Social Determinants of Health

Lecture 3

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Learning outcomes

- **Upon completion of these lectures you should be able to give :**
  - **Official WHO concepts of social determinants of health**
  - **Framework of pathways of social health determinants**
  - **Different approaches to social determinants of health**
  - **Understanding of social structure of health**
  - **Classification of social determinants of health**
  - **Examples of how social factors determine health**
  - **Lessons learned from the US experience in social health**

What is Social Determinants of Health?

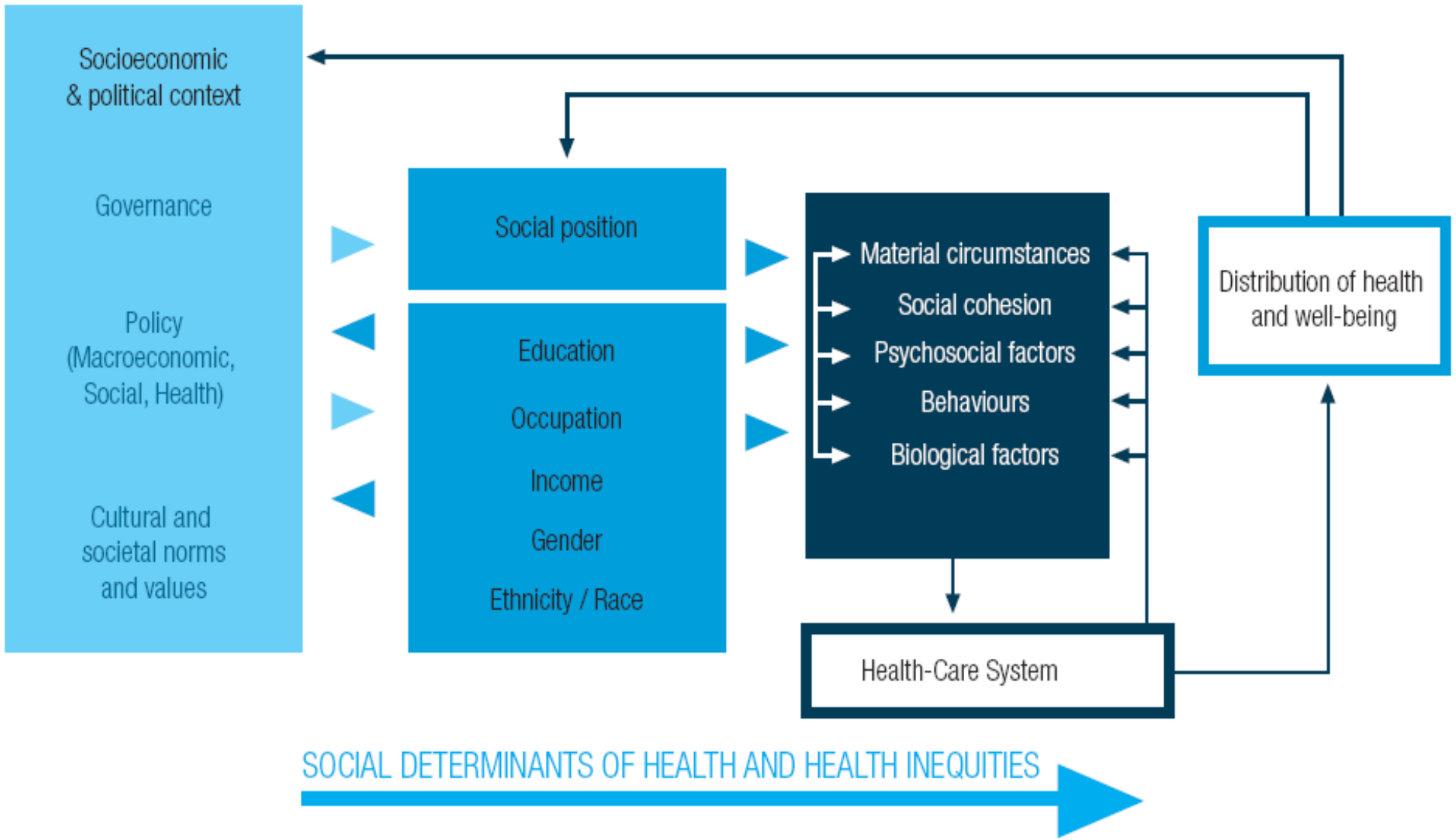
"Poor health of the poor, social differences in countries, obvious inequities between countries are conditioned by unequal distribution of power, income, goods and services as in global scale, as within one country, and as a result, injustice in people's living conditions — their access to health care services, education, their working and leisure conditions, their home, society, city, or village — and their chance to lead a flourishing life. Such an unequal distribution of conditions that adversely affect health is not a natural phenomenon ... Together, structural determinants and daily living conditions are **social determinants of health**".

WHO Commission on Social Determinants of Health, 2008

Why emphasize social determinants

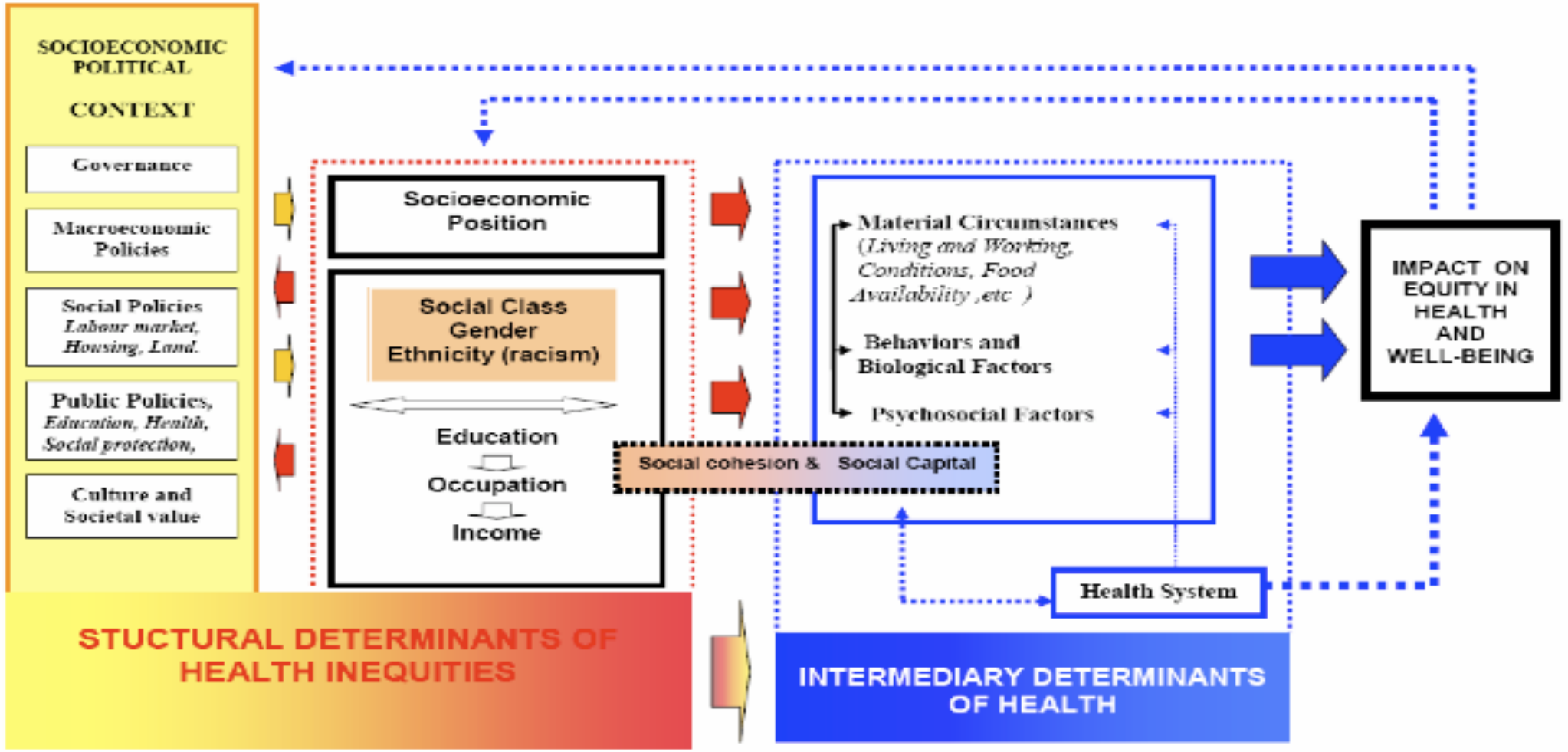
- **Social determinants of health have a direct impact on health**
- **Social determinants predict the greatest proportion of health status variance (health inequity)**
- **Social determinants of health structure health behaviours**
- **Social determinants of health interact with each other to produce health**

Figure 4.1 Commission on Social Determinants of Health conceptual framework.

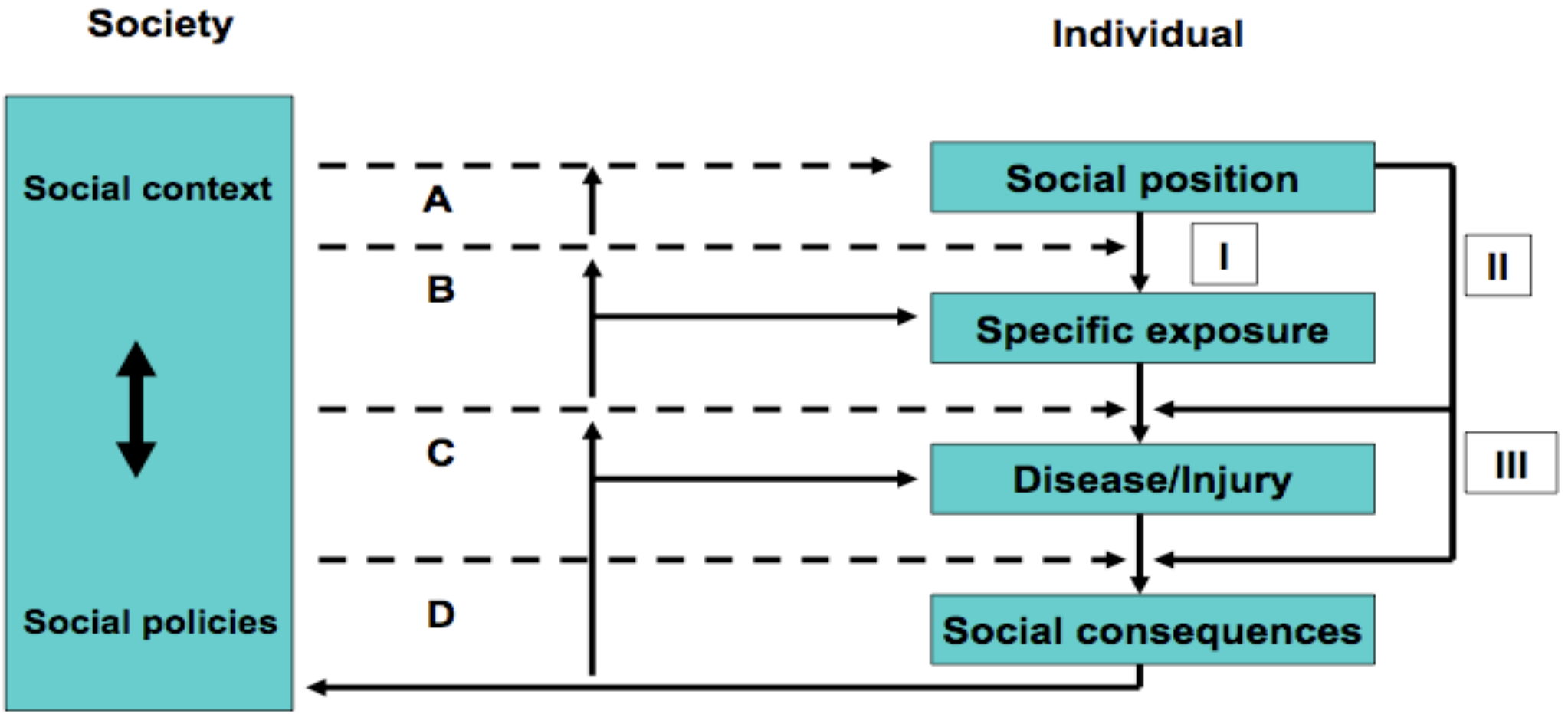


Source: Amended from Solar & Irwin, 2007

Framework of the major categories and pathways of determinants



Upstream and downstream mechanisms of social inequities in health



USA's Healthy People 2020 Approach to Social Determinants of Health

5 key areas of SDoH

- Economic Stability
  - Poverty
  - Employment
  - Food Security
  - Housing Stability
- Education
  - High School Graduation
  - Enrollment in Higher Education
  - Language and Literacy
  - Early Childhood Education and Development
- Social and Community Context
  - Social Cohesion
  - Civic Participation
  - Discrimination
  - Incarceration
- Health and Health Care
  - Access to Health Care
  - Access to Primary Care
  - Health Literacy
- Neighborhood and Built Environment
  - Access to Healthy Foods
  - Quality of Housing
  - Crime and Violence
  - Environmental Conditions

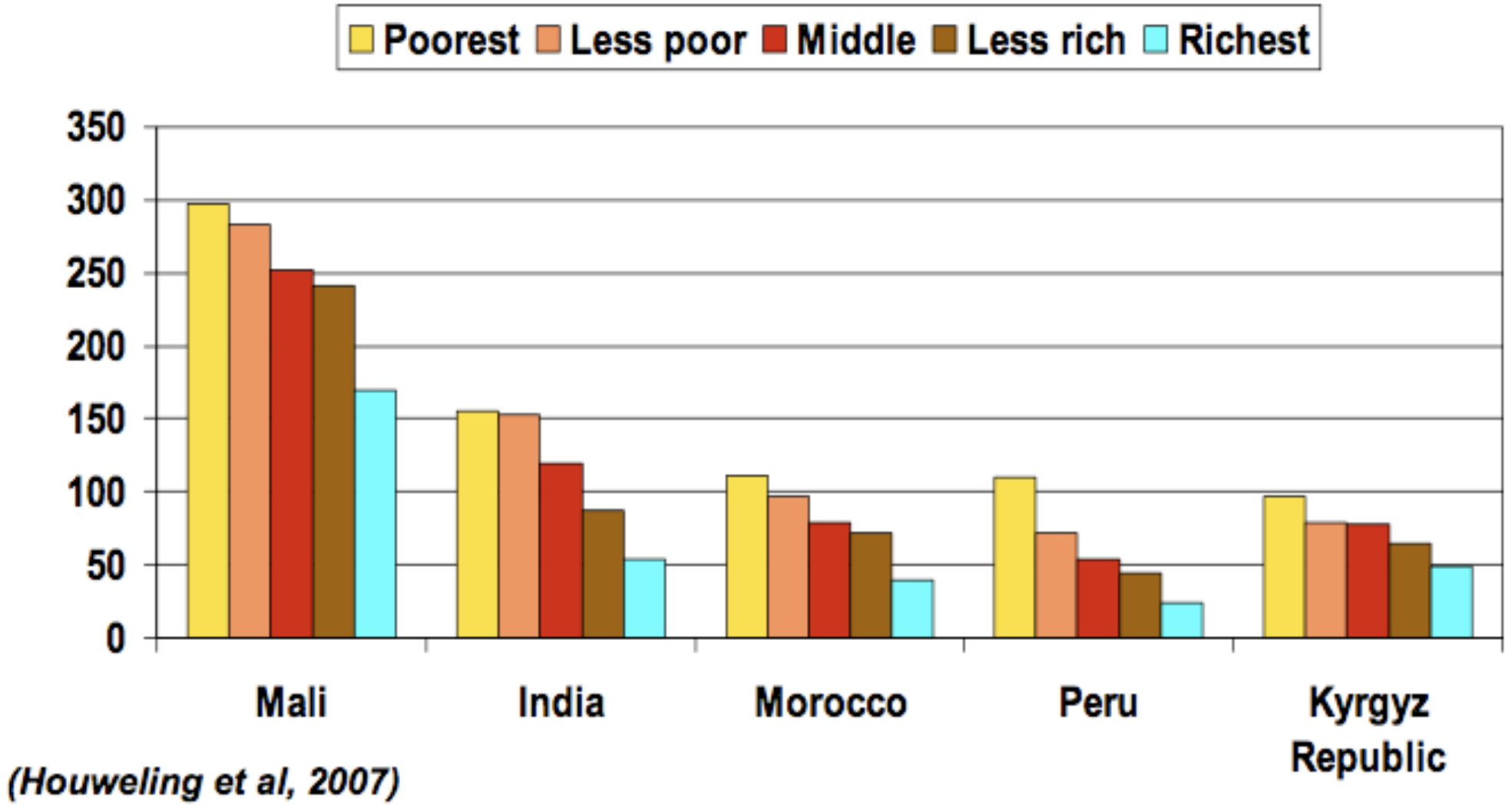
What is ‘social structure’?

The social contexts of our lives are not just random assortments of events or actions; they are structured, or patterned in distinct ways. There are regularities in the ways we behave and in the relationships we have. Human society is constantly being restructured by people themselves.

How does the social structure of a society impact health? Basic facts:

- **Top people live longer**
- **They are healthier while doing so**
- **Strong relationship between social status (SES) and health**
- **Social status measured as:**
  - **Individual: income, education, occupation**
  - **Group: area of residence, level of difference**

Under 5 mortality (per 1000 live births) by wealth group

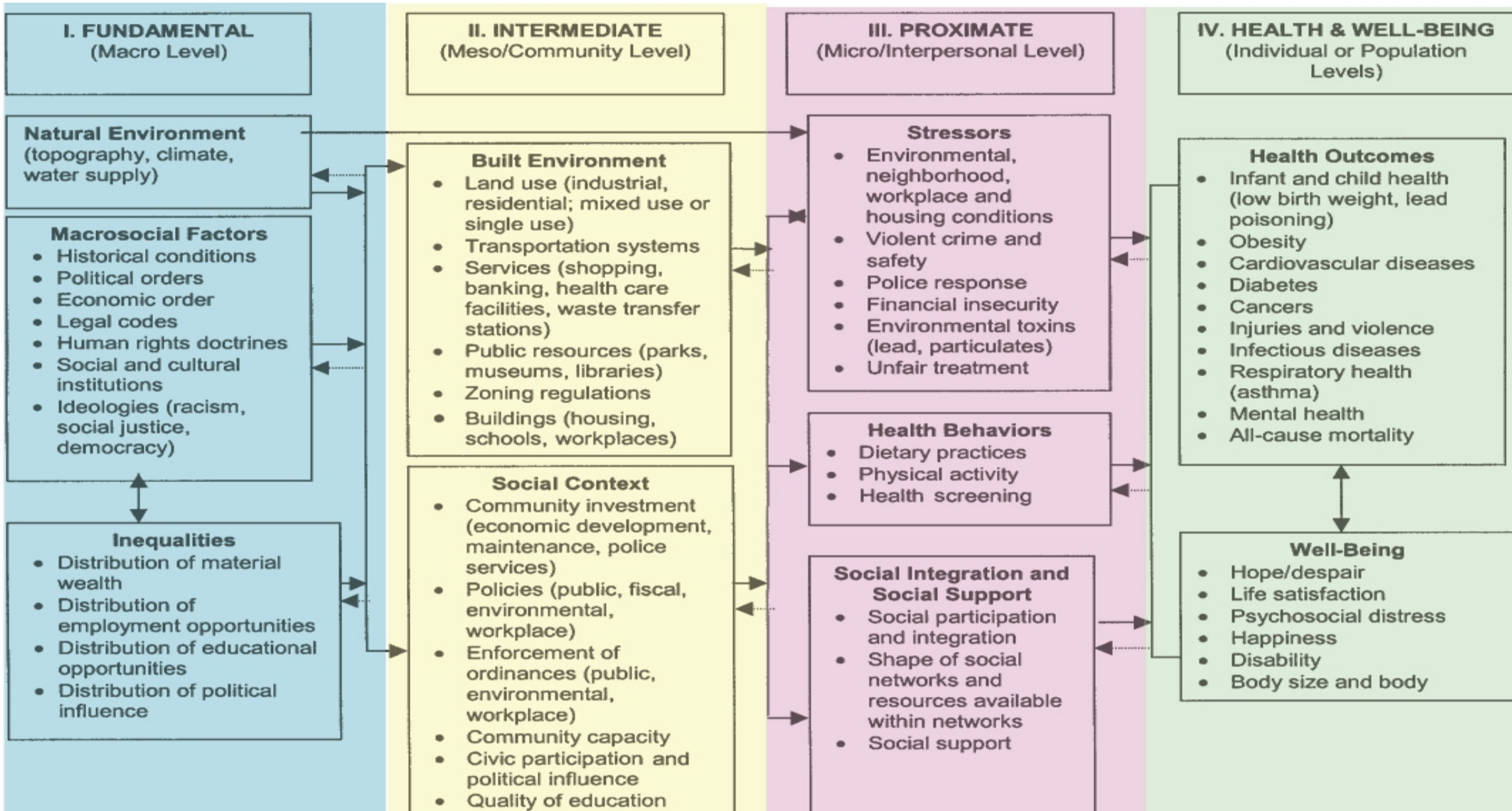


(Houweling et al, 2007)

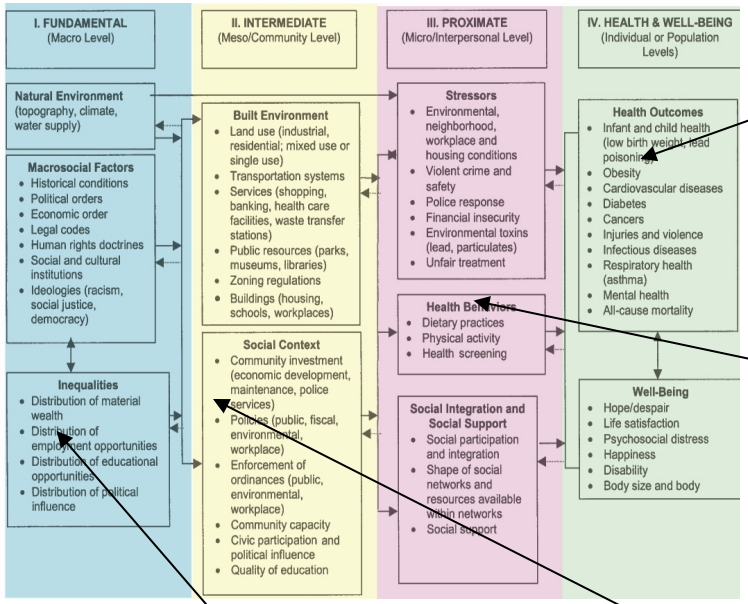
Increasing income inequality among countries

	Gross national income per capita in nominal US$		
Year	Richest countries*	Poorest countries*	Ratio
1980	US$ 11 840	US$ 196	60
2000	US$ 31 522	US$ 274	115
2005	US$ 40 730	US$ 334	122

Evans. G. The built environment & mental health. J Urban Health. 2003; 80:556-568, p. 559



Conceptual framework



HEALTH & WELL-BEING

- Health Outcomes
- Well-Being

PROXIMATE

- Stressors/Buffers
- Health Behaviors
- Social Integration/Support

INTERMEDIATE

- Built Environment
- Social Context

FUNDAMENTAL

- Natural Environment
- Macrosocial Factors
- Inequalities

FUNDAMENTAL

Natural Environment

Macrosocial Factors

- Historical Conditions
- Political Orders
- Economic Order
- Legal Codes
- Human Rights Doctrines
- Social and Cultural Institutions
- Ideologies

Inequalities

- Distribution of Material Wealth
- Distribution of Employment Opportunities
- Distribution of Educational Opportunities
- Distribution of Political Influence

INTERMEDIATE

Built Environment

- Land Use
- Transportation
- Services
- Public Resources
- Zoning Regulations
- Buildings

Social Context

- Community Investment
- Policies
- Enforcement of Ordinances
- Community Capacity
- Civic Participation and Political Influence
- Quality of Education

PROXIMATE

Health Behaviors
- Dietary Practices
- Physical Activity
- Health Screening

Stressors/Buffers
- Environmental & Neighborhood Conditions
- Workplace & Housing Conditions
- Violent Crime and Safety
- Police Response
- Financial Insecurity
- Environmental Toxins
- Unfair Treatment

Social Integration/Support
- Social Participation and Integration
- Shape of Social Networks and Resources Available
- Social Support

HEALTH & WELL-BEING

Well-Being

- Hope/Despair
- Life Satisfaction
- Psychosocial distress
- Happiness
- Disability
- Body Size and Body Image

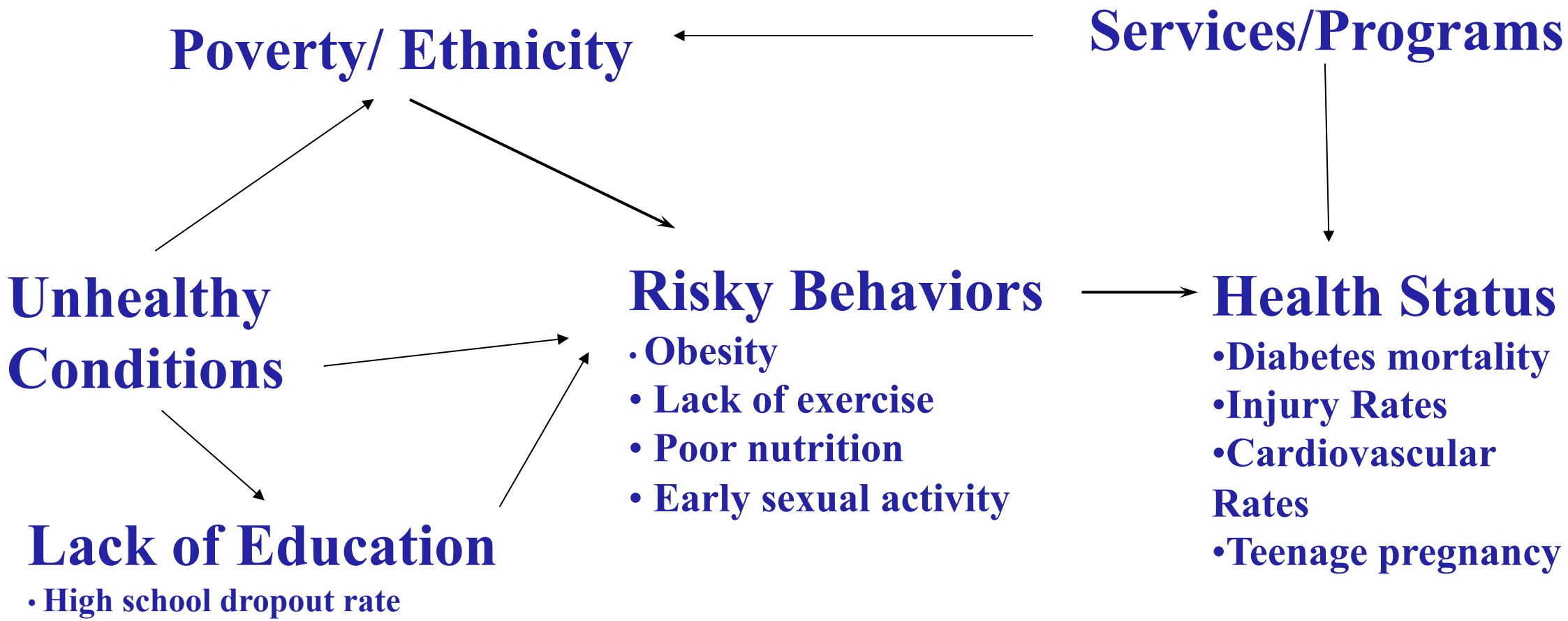
Health Outcomes

- Infant and child health
- Obesity
- Cardiovascular Diseases
- Diabetes
- Cancers
- Injuries and Violence
- Infections Diseases
- Respiratory Health
- Mental Health
- All-Cause Mortality

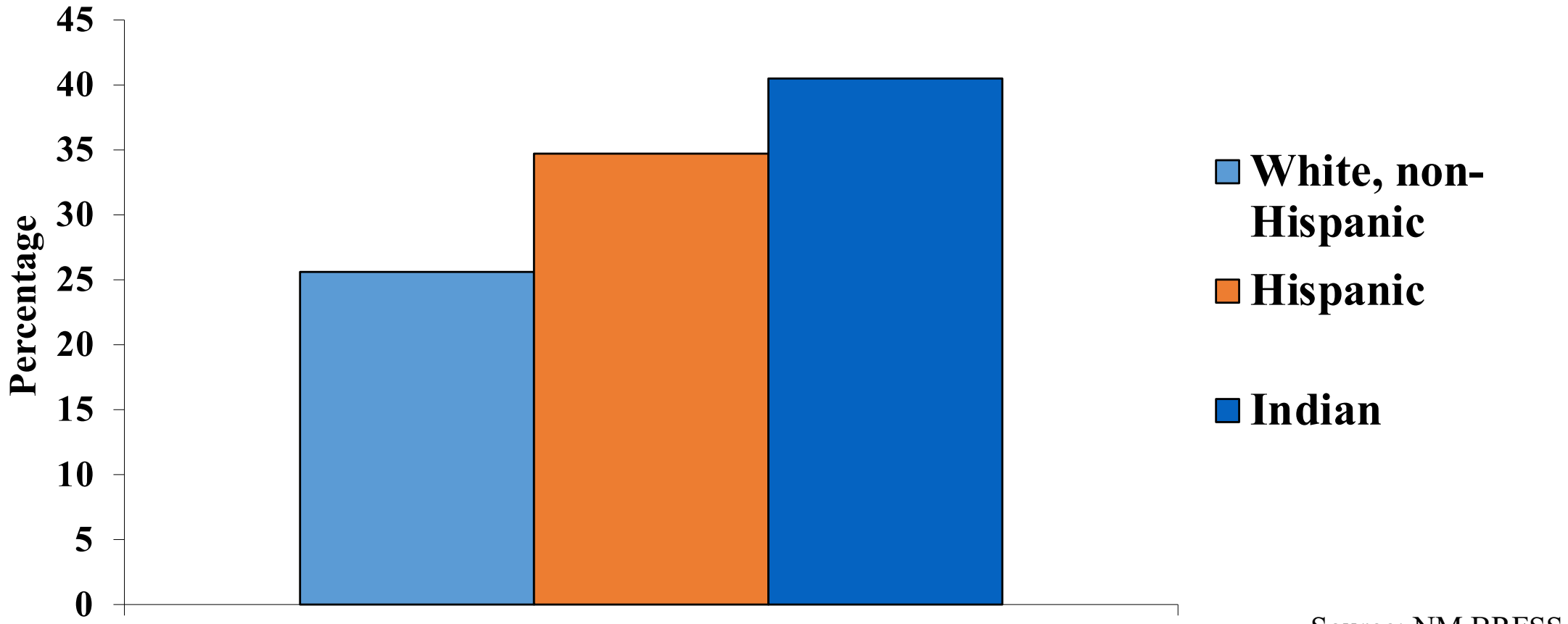
The study: New Mexico Social Determinants of Health

- **New Mexico Statistics:**
  - **Poverty: 22% live in poverty compared to 13% in U.S.**
  - **Ethnicity: Highest proportion Hispanics (>40%), second highest Native Americans (>9%)**
  - **Education:**
    - **7/10 of Hispanics have high school or less**
    - **Hispanics and NA half as likely to have college than Whites (28% compared to 59%)**

New Mexico Disparities Pathway

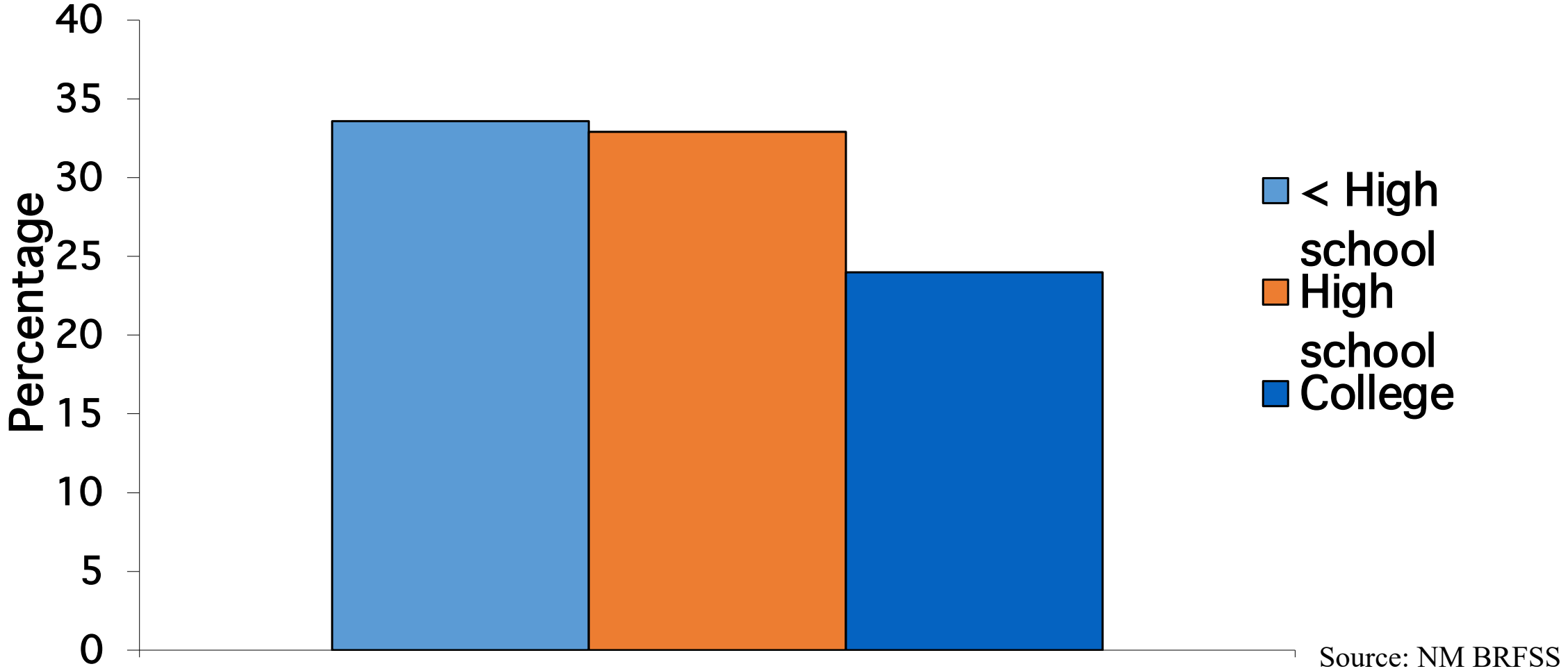


Overweight Adults by Race/Ethnicity: New Mexico, 1998



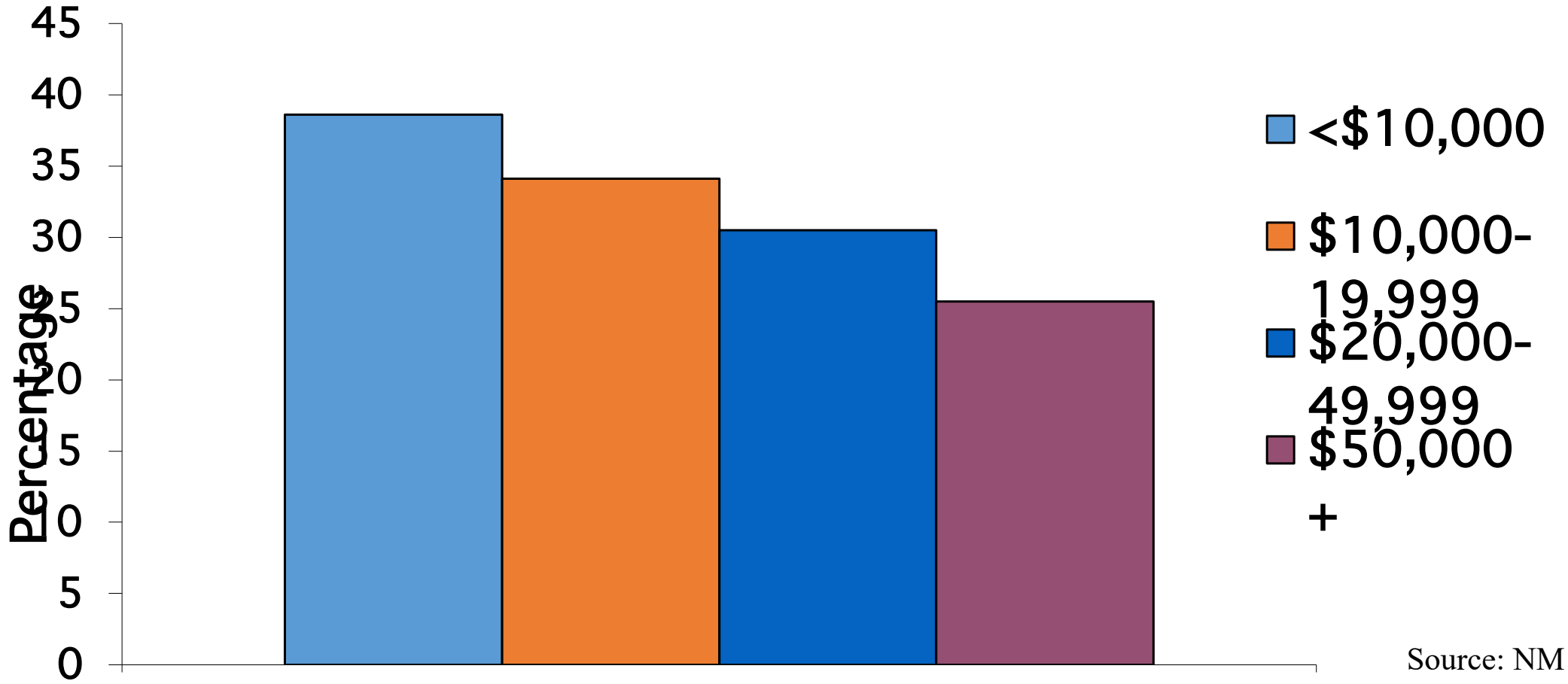
Source: NM BRFSS

Overweight Adults by Education: New Mexico, 1998



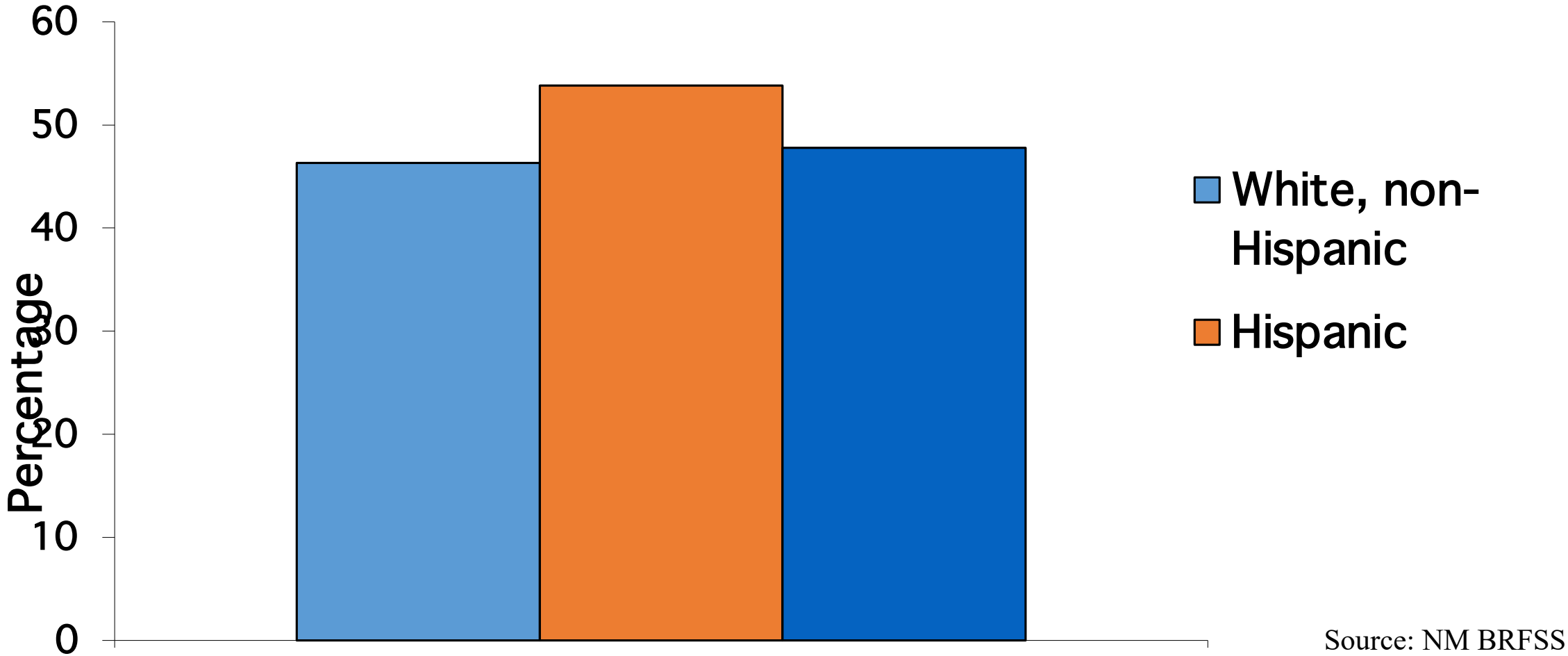
Source: NM BRFSS

Overweight Adults by Income: New Mexico, 1998



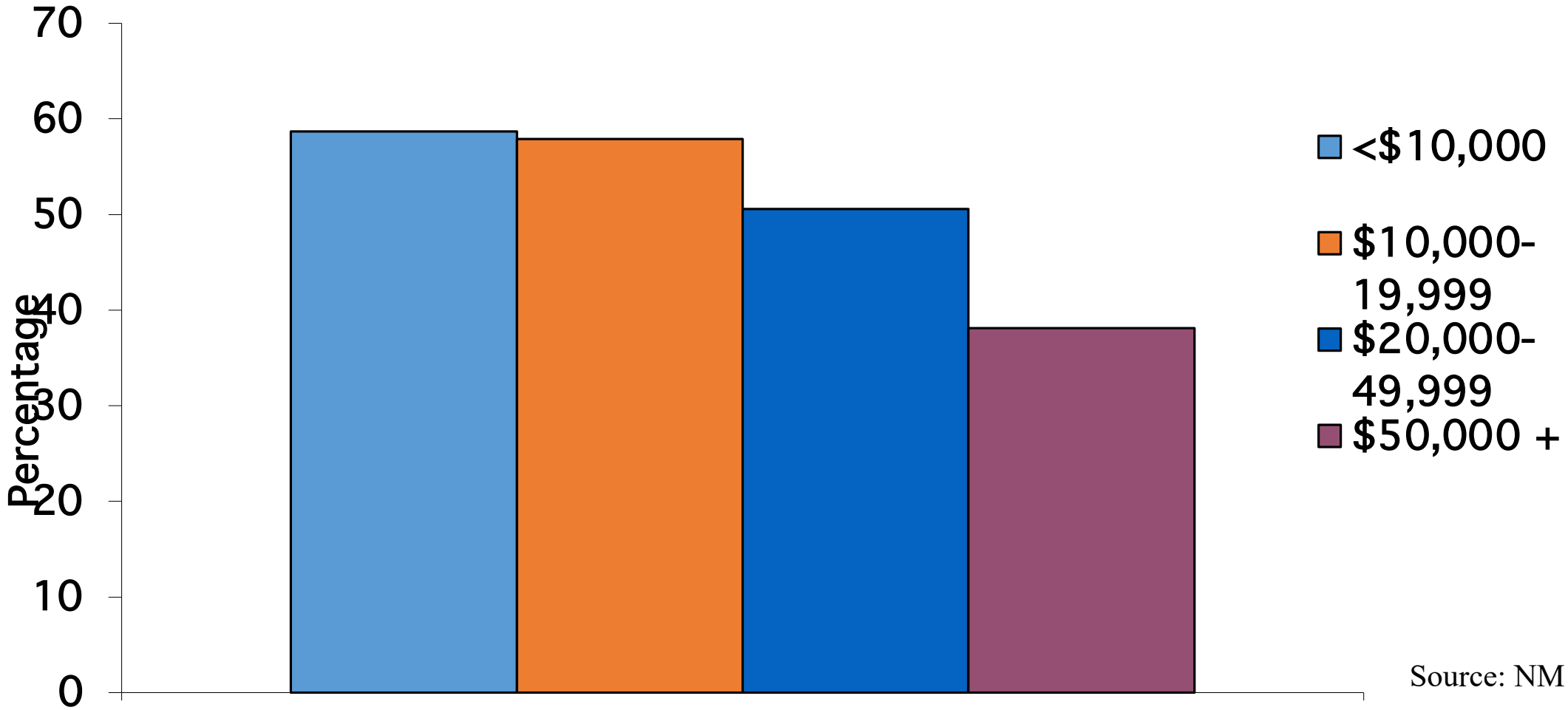
Source: NM BRFSS

Physically Inactive Adults by Race/Ethnicity: New Mexico, 1998



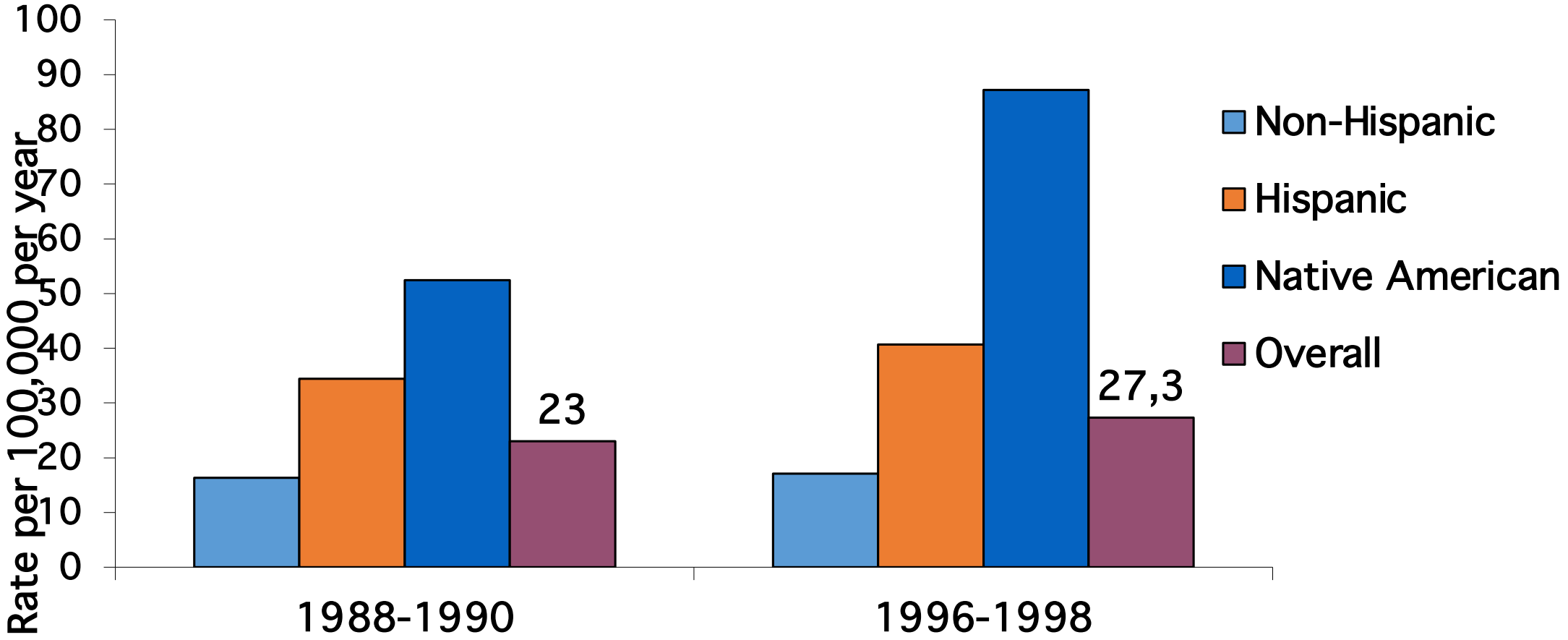
Source: NM BRFSS

Physically Inactive Adults by Income: New Mexico, 1998



Source: NM BRFSS

Diabetes Mortality Rates by Race/Ethnicity, New Mexico 1988-1990 and 1996-1998



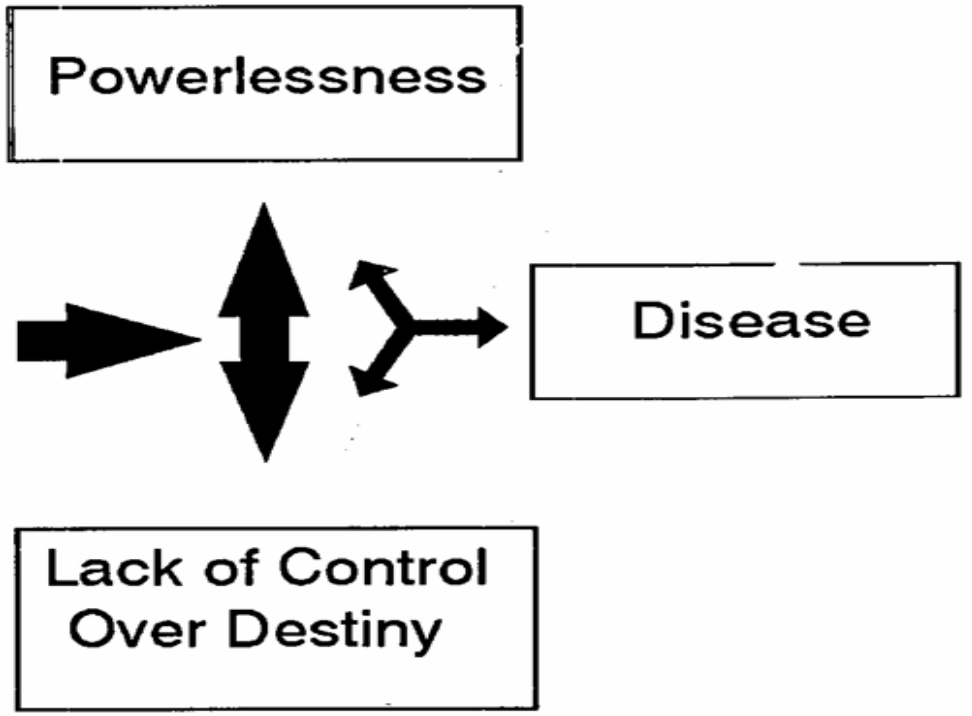
Age-adjusted to current NM population

Source: Office of Vital Records and Health Statistics, NMDOH

Inequalities

Physical and Social Risk Factors

- **Living in Poverty/Absolute Conditions**
- **Low in Hierarchy**
- **High Demand versus Low Control**
- **Physical/Psychological**
  - **Chronic Stressors**
- **Low Social Support/Social Capital**
- **Racism/Segregation**
- **Relative Inequality**
- **Lack of Resources**



Why? Debates in Social Determinants

- **Material versus psycho-social conditions**
- **Proximal versus distal factors: role of multi-level analysis, ie., neighbourhood effects versus individual effects**
- **Absolute versus relative position in society**

Material Deprivation & Exposure

- **Poor or lower SES neighborhoods have less access to the material necessities of life: food, clothing, shelter**
- **Poor or lower SES neighborhoods more exposed to work place and environmental hazardous substances (e.g. lead paint, asbestos) and conditions (neighborhood violence)**
- **Poor or lower SES neighborhoods have less access to social and institutional resources: medical care, legal advice, educational resources, social connections**
- **Disinvestment of Public Infrastructure**
  - **Increased Residential Segregation**
- **Greater adversity (and poorer health) stems from an imbalance of demands and resources**

Ethnicity issue

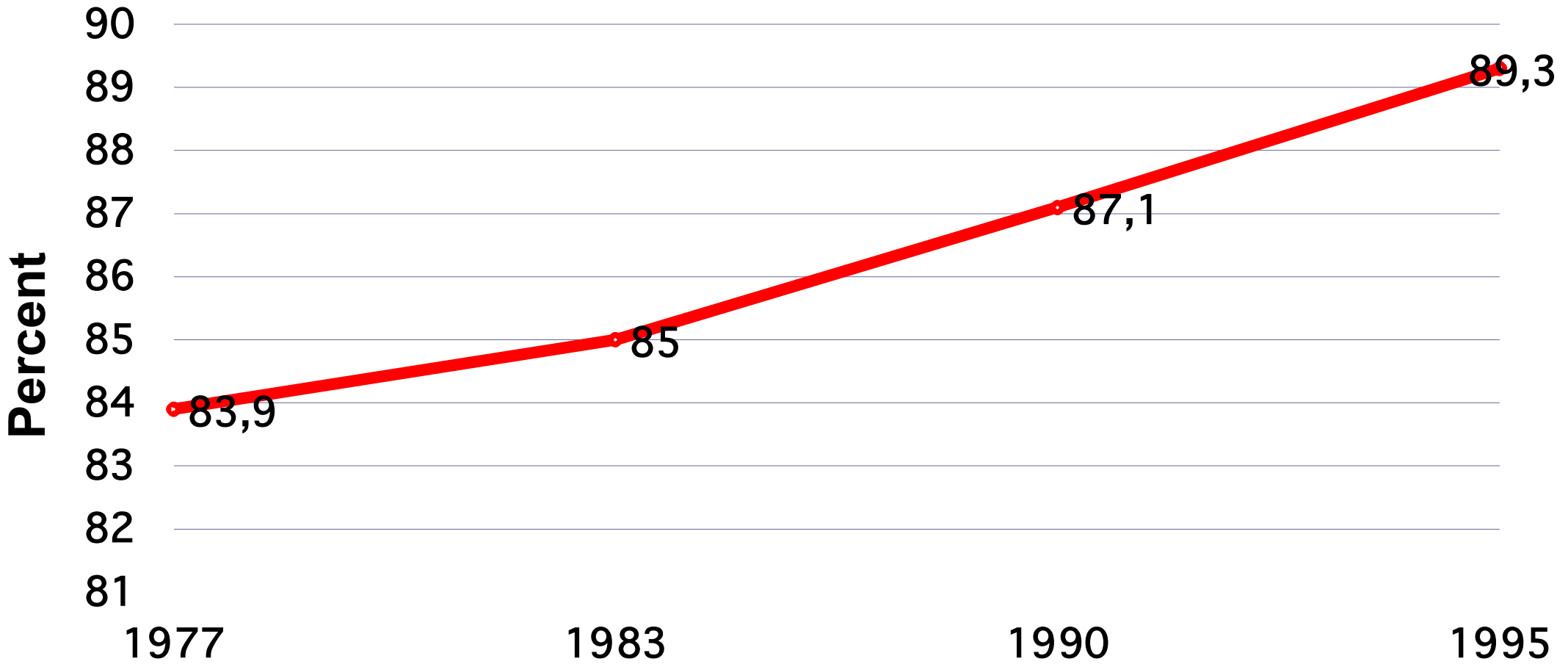
- **Despite improvements in U.S. populations, African-American death rate 1.6X White death rate**
- **Greater health differences from high to low SES within ethnic groups than between ethnic groups**
- **Hypotheses of racial difference:**
  - **Life course: childhood versus adult SES**
  - **Nonequivalence of income: Material Effects**
    - **High school graduate earning power: buy less with same $**
    - **Neighborhood effects of less services**
  - **Psychosocial Effects/Allostatic Load**
  - **Objective versus perceived racism (BRFSS)**

Example of
Physical/Social/Built Conditions for Obesity

The Detrimental Impacts of Land Use and Transportation

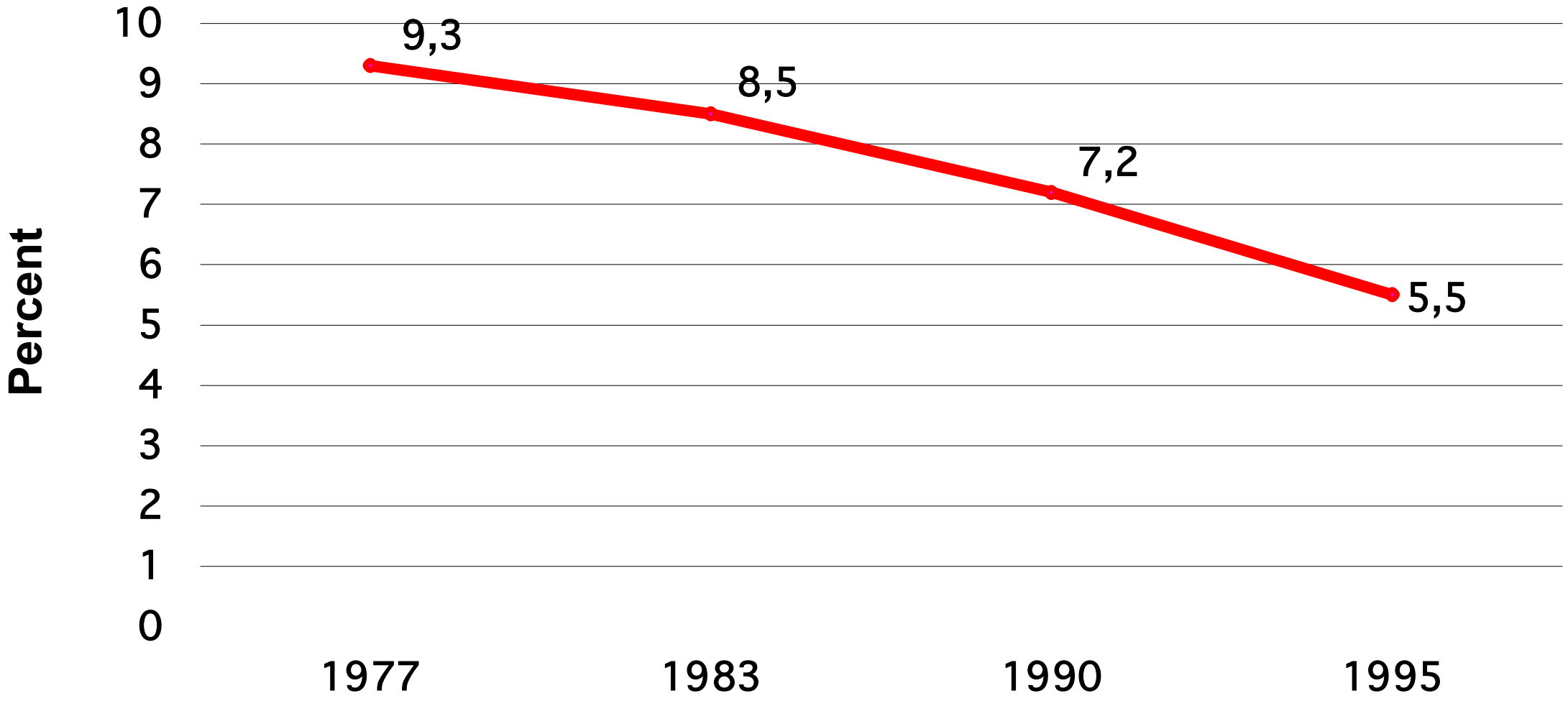
- ↑ air pollution
- ↑ heat island effect
- ↑ car crashes
- ↑ pedestrian injuries
- ↓ water quality
- ↓ mental health
- ↓ social capital
- ↓ physical activity

USA, 1977-1995: Auto Trips



Source: USA Nationwide Personal Transportation Survey, 1995

USA, 1977-1995: Walk Trips



Source: USA Nationwide Personal Transportation Survey, 1995

Sprawl and Social Capital

- More driving time means less time with family, friends, and civic organizations.
  - Putnam: every 10 minutes of commute time means a 10% decline in social capital
- Suburban voters tend to favor more individualized, less collective solutions.
- Residential stability across the lifespan:
  - Place for elders?
- Aggravated income inequality?

Example: Factors that Influence Decisions to Walk or Bicycle

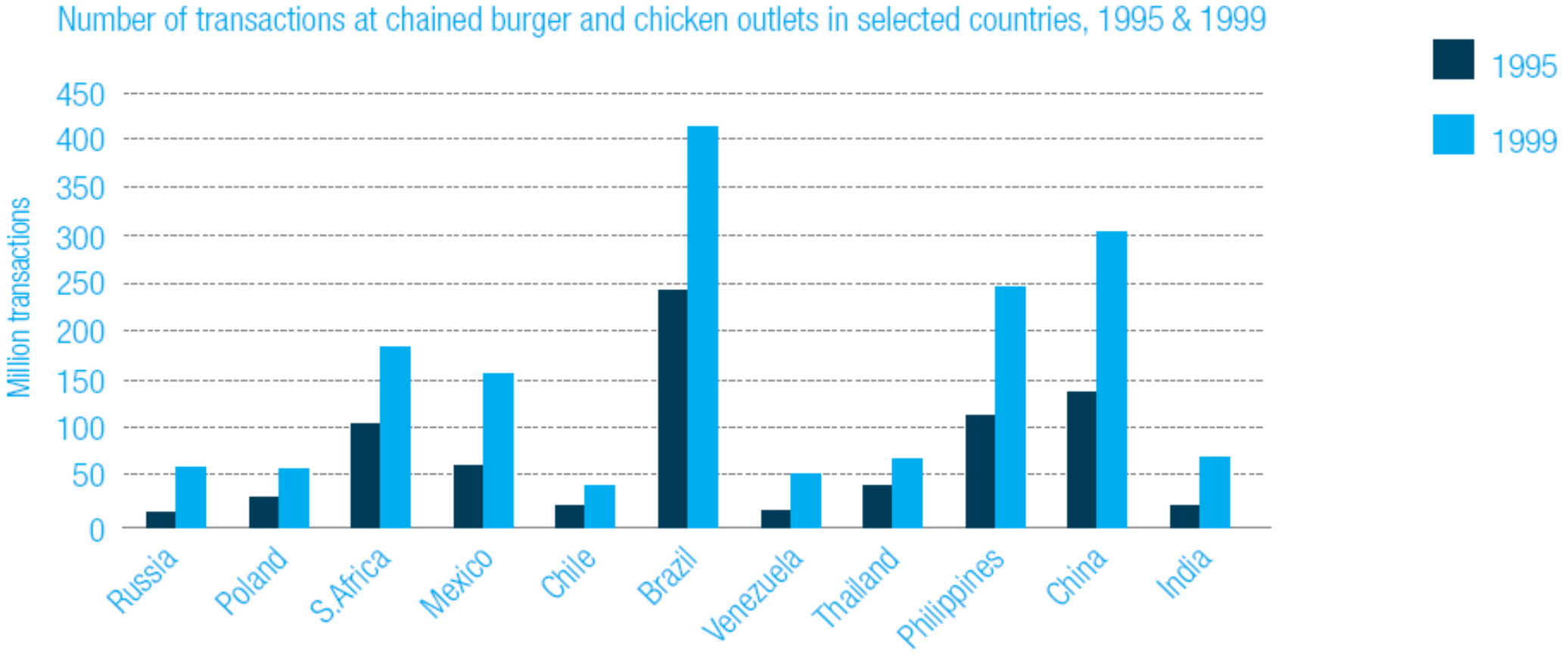
- Land Use Mix
- Higher Density
- Network Connectivity
- Street Design
- Site Design
- Density
- Beliefs
  - Crime
  - Safety

USA, 1992-2002: Food Industry Behavior

- **Marketing Budget Doubled, $7-15 Billion**
- **4 out of 5 ads: sugary cereals, snack foods, candy, soft drinks**
- **60% of products on Saturday morning shows**
- **Fast Food Availability and Marketing: gas stations, rest stops, schools, reading books, computer games**
- **Expanding Portion Sizes: Gulp/Extra Value Meals**

Dr. Margo Wooten, Center for Science in the Public Interest

Figure 12.1 Fast food consumption (1995 and 1999) in selected countries.



Reprinted, with permission of the publisher, from Hawkes (2002).
Source: Euromonitor data in Hawkes (2002).

Food Industry Tactics

- **Focus attention on lack of physical inactivity**
- **Evoke personal responsibility**
- **Claim advertising only affects broad choices**
- **Blaming parents**
- **Victims are the children**

Soft Drinks / Sweetened Beverages

- **Supply about 20–24% of calories for a 2–19 year old**
- **Contribute toward excessive calorie consumption and tooth decay**
- **Average American consumes 62 gallons of them**
- **Consumption is negatively related to the consumption of milk and fruit juice**
- **Consumption is related to high-fat probably diet habits, (e.g. fast food centers: 25% of vegetables eaten are French fries)**

American Journal of Public Health, Sep 2002

Food Marketing Strategies

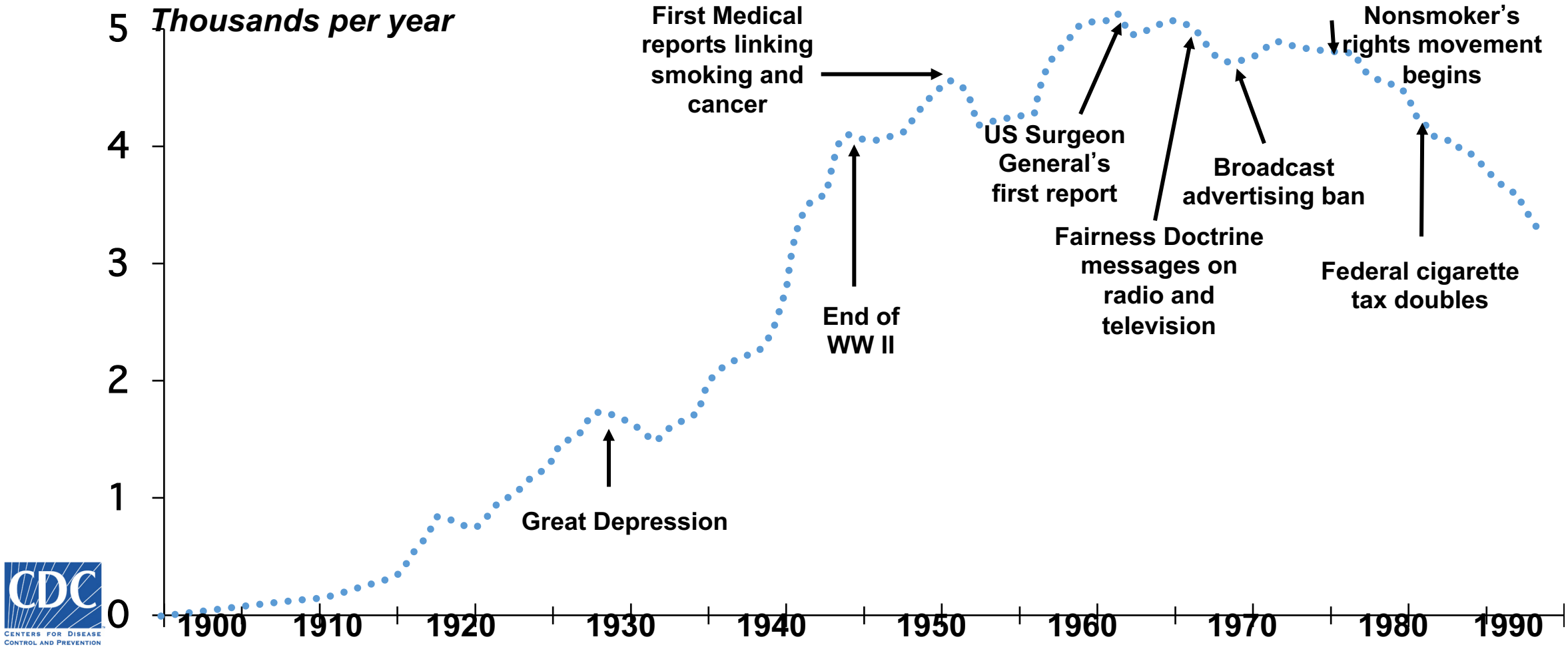
- **State/School Districts Limit marketing**
  - **California lesson: All soda sales eliminated from elementary/middle schools by July 2004 (could not do 2 cent/can taxes)**
- **Functional food (Super-food)**

Lessons from Tobacco

- **Surgeon General's Report: 1964: Warning Labels on Cigarette Packs**
- **Synergistic Impact:**
  - **Physician Advice: Clinically and cost-effective**
  - **Selected School Programs: social influences**
  - **Countermarketing: if frequent, long-lasting, broad reach**
  - **Taxation: Adolescents especially sensitive (10% increase= 3-5% decline in high income countries/6-10% in low/mid income countries)**
  - **Regulatory control: clean indoor air acts, minor's access**
  - **Comprehensive community/organizational advocacy**

Mercer et al, Am J Clin Nutr 2003 Lessons from tobacco for obesity

Adult per Capita Cigarette Consumption & Major Environmental & Policy Changes in the US 1900-1990



Lessons from Tobacco: California, USA, 1988-1999

- **1988: Proposition 99: 25 cent tax on pack**
  - **$90 million/year to change social norms/behaviors**
- **1999: 27% decrease in smoking**
  - **19% decrease in lung cancer death rates**

For further information:

- Wallace R.B. Public Health & Preventive Medicine. – Mc Grow-Hill Co, NY, 2008
- K. Park's Textbook of Social & Preventive Medicine. – Calcutta, 2008
- www.who.int/social_determinants
- http://www.cdc.gov/socialdeterminants/
- Commission on Social Determinants of Health (2008). *Closing the Gap in a Generation: Health Equity through Action on the Social Determinants of Health. Final Report of the Commission on Social Determinants of Health.* Geneva, World Health Organization.
- https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-of-health
- Mercer et al, Am J Clin Nutr, 2003 Lessons from tobacco for obesity
- American Journal of Public Health, Sep 2002