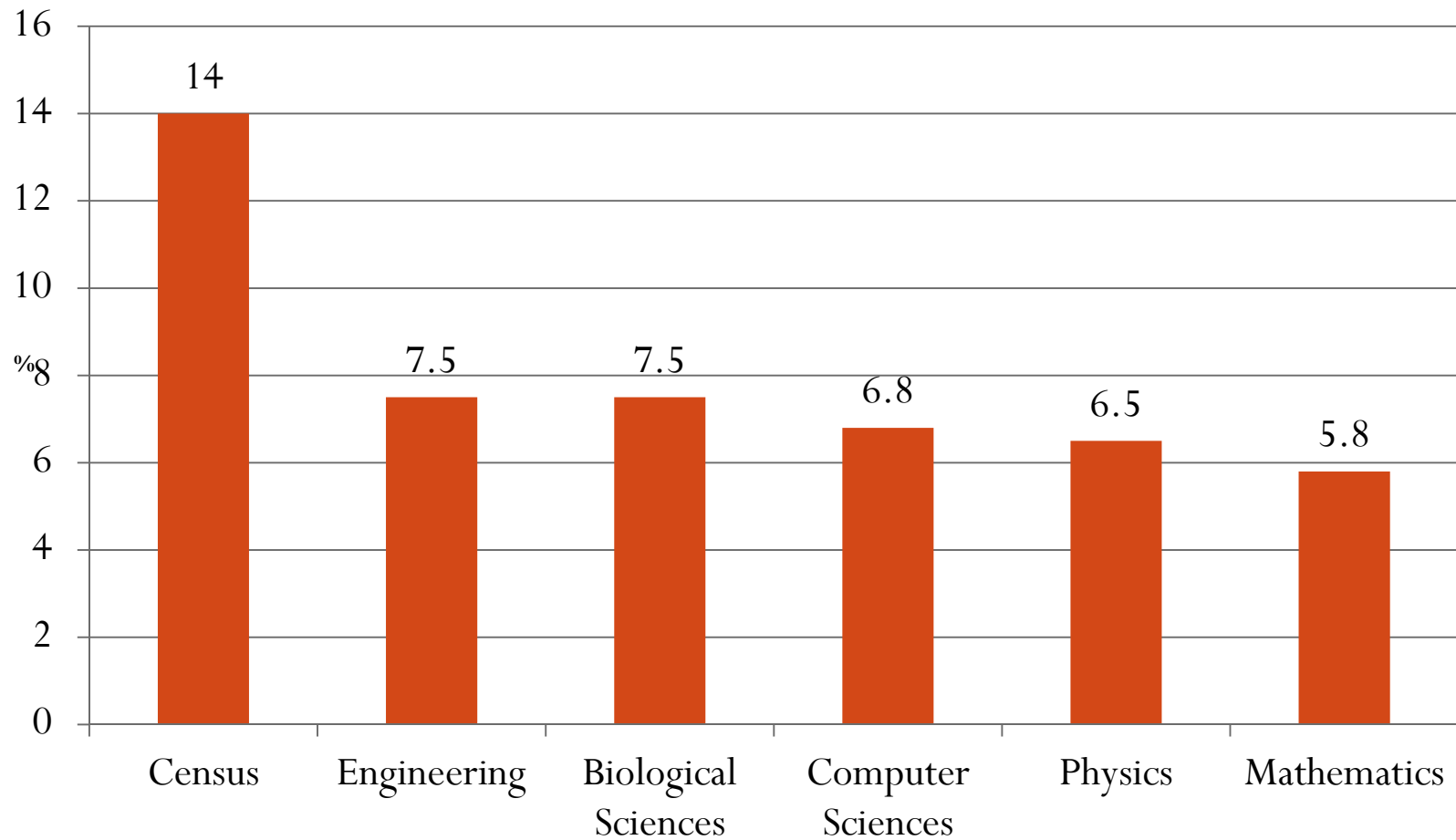
# Hispanics in STEM

## Degrees Earned in 2005

- 7.5% of bachelor's degrees in engineering
- 7.5% of bachelor's degree in biological science
- 6.8% in computer sciences
- 6.5% in physics
- 5.8% in mathematics

*Resource: The National Action Council for Minorities in Engineering*

# Hispanics in STEM Careers



# U.S. Educational Spectrum by Race and Ethnicity

	High School %	College %	Grad/ Medical School %	Assistant Professor %
White	65	72	68	75
Black/ African American	11	6	6	5
Hispanic/ Latino	8	6	5	3
Asian American Pacific Islander	4	13	18	16
American Indian/ Alaskan Native	1	1	1	1

*Source: Presentation by Dr. Raynard S. Kington, March 12, 2009*

## Demographics of R-01 Grant Recipients, 2008

- African Americans – 1.7%
- Hispanics – 3.5%

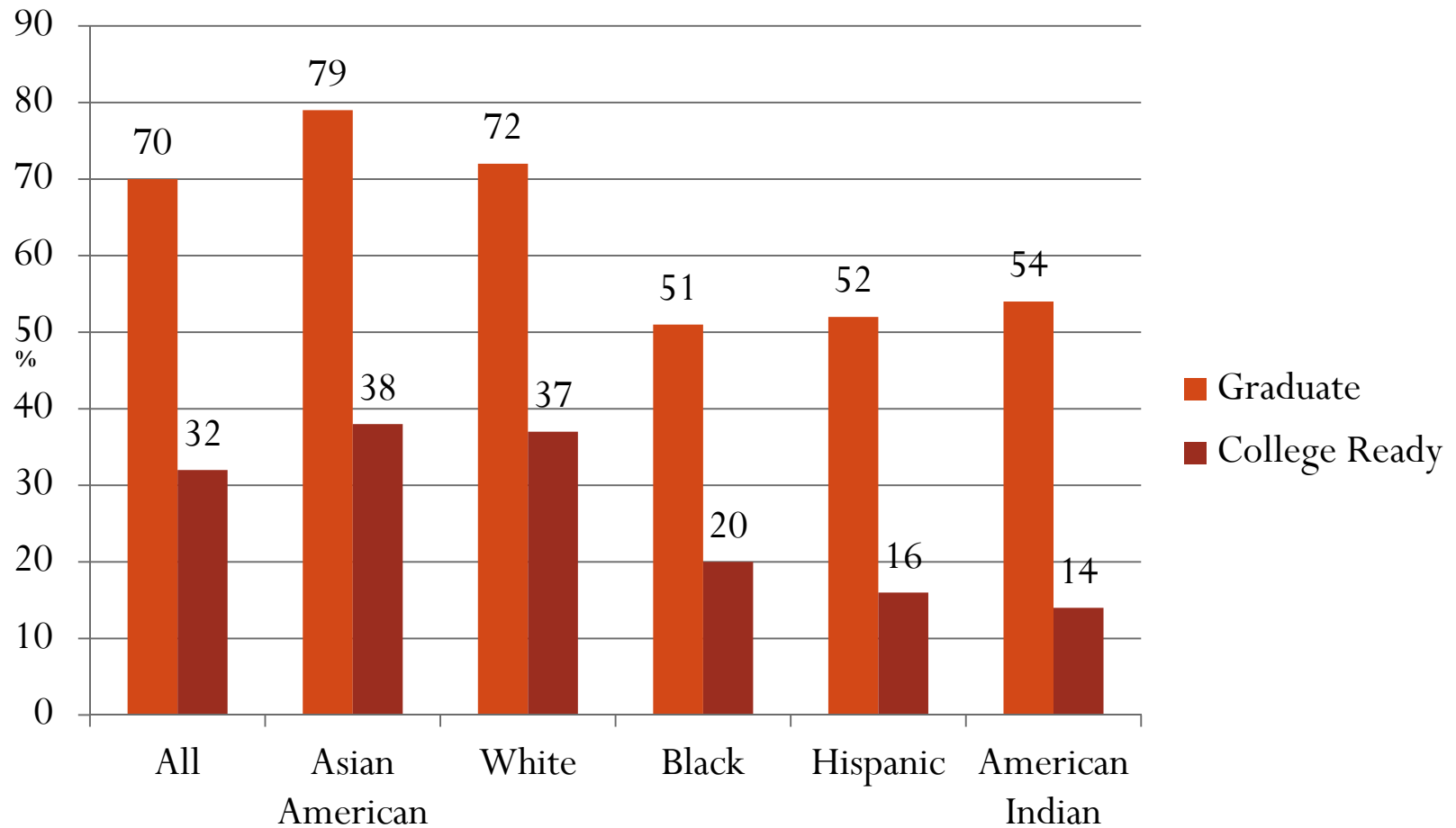
*Source: Presentation by Dr. Raynard S. Kington, March 12, 2009*

# The Educational Pipeline

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## Public High School Graduation and College Readiness in the U.S. by Race and Ethnicity, 2001



Source: *The Manhattan Institute for Policy Research, 2003*