

# HS100

# Health Status and Utilization

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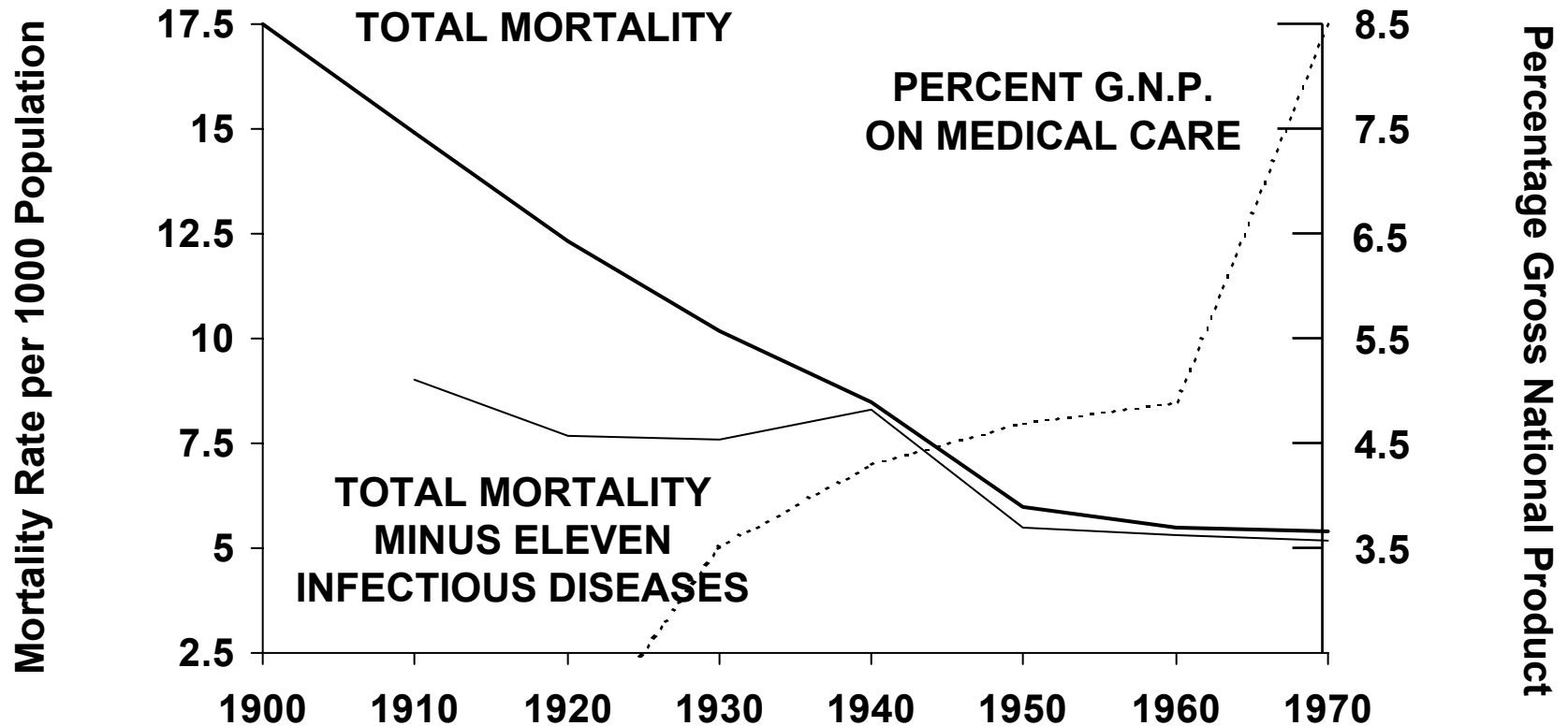
# Outline of Lecture on Health Status and Utilization

- Overview of health status and health services changes
- Health status disparities and changes
- Health status definitions and policy
- Individual and system models of health services utilization
- Data Examples

# Overview of Health Status and Health Services

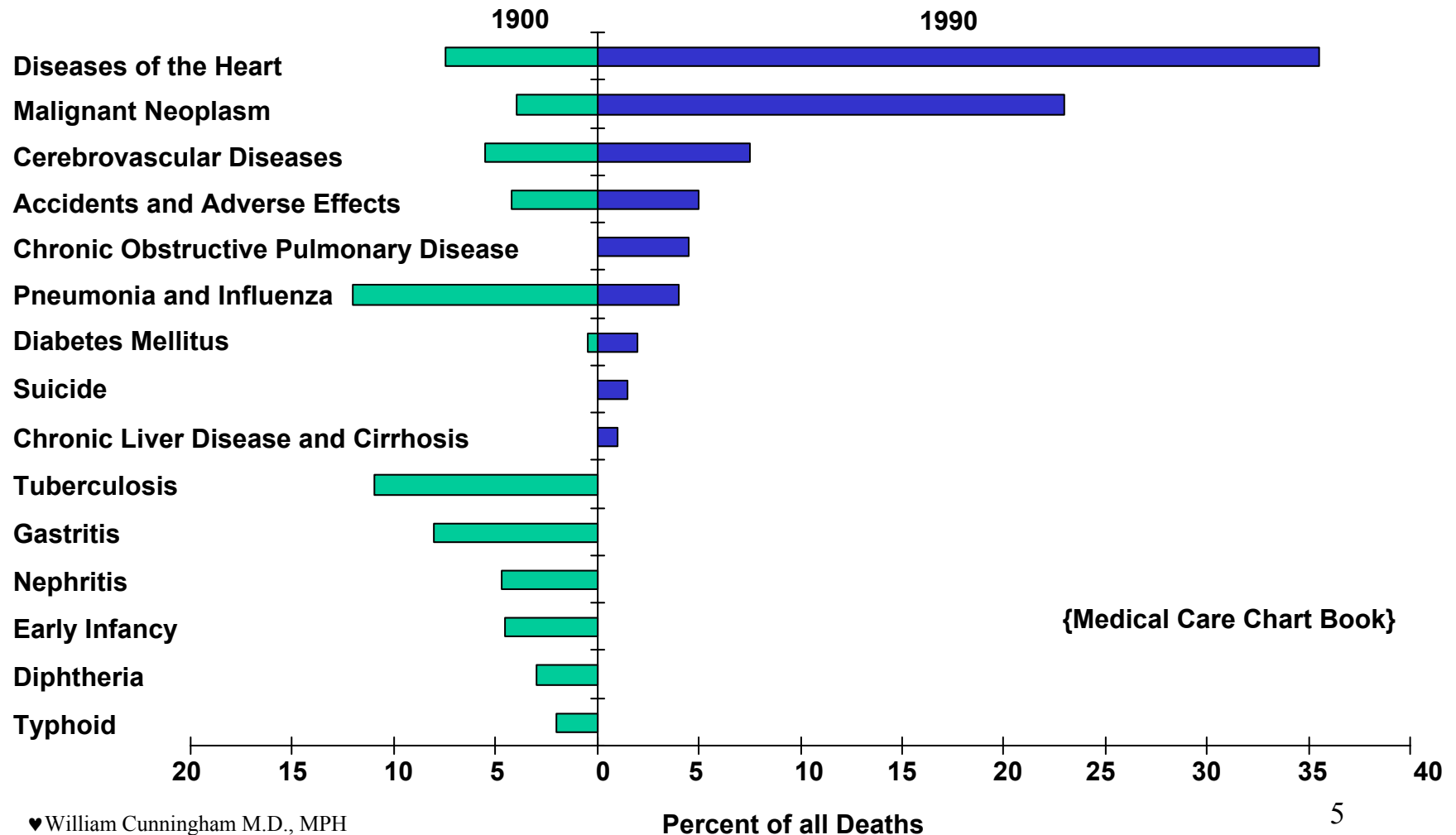
- Health status improvement and changes in causes of death
- U.S. health policy focus:
  - Individual vs. population health

# Change in Mortality Rate Compared with Expenditures on Medical Care: 1900-1970.



Age-and Sex-Adjusted Mortality Rates for the United States Contrasted with the Proportion of the Gross National Product Expended on Medical Care

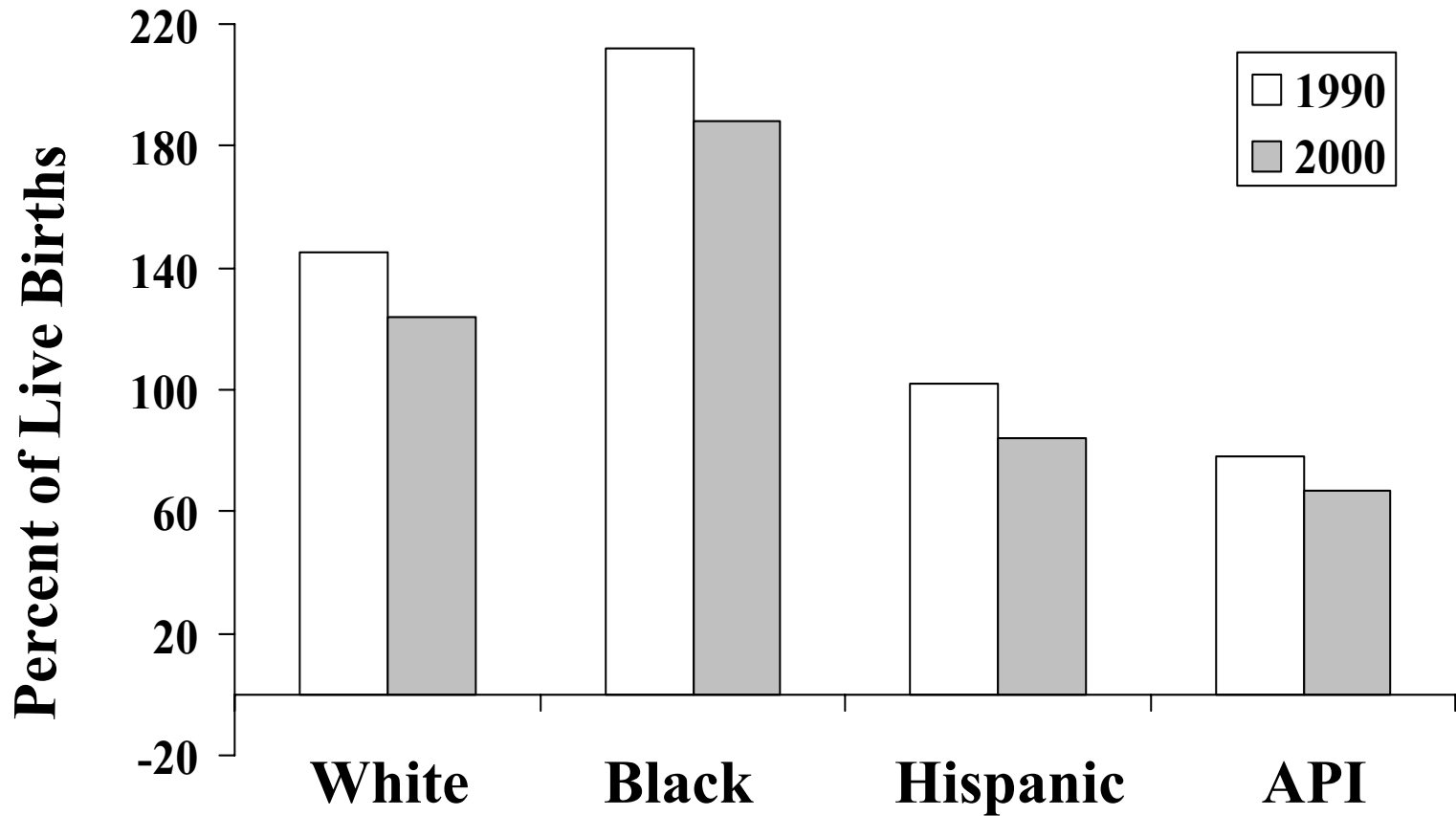
# Leading Causes of Death: 1900 and 1990



# Health Status Disparities

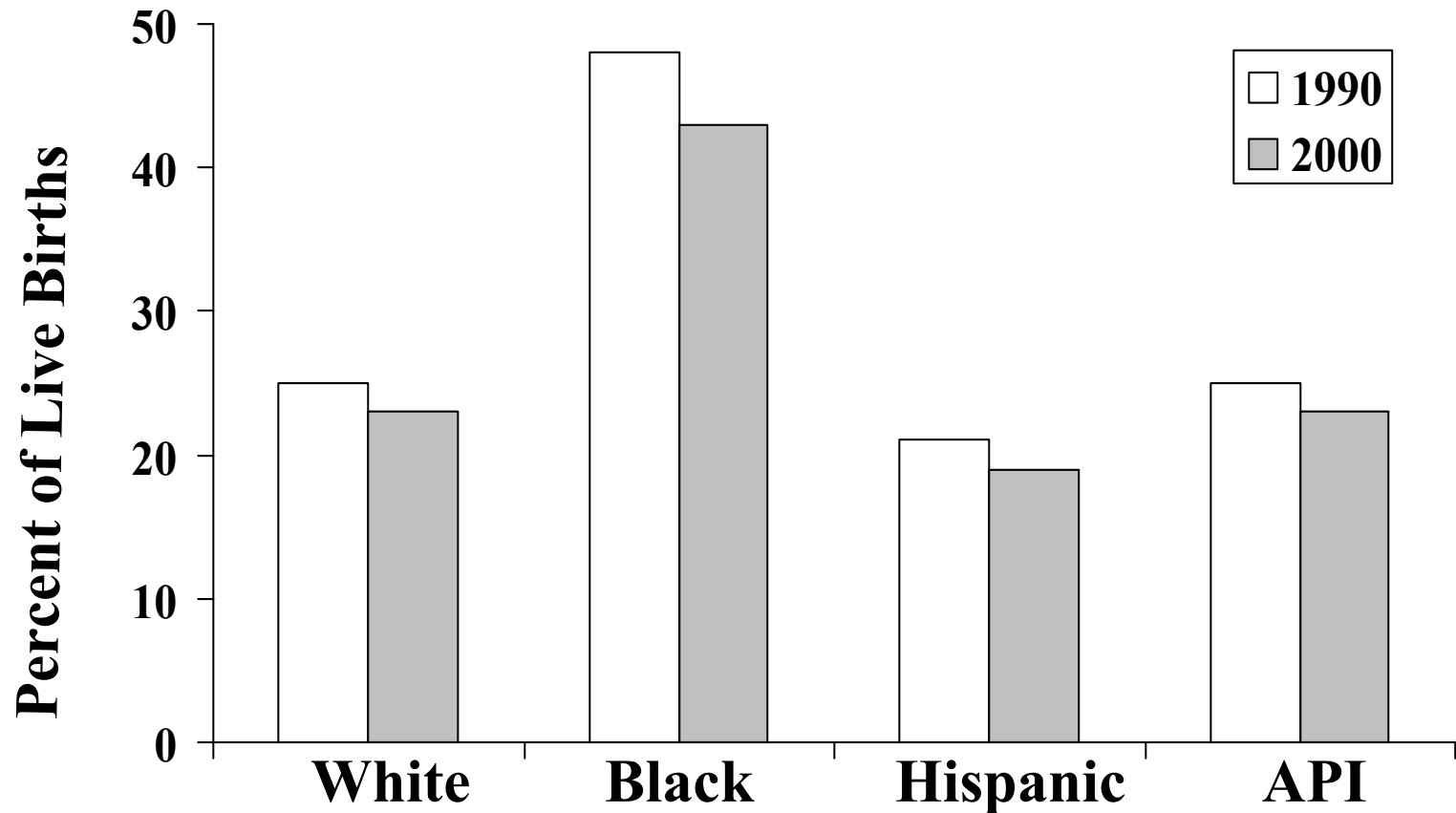
- Race and ethnicity
- Age
- Gender
- Socio-economic status
- Access to care

# Age-adjusted Heart disease death rates by Race/Ethnicity



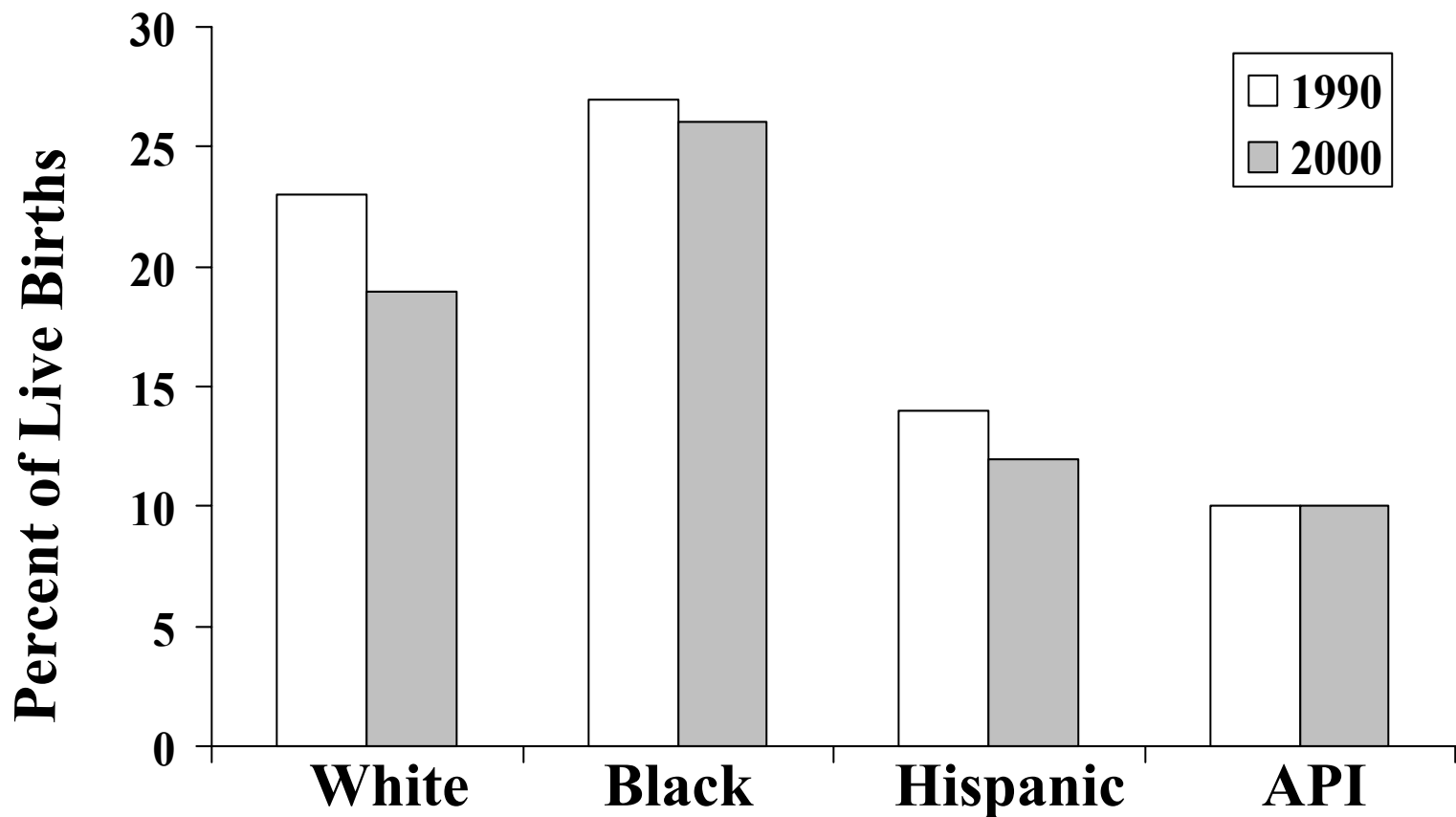
CDC: Health People  
#23, Jan. 03

# Age-adjusted Stroke death rates by Race/Ethnicity



CDC: Health People  
#23, Jan. 03

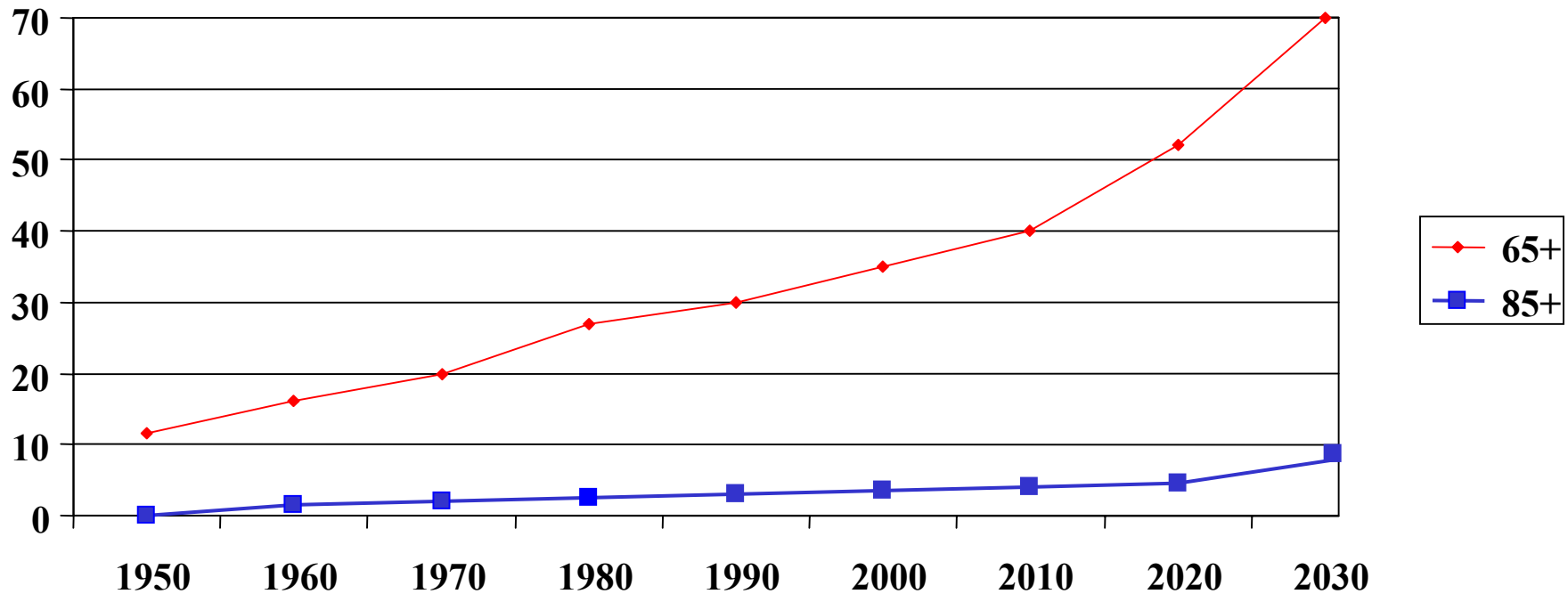
# Age-adjusted Female breast cancer death rates by Race/Ethnicity



CDC: Health People  
#23, Jan. 03

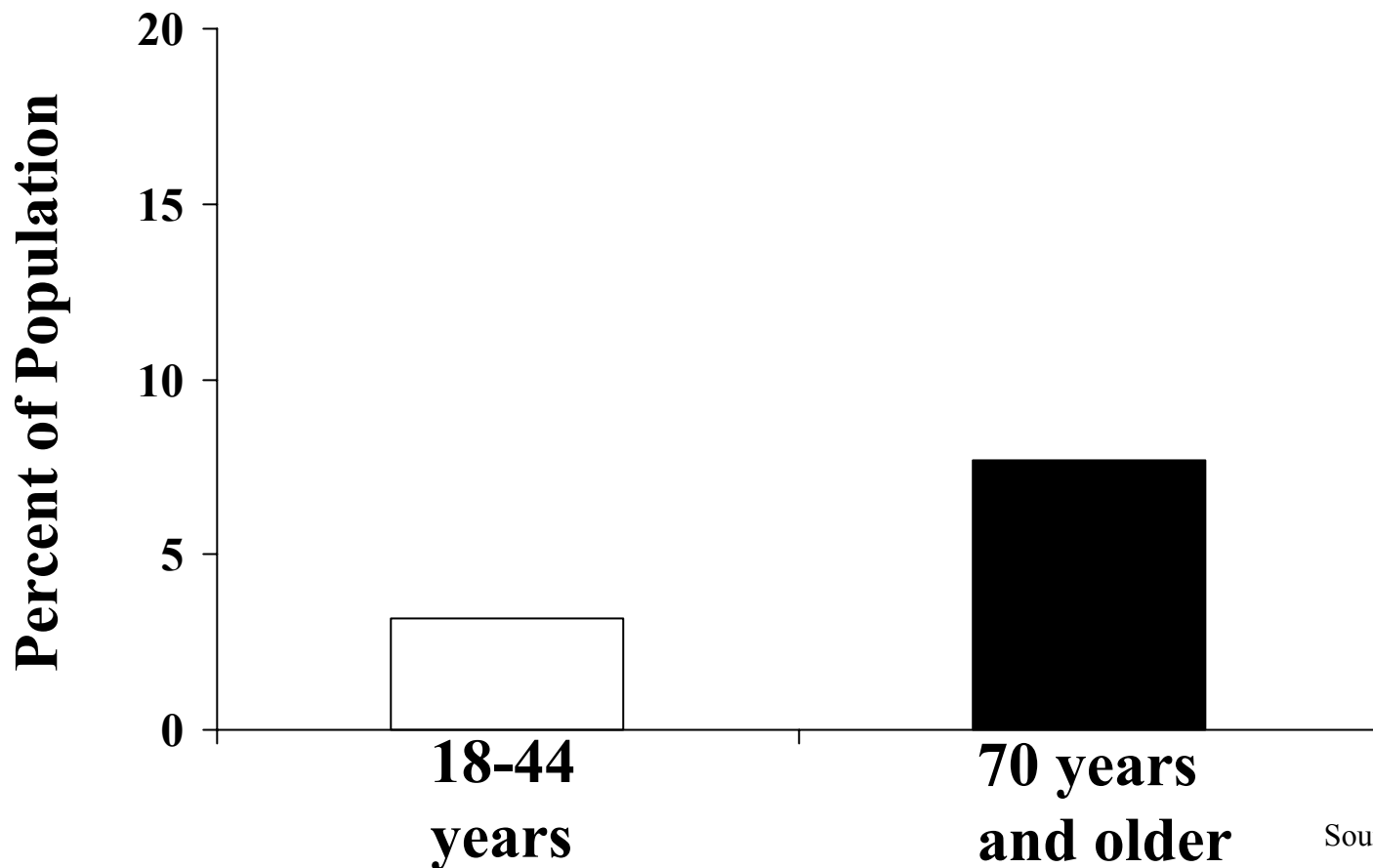
# Population 65 years of age and over: United States, 1950-2030

Figure 1. Population 65 years of age and over: United States, 1950-2030



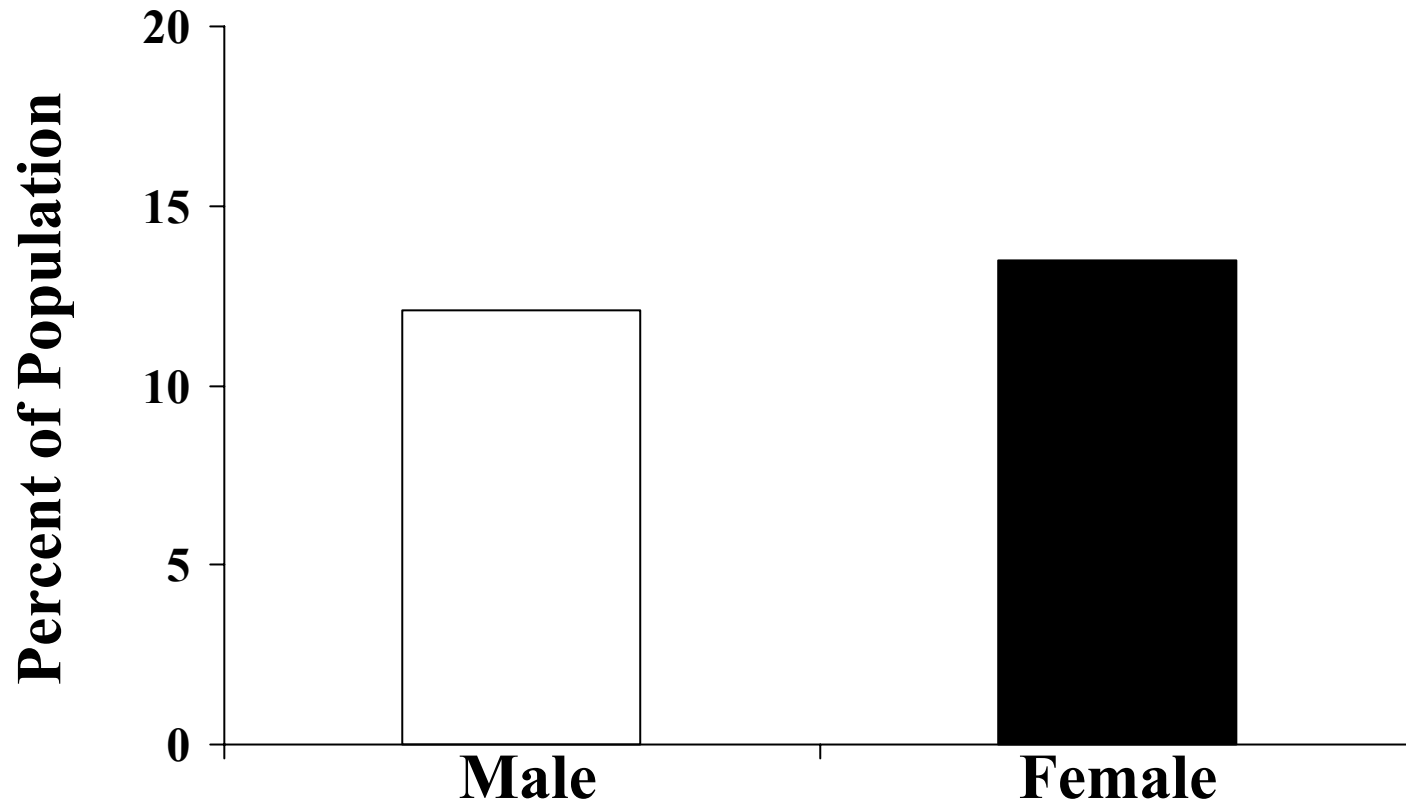
NOTES: Figures for 1950-90 are based on decennial censuses. Figures for 2000-30 are middle series population of the U.S. Bureau of the Census.  
SOURCES: See *Health United States*, 1999 table 1 for data years 1950-90. For data years 2000-30, see U.S. Bureau of the Census - Day JC  
Population projections of the United States by age, sex, race, and Hispanic Origin: 1995 to 2050. Current population reports: P25-1130.  
Washington: U.S. Department of Commerce. 1996

# Unable to Carry on Major Activity, Due to Chronic Conditions, 1995 (Age)



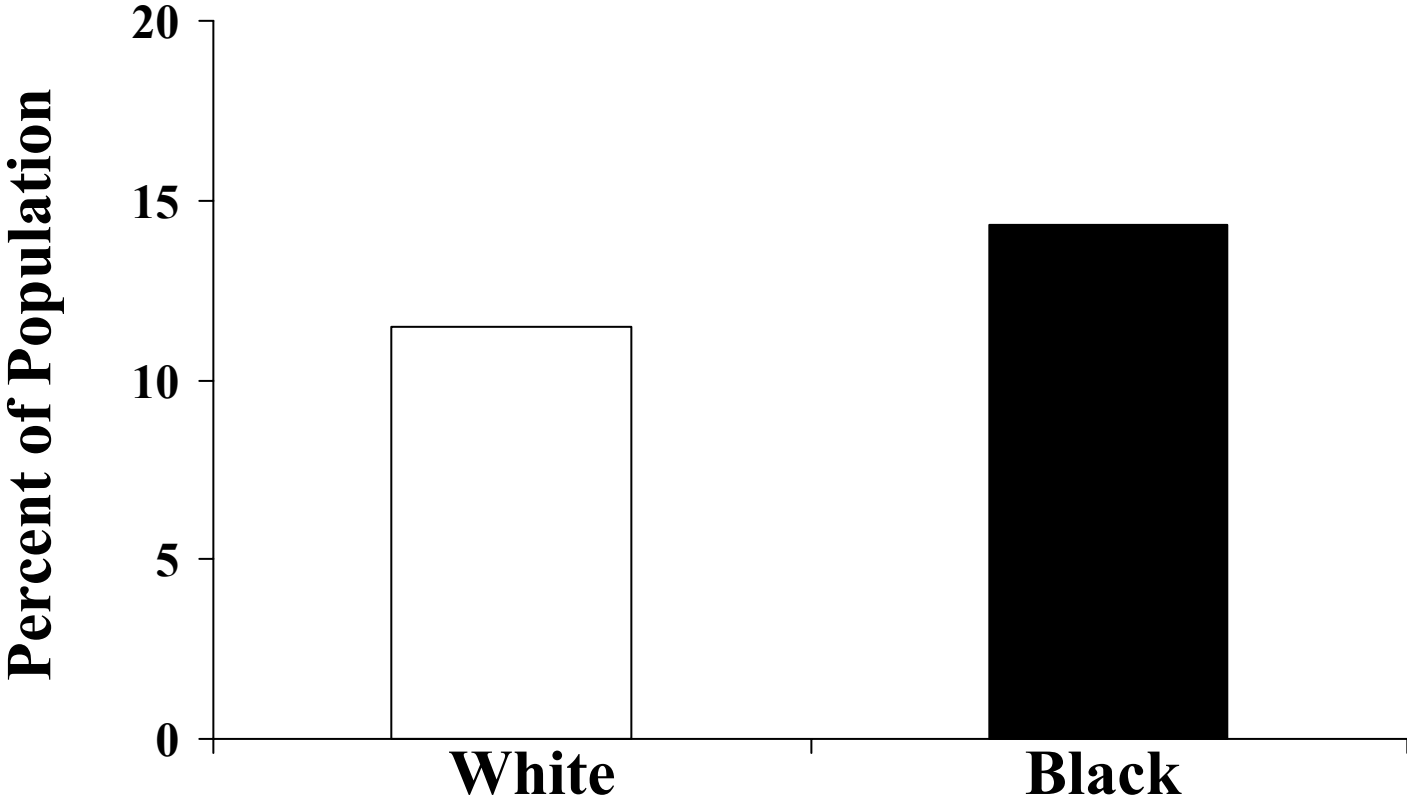
Source: NHIS, 2000

# Unable to Carry on Major Activity, Due to Chronic Conditions, 1997 (Sex)



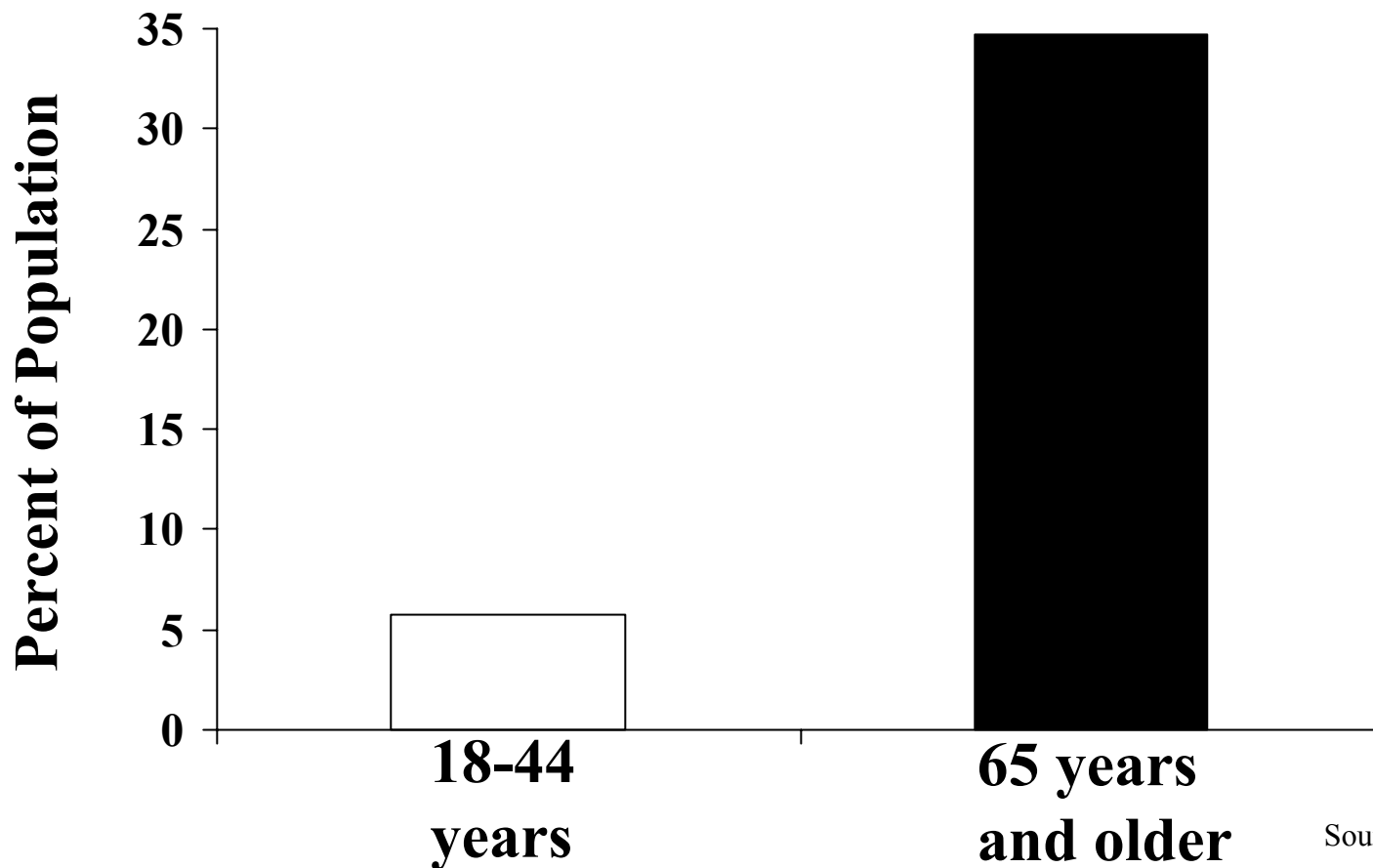
Source: NHIS, 2000

# Unable to Carry on Major Activity, Due to Chronic Conditions, 2000 (Race)



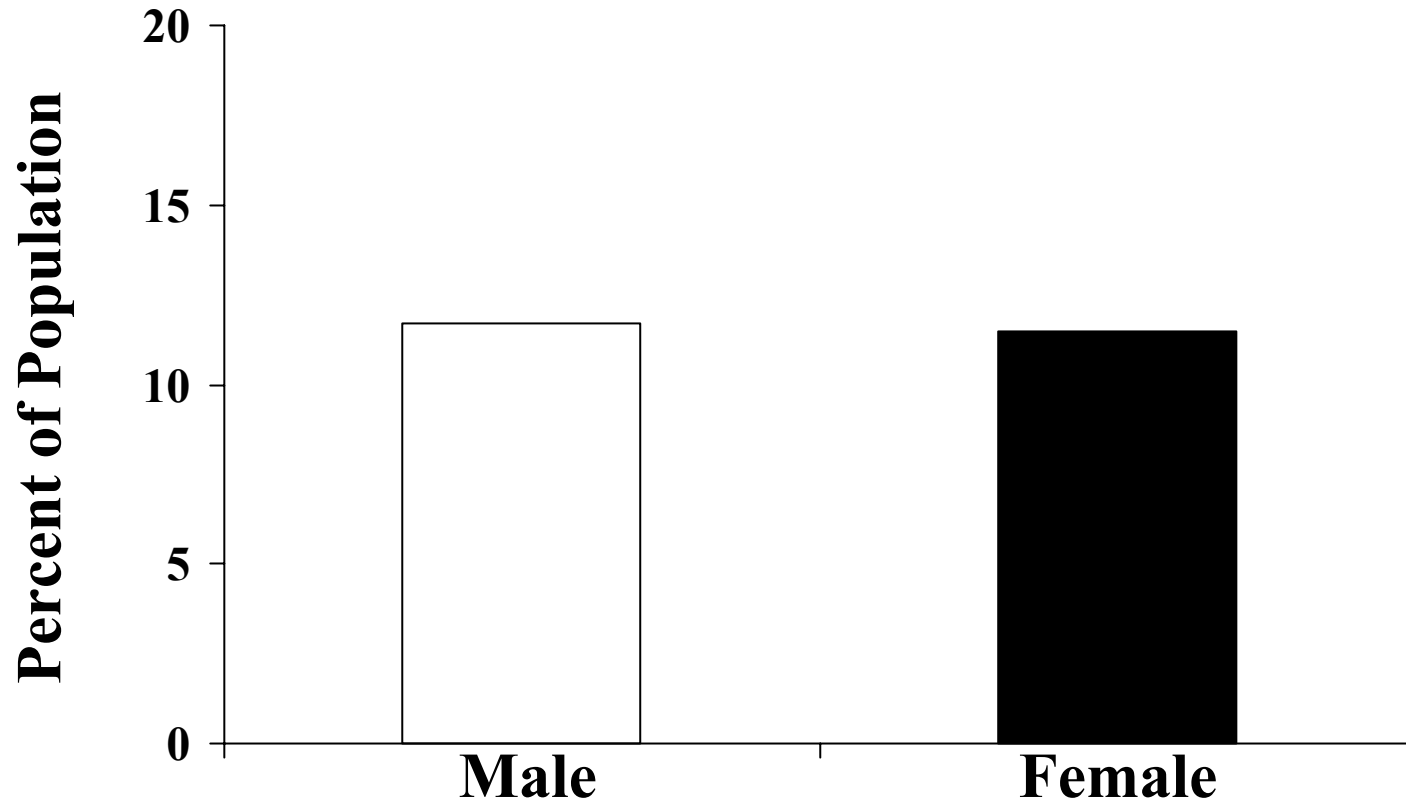
Source: NHIS, 2000

# Unable to Carry on Major Activity, Due to Chronic Conditions, 2000 (Age)



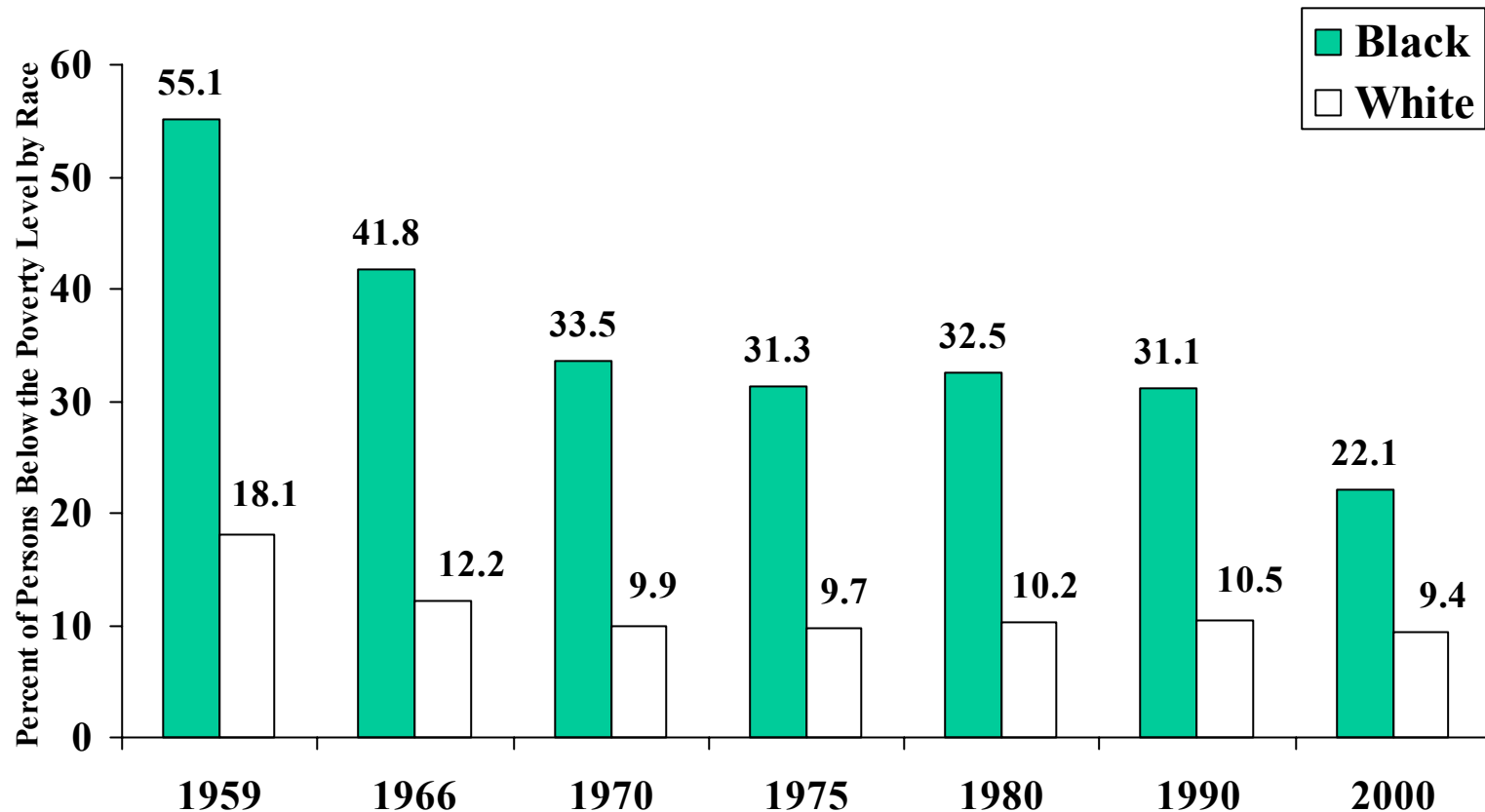
Source: NHIS, 2000

# Unable to Carry on Major Activity, Due to Chronic Conditions, 2000 (Sex)



Source: NHIS, 2000

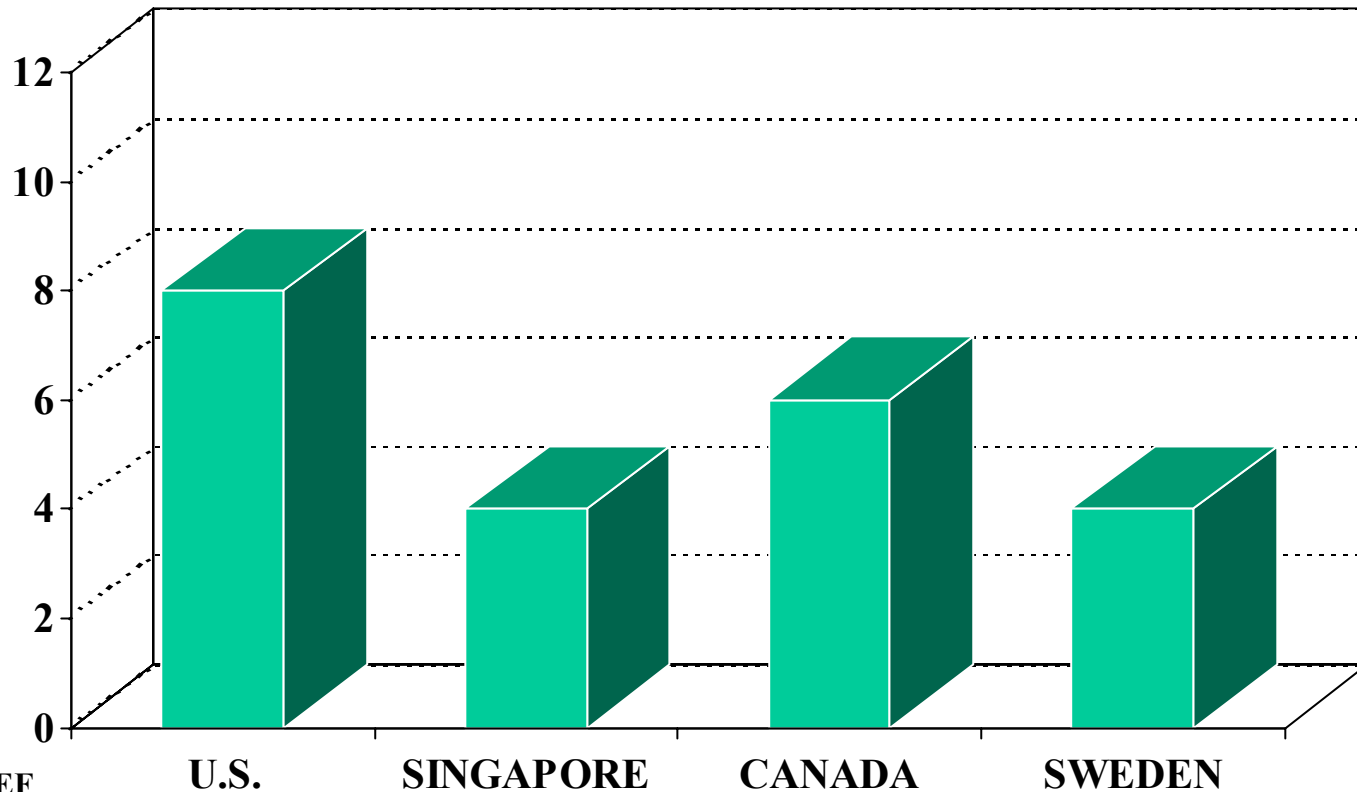
# Percent of Persons Below the Poverty Level by Race (USA, Selected Years, 1959-2000)



Source: U.S. Department of Commerce, Bureau of the Census, 2001.

# Infant Mortality, 2000

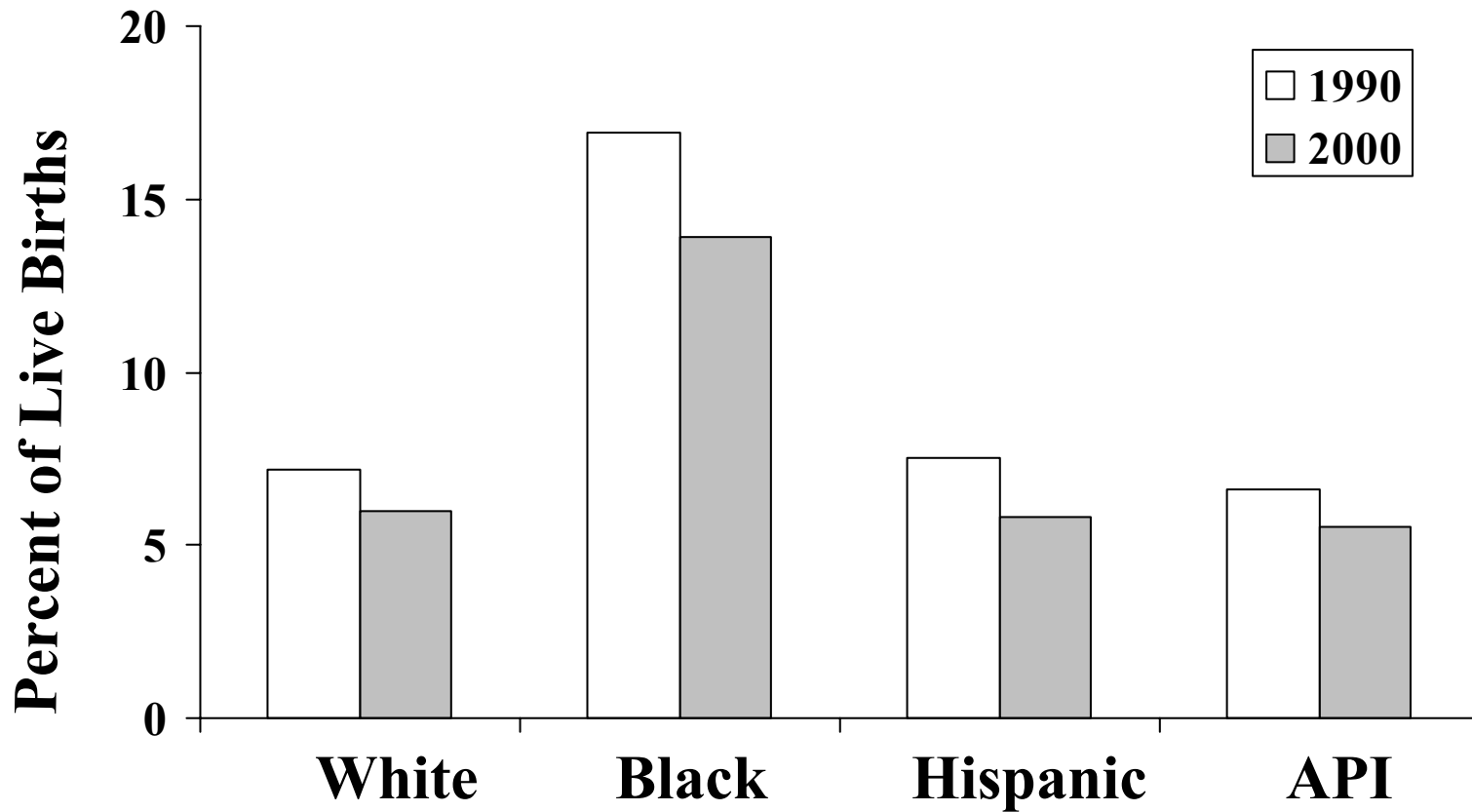
PER 1000 BIRTHS



Source: UNICEF

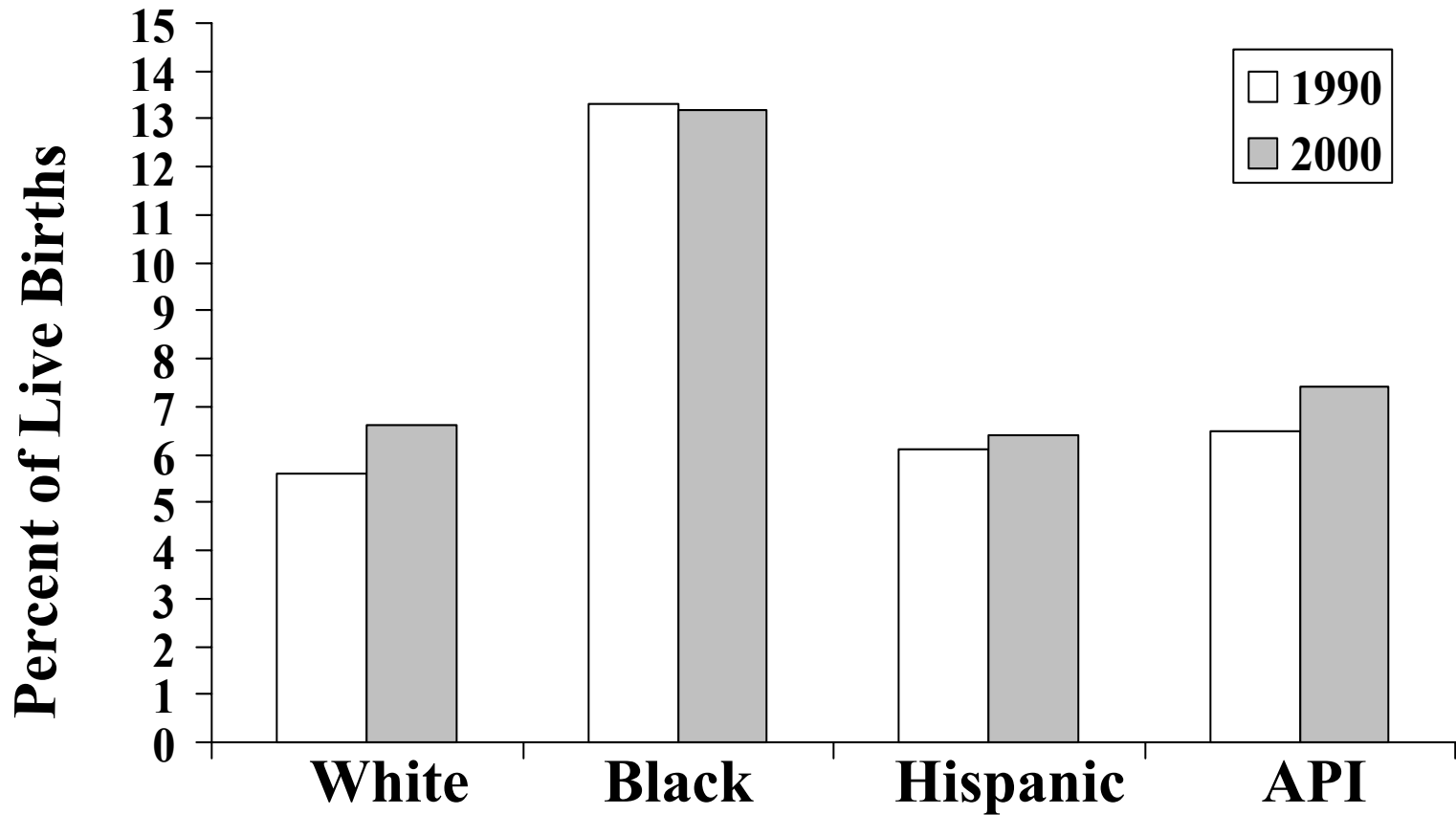
Infant Mortality, 2000

# Infant Mortality by Race/Ethnicity



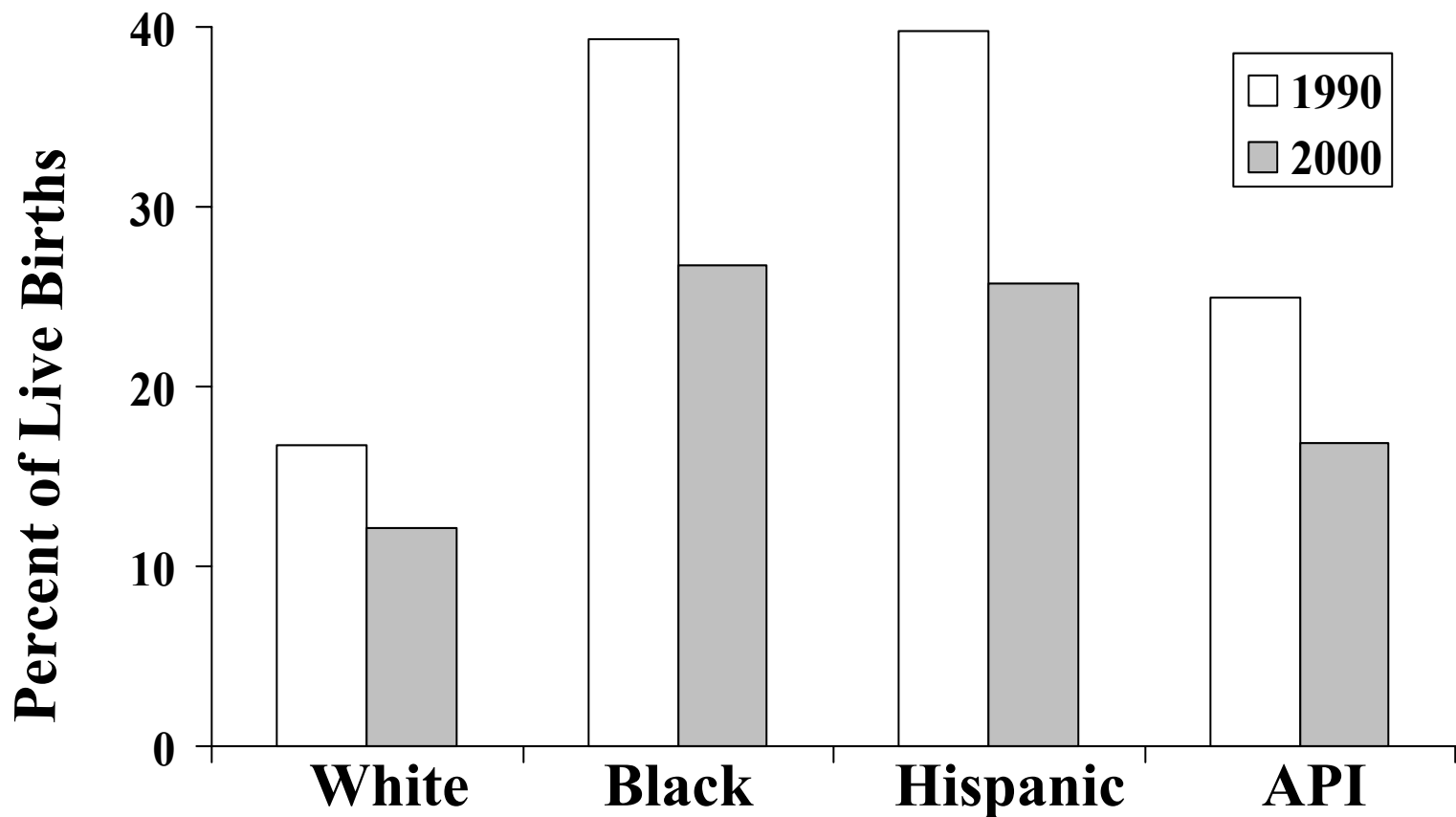
CDC: Health People  
#23, Jan. 03

# Low Birthweight by Race/Ethnicity



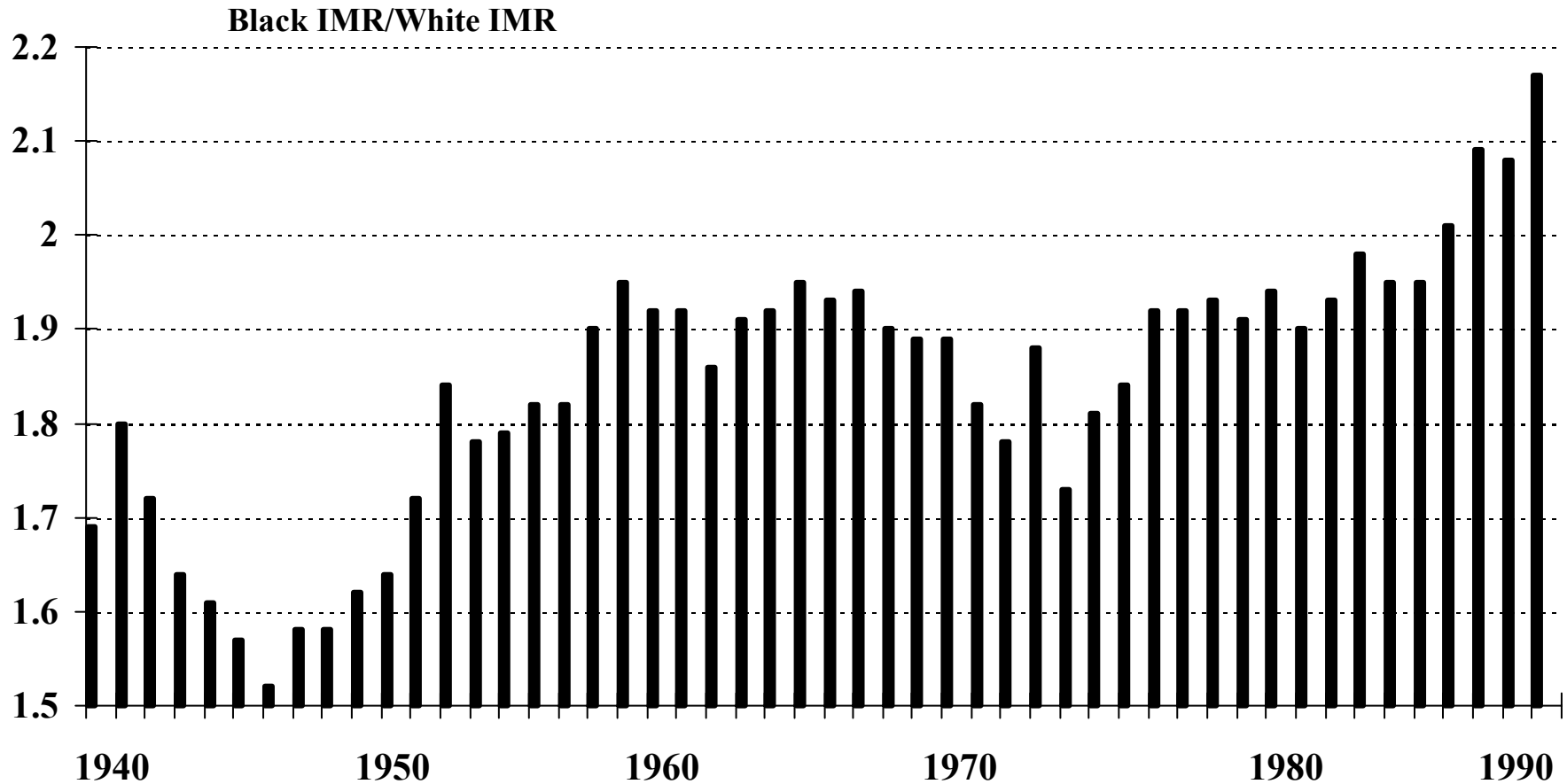
CDC: Health People  
#23, Jan. 03

# Prenatal Care by Race/Ethnicity



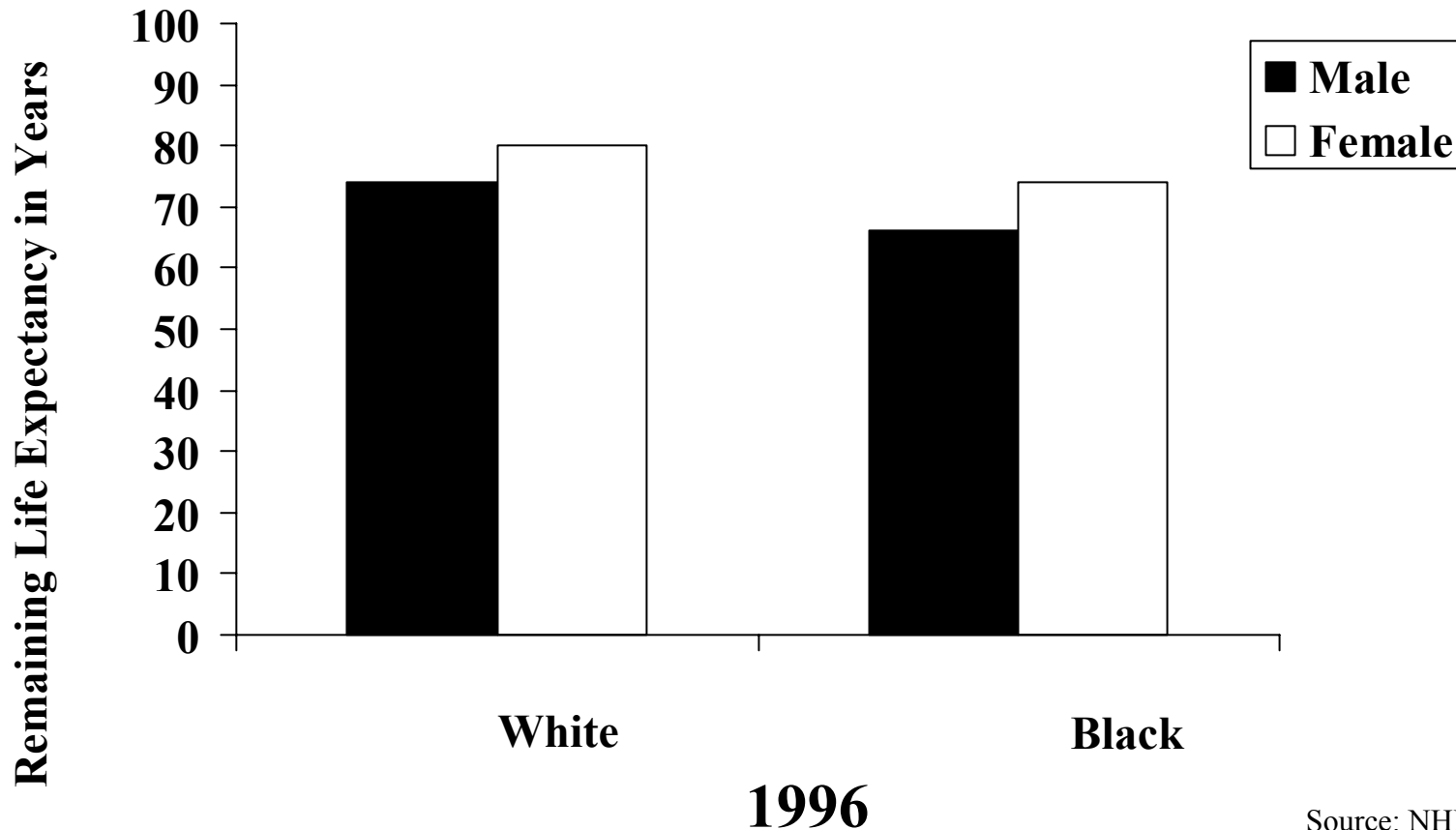
CDC: Health People  
#23, Jan. 03

# Black: White Infant Mortality Ratio U.S. 1940-1990



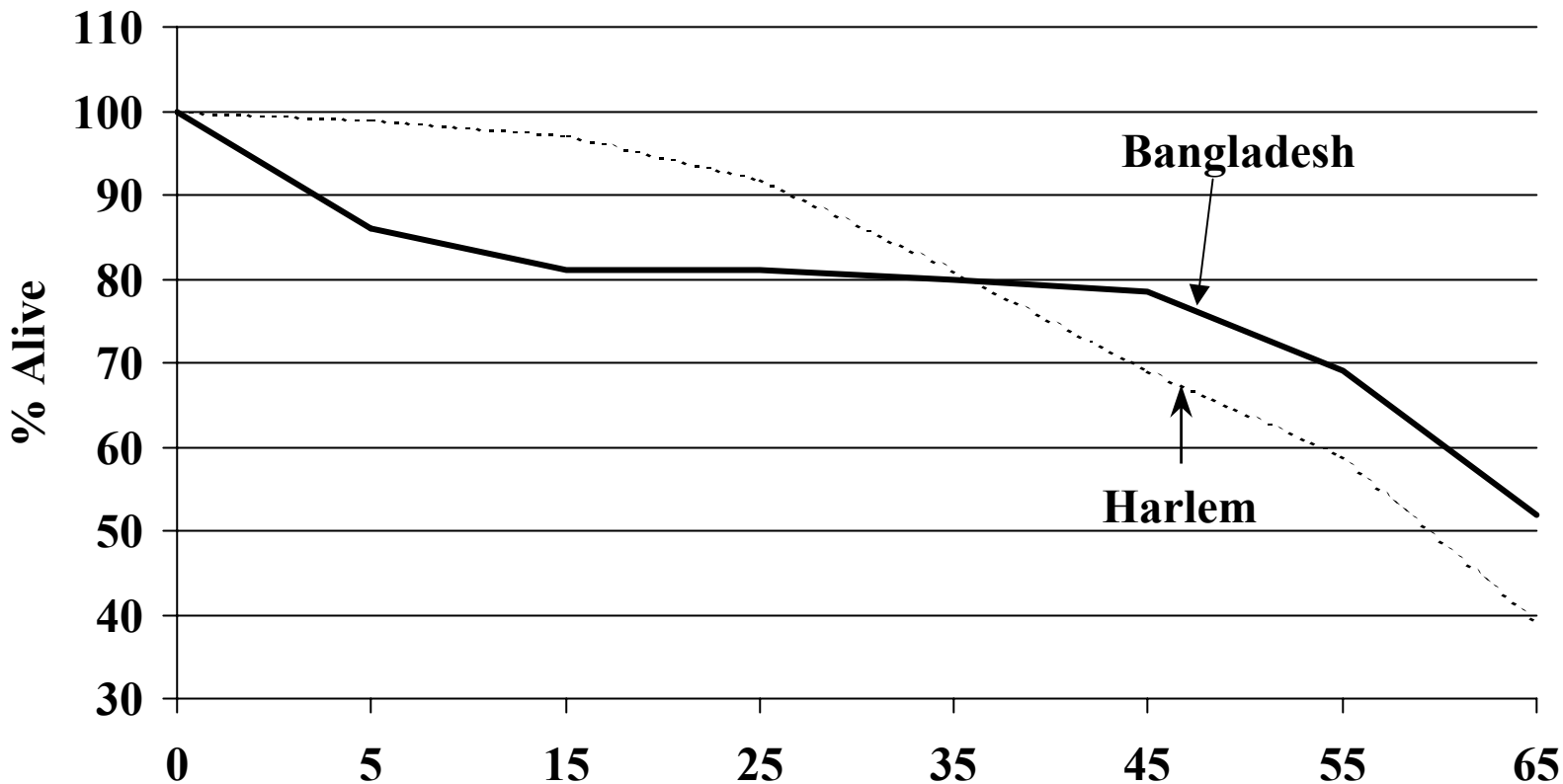
Source: Children's Defense Fund/NCHS

# Life Expectancy at Birth, According to Race and Sex 1996



Source: NHIS, 2002

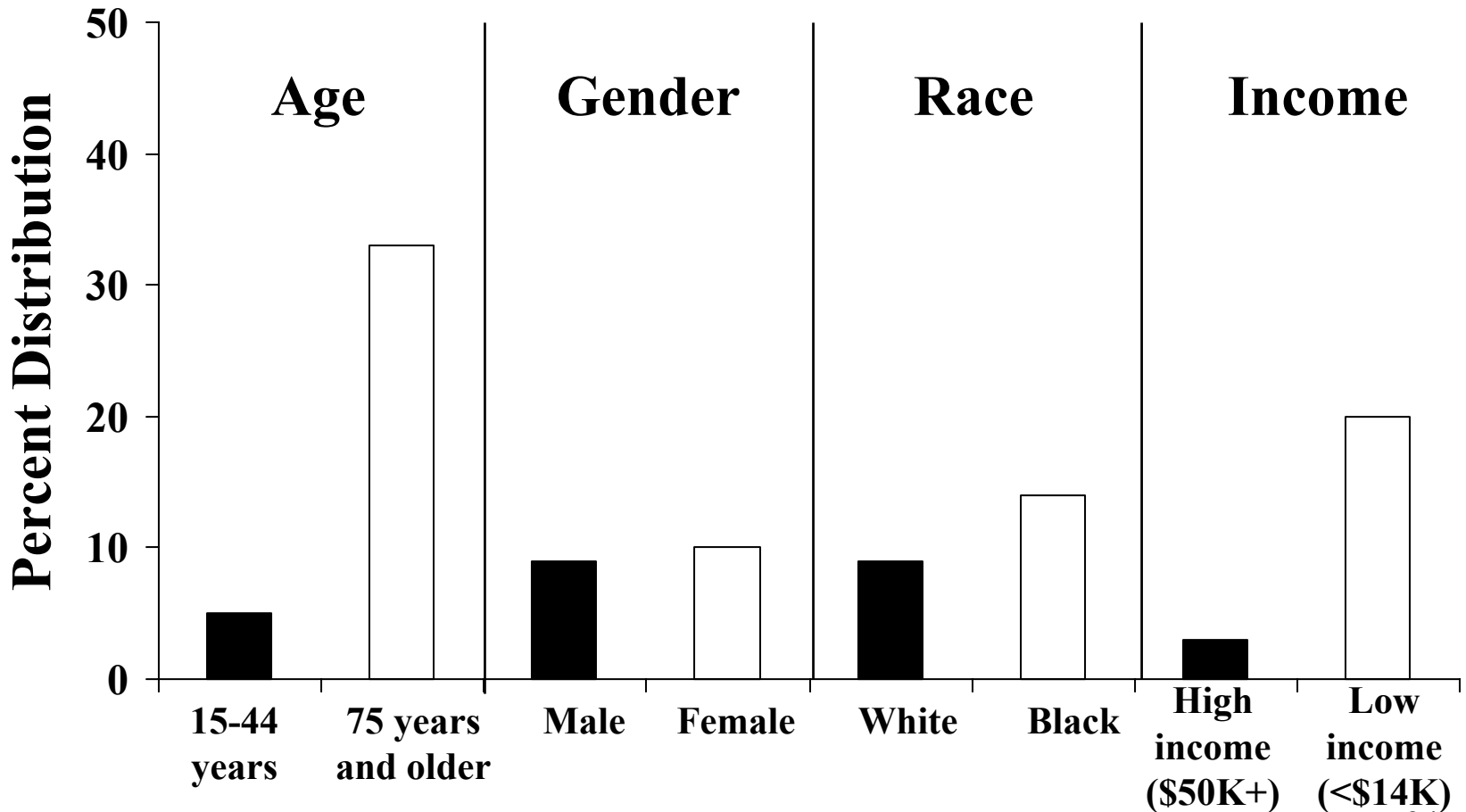
# Survival of Men: Harlem (U.S.) & Bangladesh



Source: Freeman NEJM 322:173, 1989

Age

# Percent of Population in Poor Health by Age, Gender, Race, Income 1991



# History of Health and Quality of Life Concepts: a Paradigm Shift

- Changes in survival, epidemiology
- Limits of medical technology
- Public health and policy: populations
  - mass public health measures

# History of Health and Quality of Life Concepts: a Paradigm Shift (con't.)

- Chronic disease treatment: individuals
  - focus on life-style, function, and well-being
- Cost-containment and consumerism
  - demonstration of health care value

# Definitions of Health

- Disease vs. illness: biomedical model
- WHO definition: bio-psycho-social
- QOL: consumer/health system
- Significance of health
  - need, outcome

# Quality of Life: functioning and well-being

- Ability to engage in daily functions:
  - physical (e.g. self-care)
  - role
  - social
- Perceived well-being versus distress

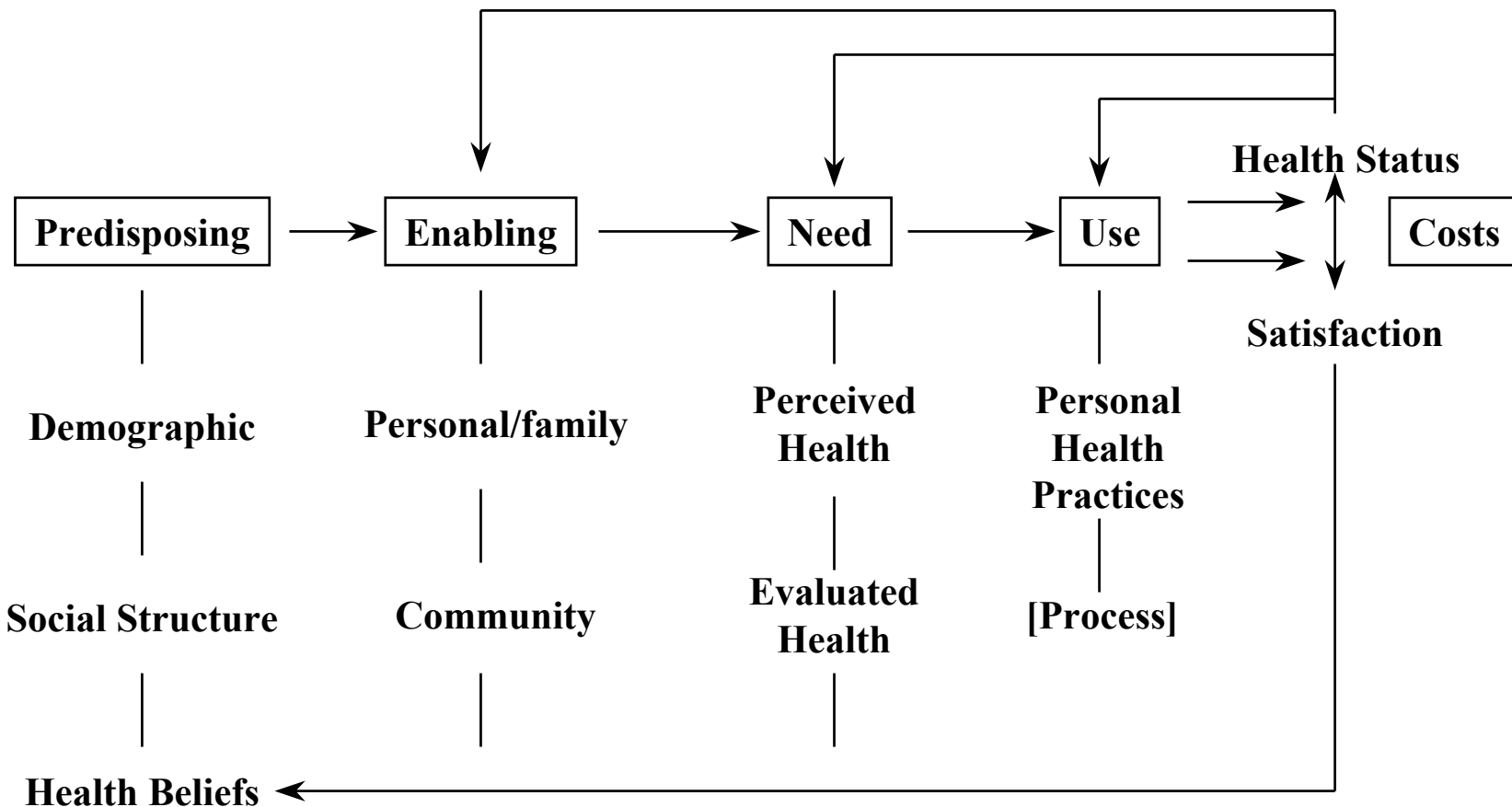
# Determinants of Utilization: Theoretical Models

- Individual decision making
  - health behavior
  - illness behavior
  - sick role behavior
- Health system structure, process, and outcome
  - access to care
  - quality of care
  - costs

# Why Is Health Status Important?

- Reflects need for services
- Effective services improve health outcomes

# The Basic Behavioral Model of Health Services Utilization



Adapted from Andersen 1968

# Key Problems With US Health Care System

- Access to care
  - ~ 38 million without health insurance
- Cost of care
  - 2000 expenditures ~ \$1.3 Trillion
- Quality of care
  - not all care delivered is beneficial
  - not all needs are met

# Goals of Care System

- Provide equitable, cost effective care
  - Maximize access to needed care
  - Minimize costs
  - Maximize effectiveness (quality)

# Health Services Research: Improving Health Systems

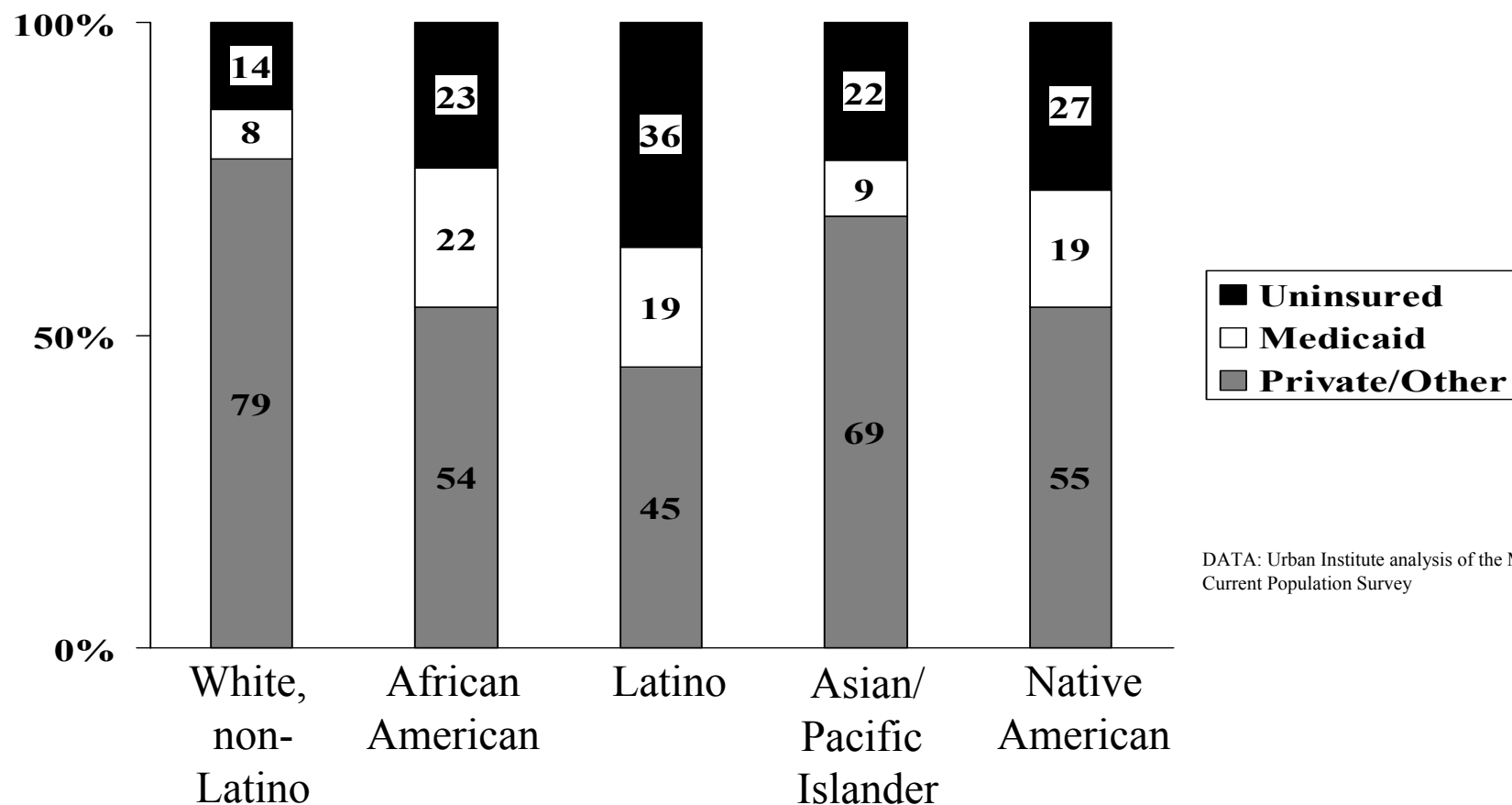
## Criteria:

- Equity - needed care obtainable and provided
- Efficiency - costs are minimized
- Effectiveness - quality care improves health outcomes

## Application:

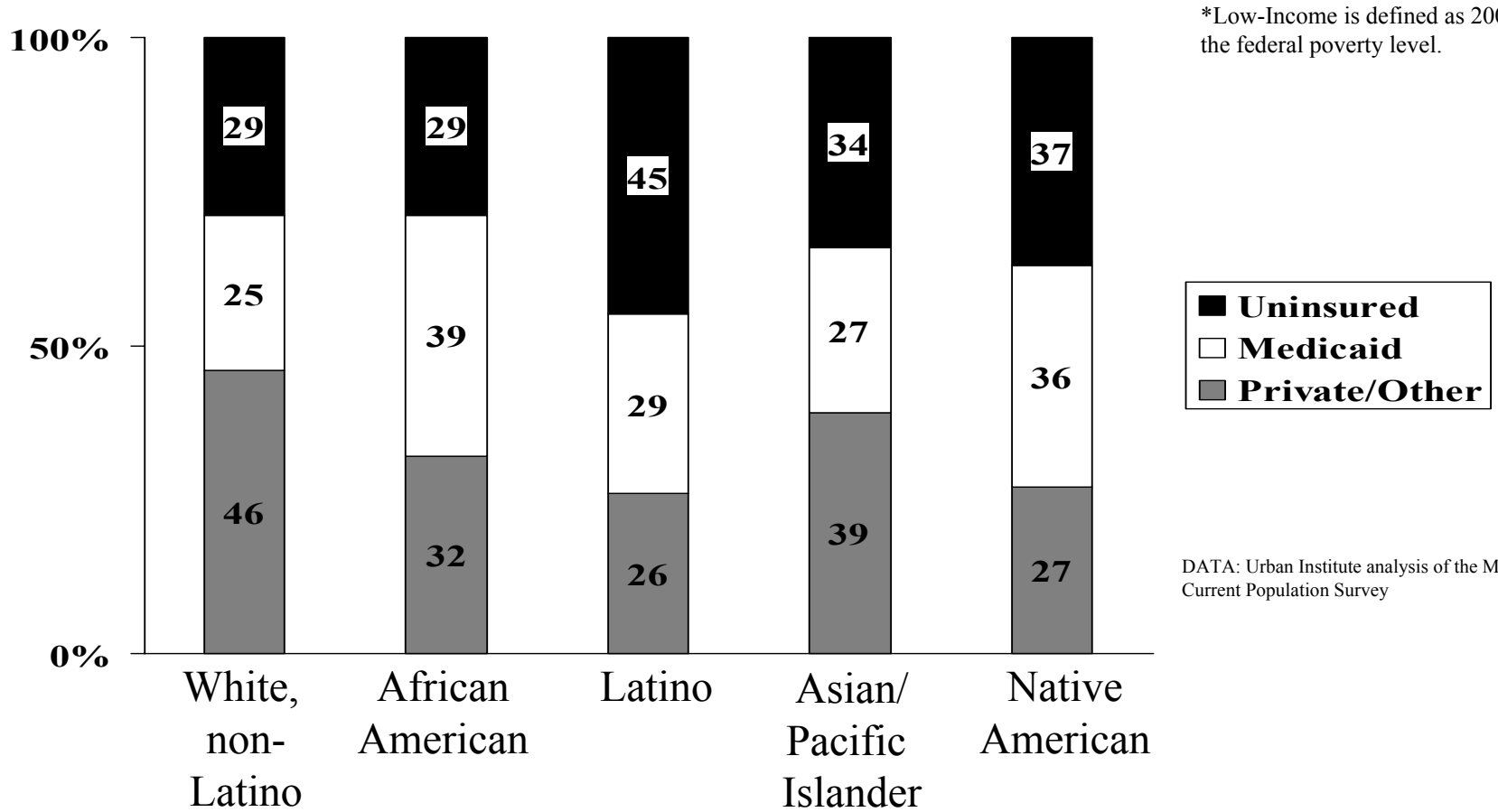
- Evaluate policy, interventions, secular trends

# Health Insurance Status, by Race and Ethnicity, 1997: Total Nonelderly Population



DATA: Urban Institute analysis of the March 1998 Current Population Survey

# Health Insurance Status, by Race and Ethnicity, 1997: Low-Income\* Non-elderly Population

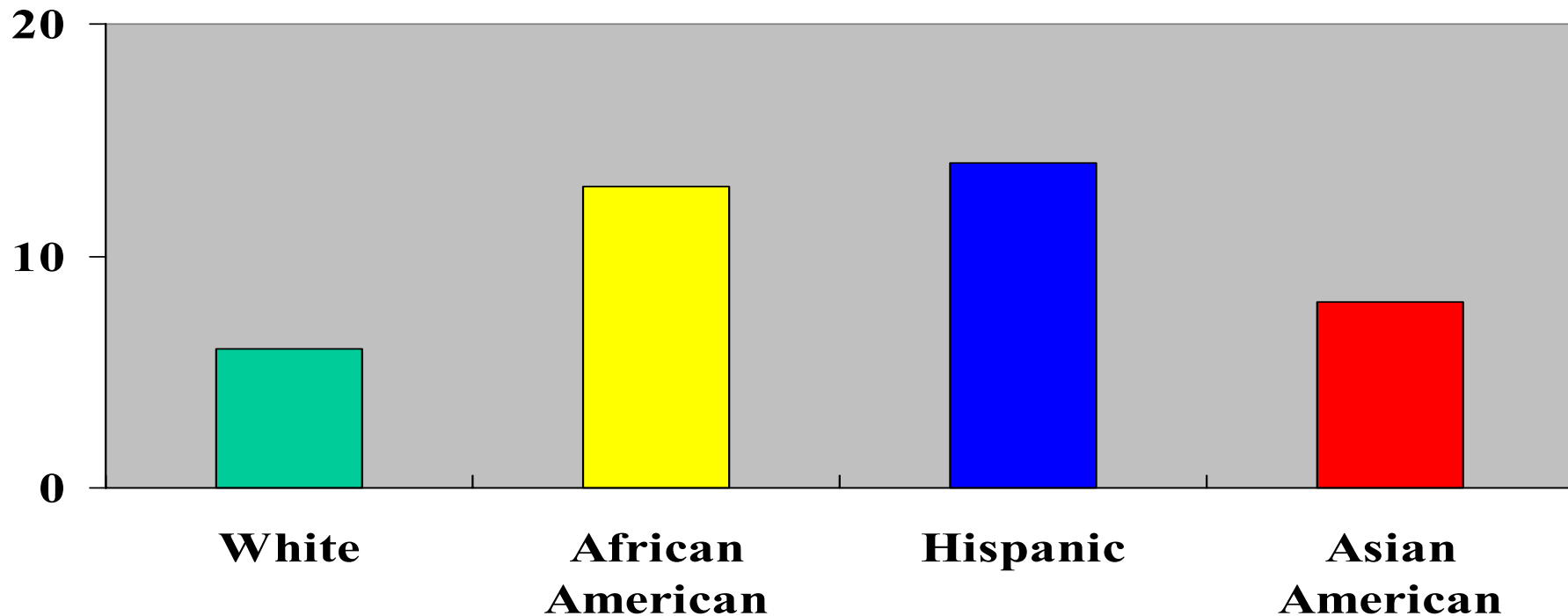


\*Low-Income is defined as 200% below the federal poverty level.

DATA: Urban Institute analysis of the March 1998 Current Population Survey

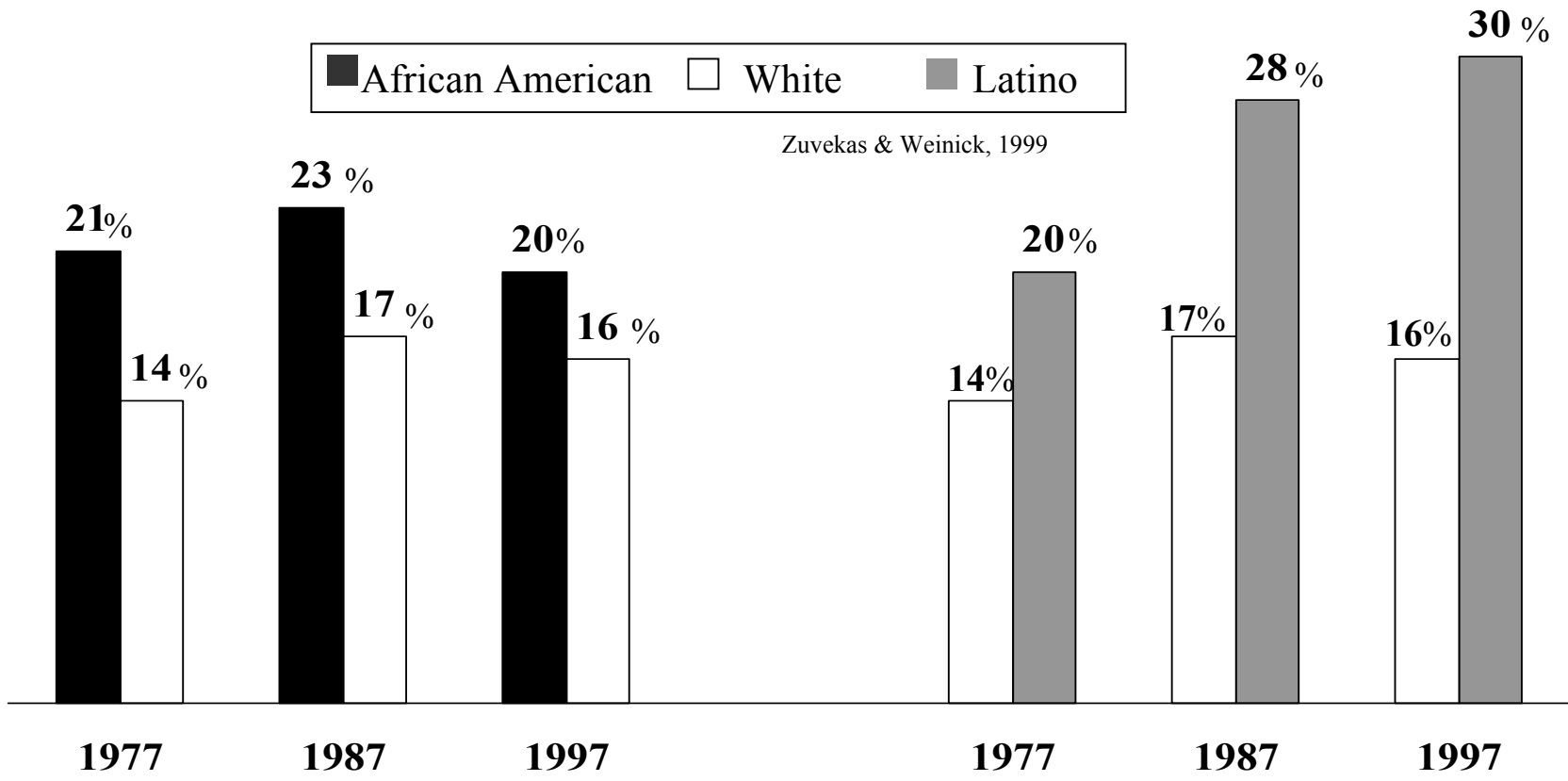
# African Americans and Hispanics More Likely to Have No Regular Source of Care and Use ERs

Percent of adults reporting emergency room or none as regular source of care



Source: The Commonwealth Fund 2001 Health Care Quality Survey.

# No Usual Source of Medical Care, 1977 to 1997



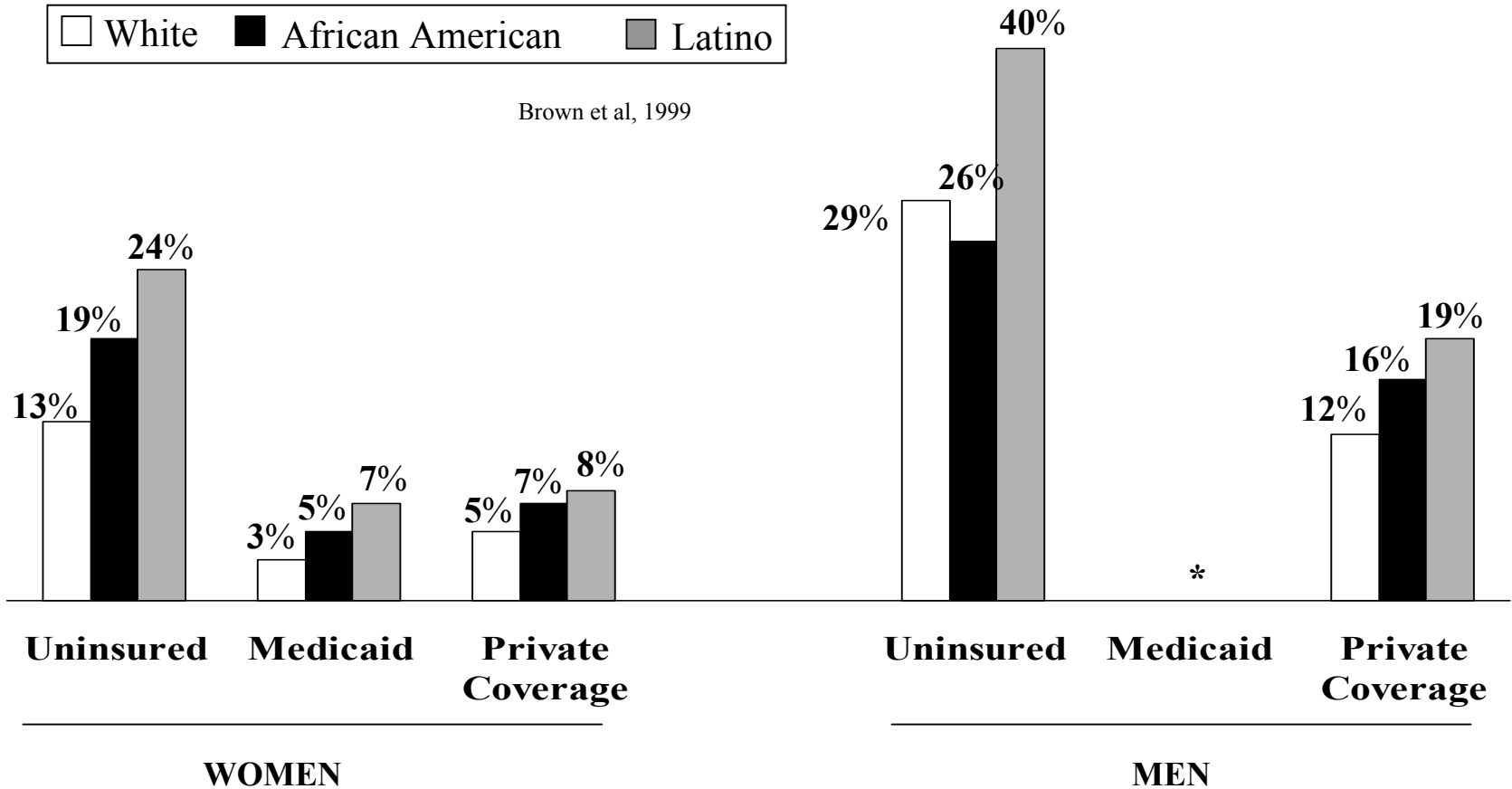
African Americans compared to Whites

Latinos compared to Whites

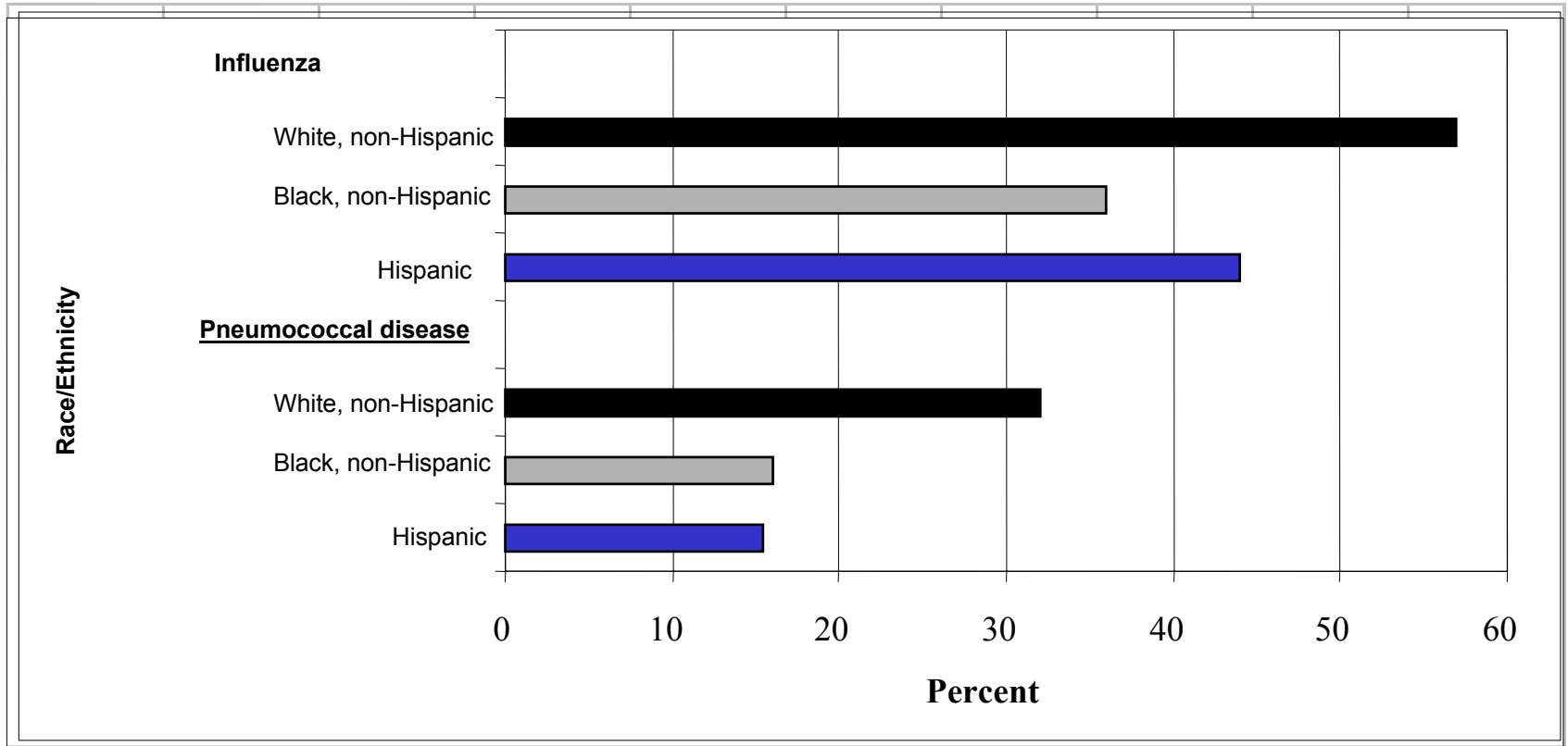
# Percent with No Doctor Visit in Past Year: Adults 18-64 in Fair to Poor Health



Brown et al, 1999



# Percent vaccinated against influenza and pneumococcal disease among persons 65+ years by race/ethnicity



United States, 1993-95

Source: CDC. National Center for Health Statistics. National Health Interview Survey.

# Odds of Receiving 3 Cardiovascular Procedures in LA Hospitals by Race/Ethnicity (Compared to Whites)

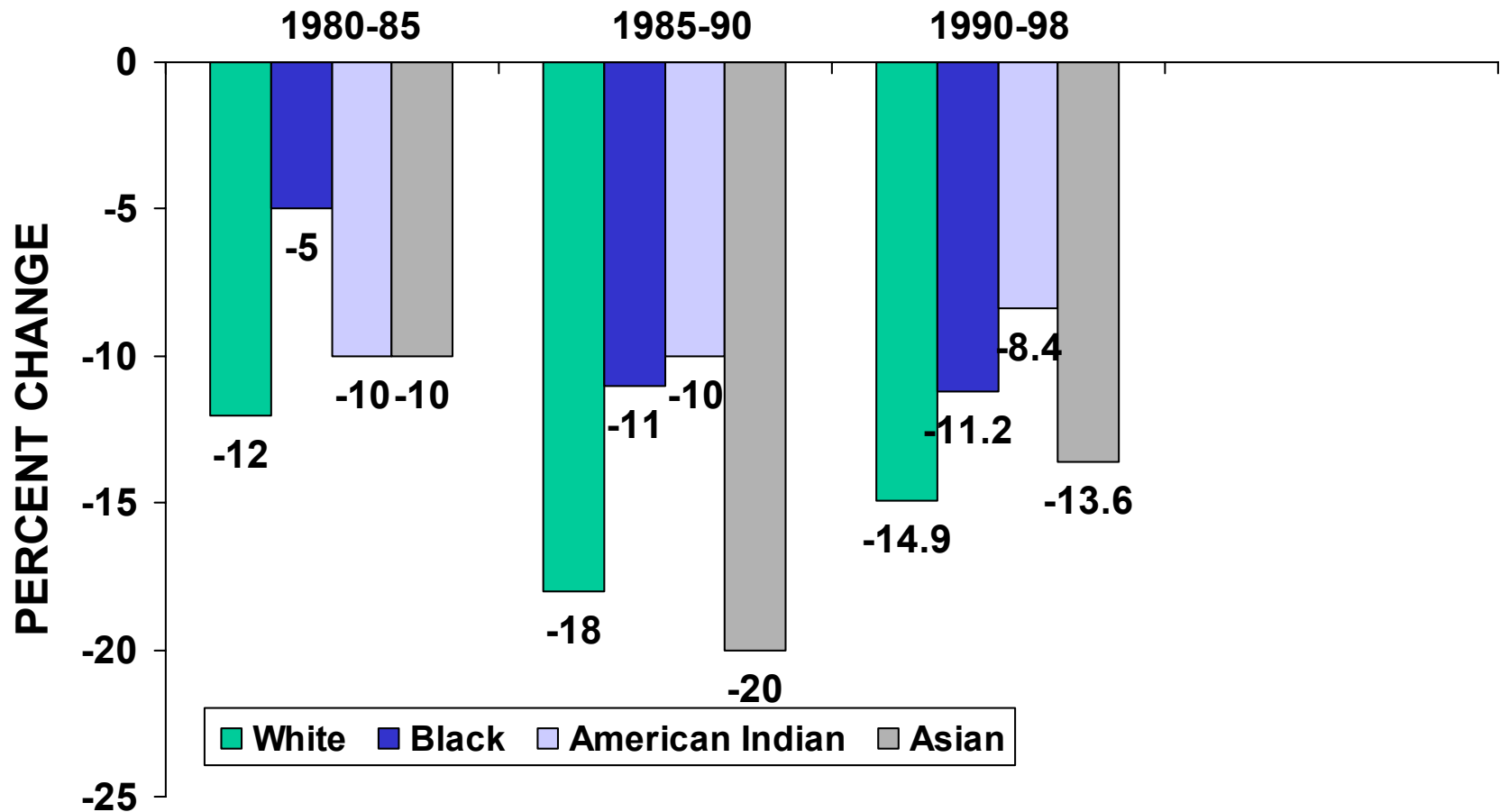
	<b>Black</b>	<b>Latino</b>	<b>Asian</b>
<b>Angio</b>	<b>0.59</b>	<b>0.53</b>	<b>0.71</b>
<b>CABG</b>	<b>0.56</b>	<b>0.67</b>	<b>0.92<sup>NS</sup></b>
<b>PTCA</b>	<b>0.50</b>	<b>0.45</b>	<b>0.70</b>

\* Controlling for age, gender, and primary diagnoses

<sup>NS</sup>Non-Significant

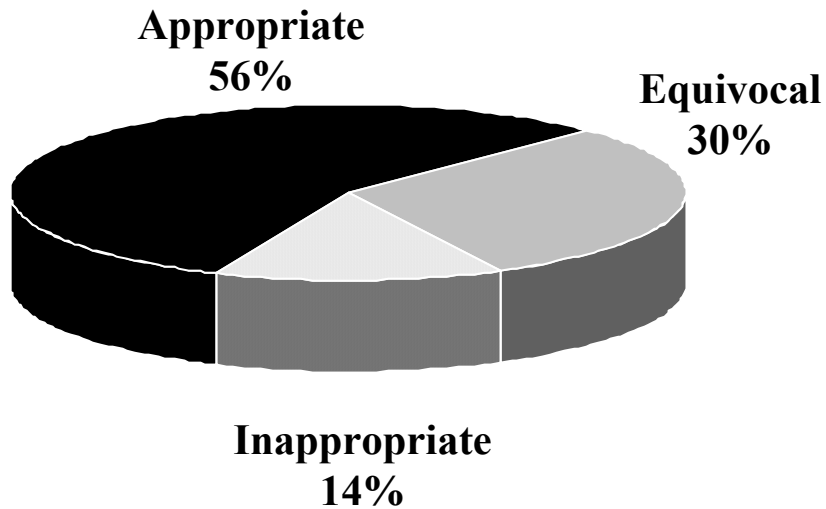
Source: David Carlisle 1997

# Heart Disease Mortality by Race: Percent Change 1980-1998

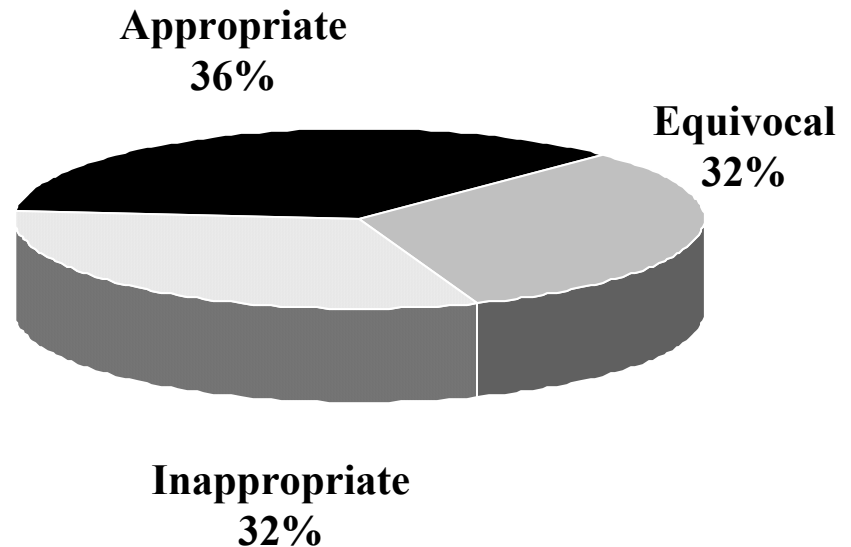


# Appropriateness of CABG and Carotid Endarterectomy in U.S.

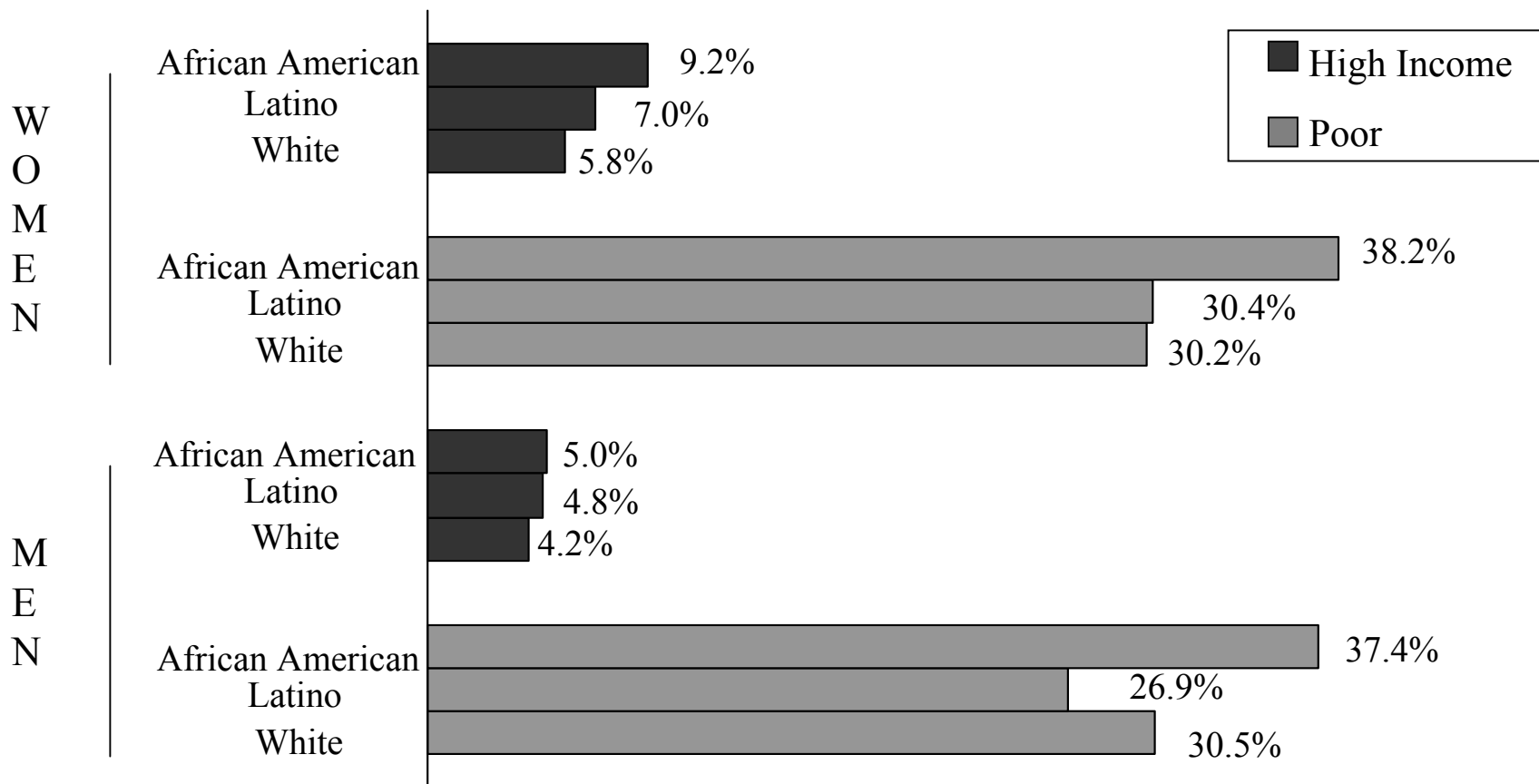
## CABG



## CEA

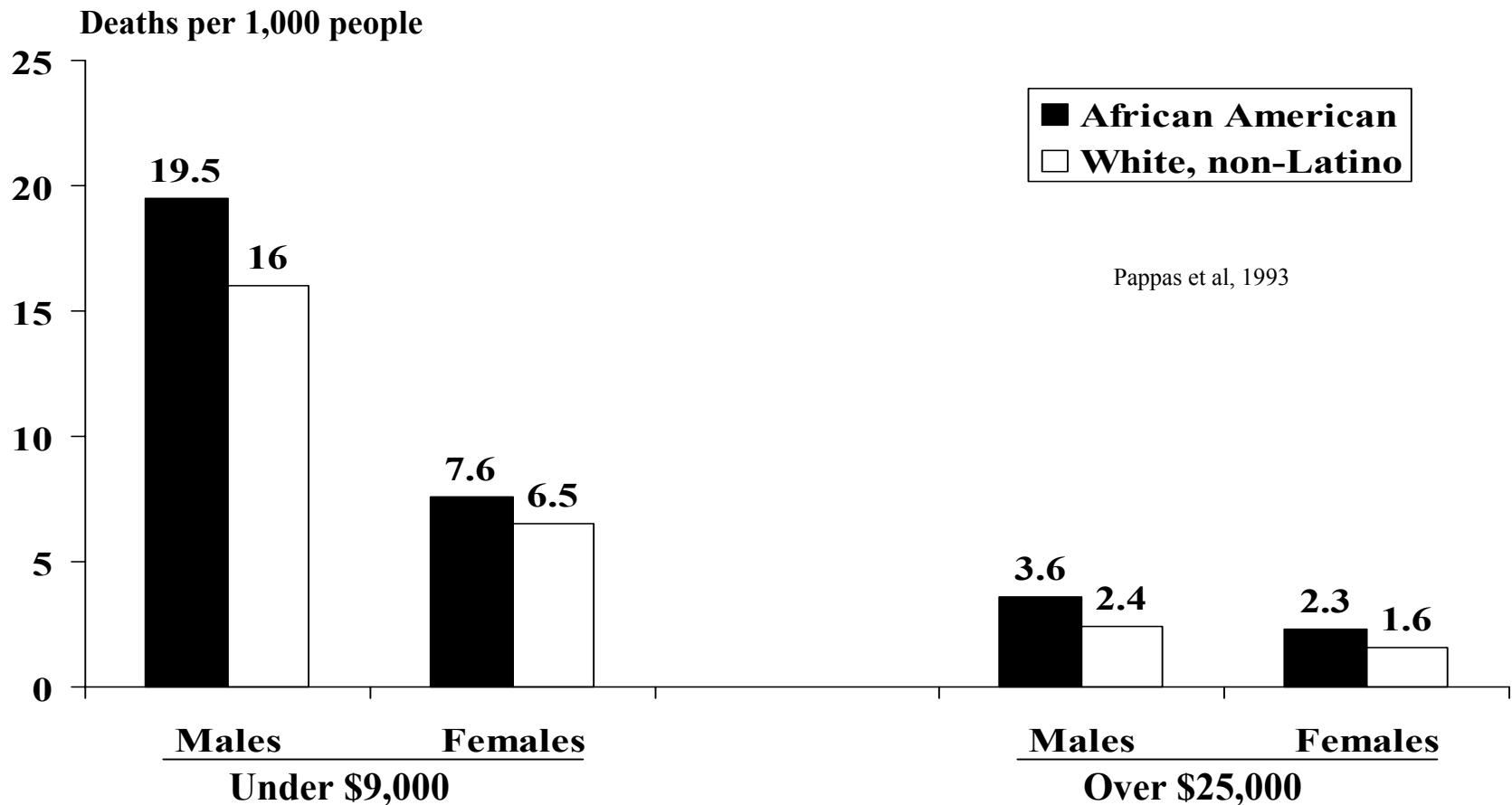


# Fair or Poor Health by Race, Gender, and Family Income

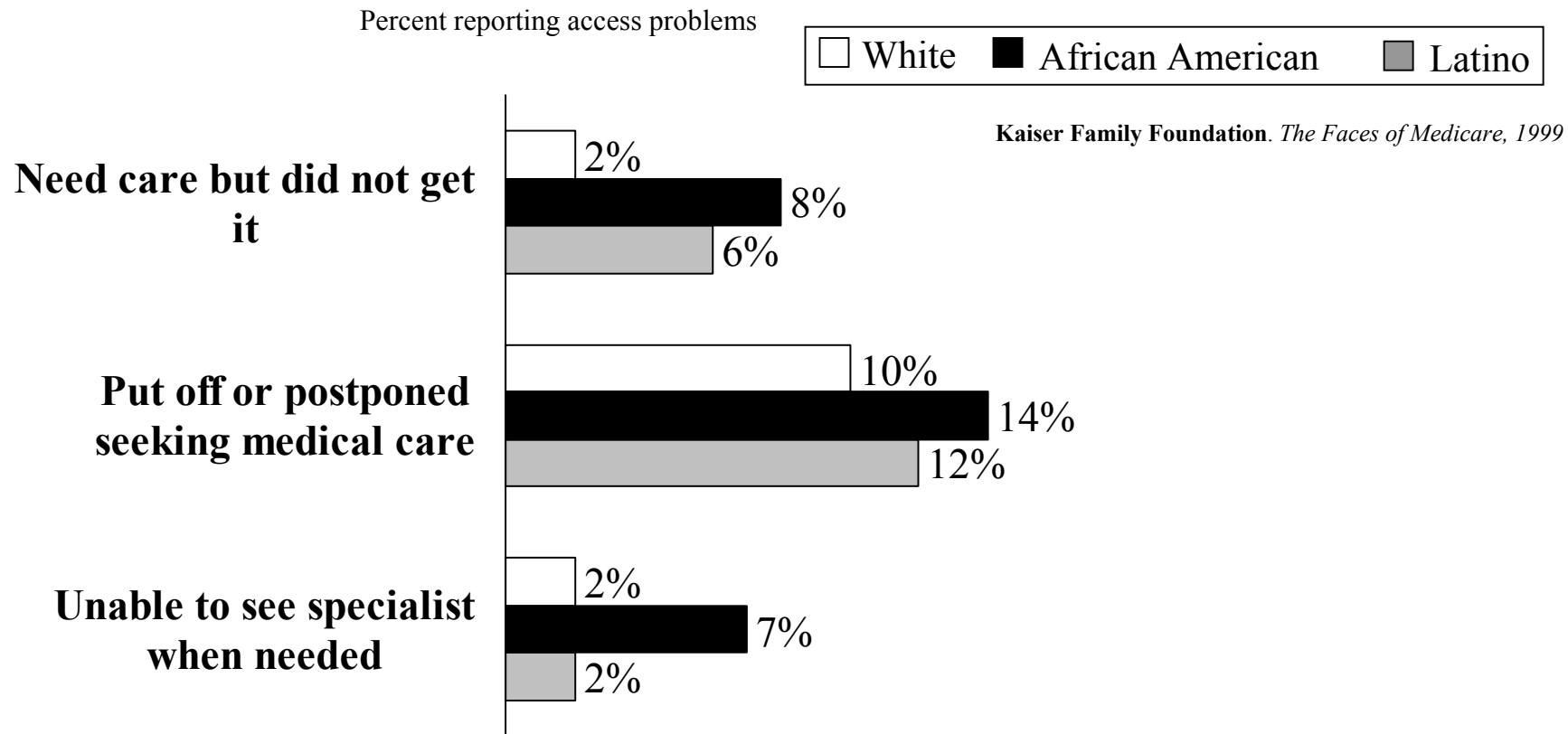


DHHS, *Health, United States, 1998*

# Mortality Rates by Family Income, Race and Gender for Adults 25-64

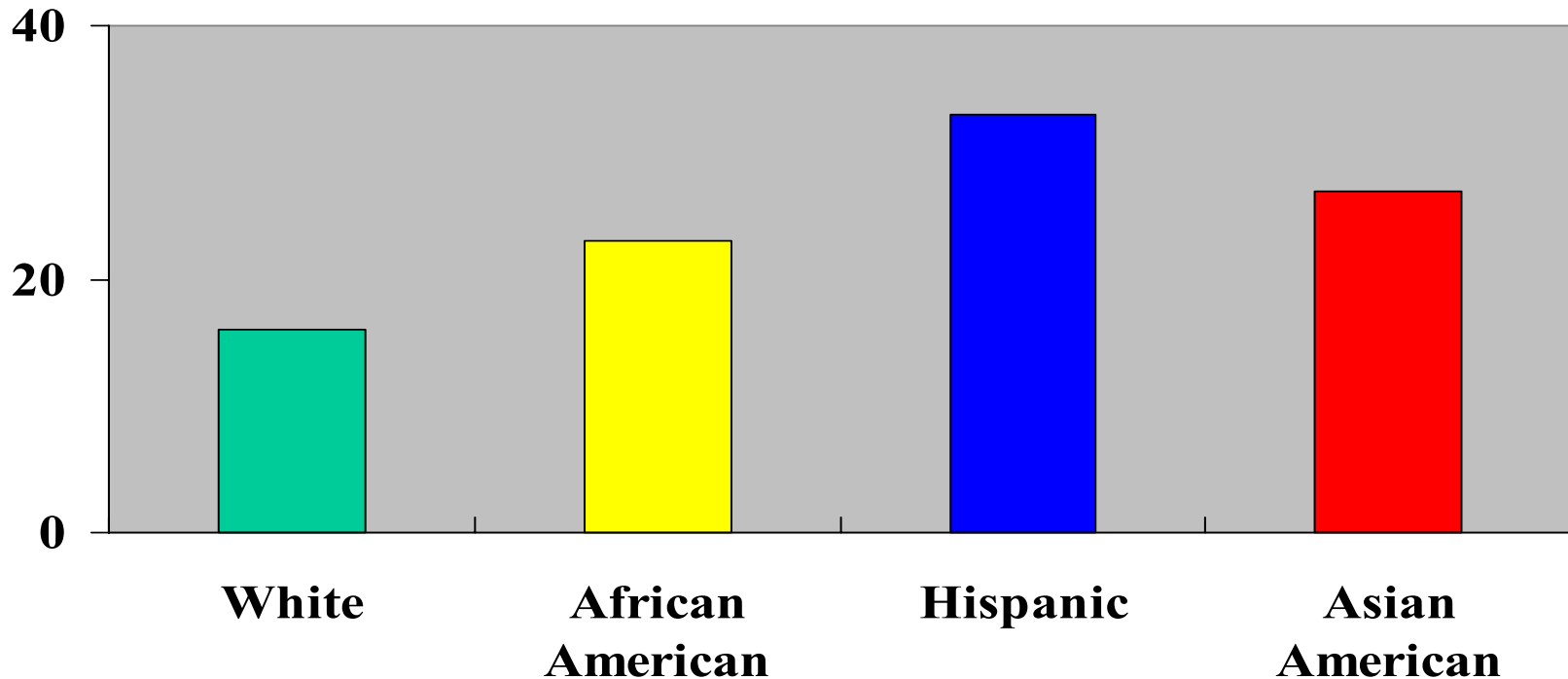


# Access to Care Problems of Medicare Beneficiaries, by Race and Ethnicity, 1997



# Minorities Face Greater Difficulty in Communicating with Physicians

Percent of adults with one or more communication problems\*



Base: Adults with health care visit in past two years.

\*Problems include understanding doctor, feeling doctor listened, had questions but did not ask.

Source: The Commonwealth Fund 2001 Health Care Quality Survey.

# A Behavioral Model of Health Services Use for Understanding Access to Medical Care

