

Racial-Ethnic Disparities in Pregnancy Outcome: What Do Fathers Have to Do with It?

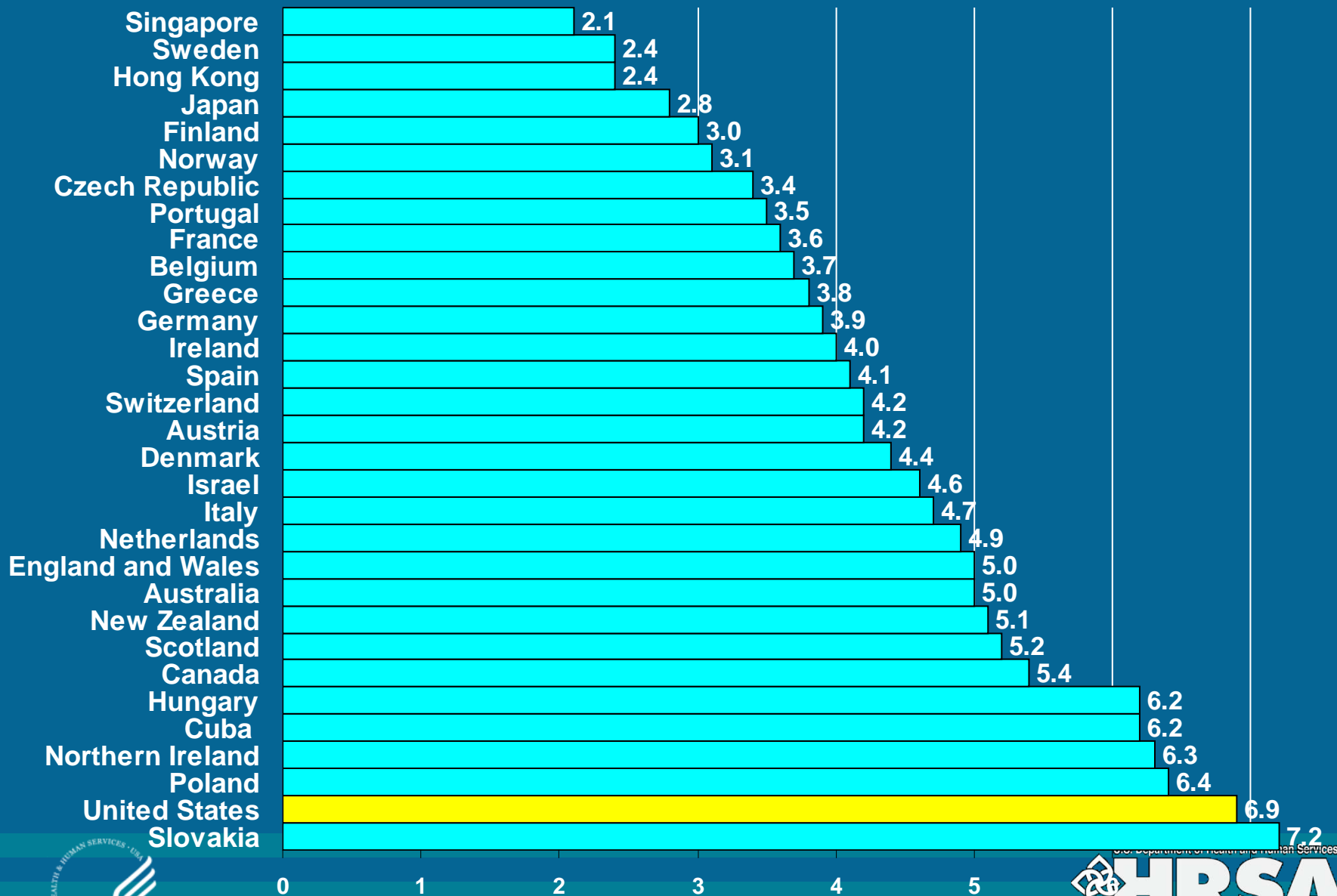
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NICHD Workshop
Racial-Ethnic Disparities in Pregnancy Outcome:
Exploring the Role of Paternal Involvement
Bethesda, MD
July 16, 2012



Infant mortality rates, selected countries, 2005



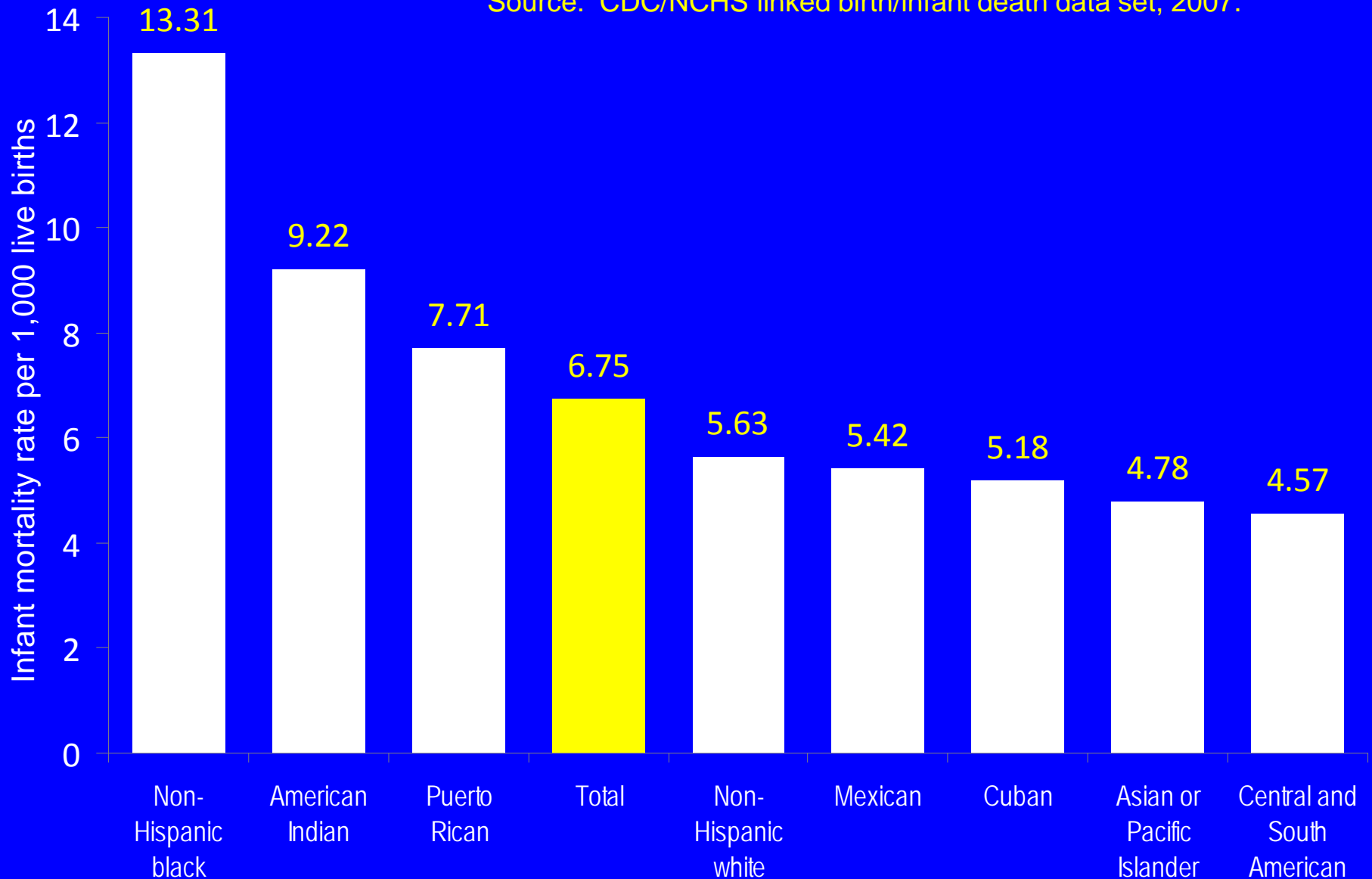
Source: Health, United States, 2008

Rate per 1,000 live births

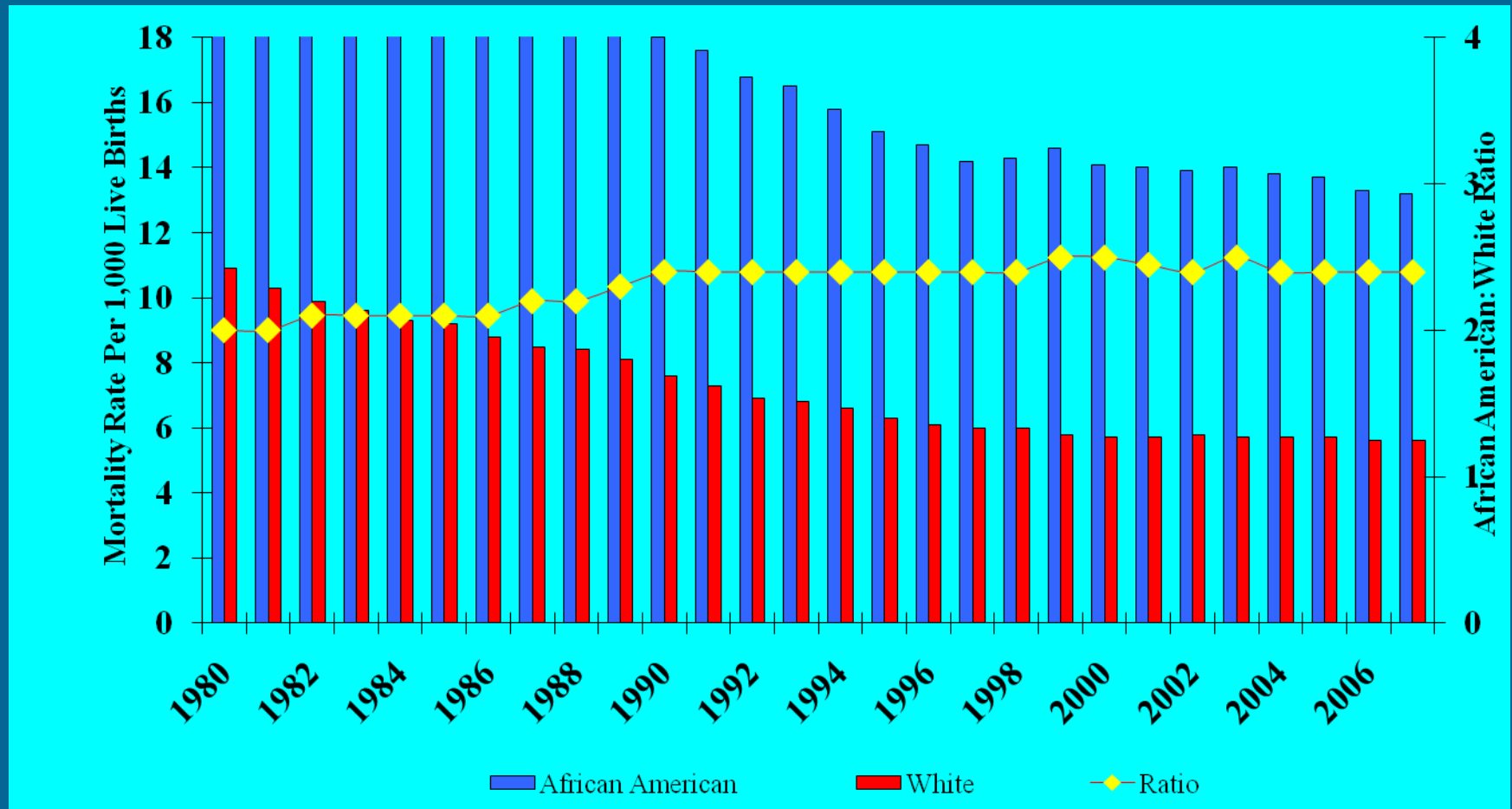


Infant mortality rates, United States, 2007

Source: CDC/NCHS linked birth/infant death data set, 2007.



Racial Gap in Infant Mortality 1980-2007



Data Source: NCHS

What Do Fathers Have to Do with It?



What Do Fathers Have to Do with It?

1. Definition and Measurement



Definition and Measurement

- Marital status
- Residence
- Visitation
- Financial support
- Level of responsibility
- Type of activities
- Conceptualization of paternal commitment
- Engagement, availability and responsibility
- Paternal support
- Interaction and accessibility
- Paternal index of child care involvement
- Observed index of father-infant interaction

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Definition and Measurement

- Relevance and adaptability to preconception and pregnancy
- Cultural differences
- Biological measures (e.g. sperm chromatin structural integrity?)



What Do Fathers Have to Do with It?

1. Definition and Measurement
2. Determinants



Determinants of Father Involvement

- **Individual**
 - Knowledge, attitudes, and skills
 - Human capital (educational & employment status)
- **Interpersonal**
 - Relationship with the mother
 - Relationship with maternal grandmother, mother's new partner, others
- **Institutional & community**
 - Norms, values, expectations
 - Unemployment
 - Incarceration
 - Institutionalized racism
- **Public policy**
 - Temporary Assistance for Needy Families
 - Earned Income Tax Credit
 - Child Support

Lu MC, Jones L, Bond MJ, Wright K, Pumpuang M, Maidenberg M, Jones D, Garfield C, Rowley DL. [Where is the F in MCH? Father involvement in African American families.](#) Ethn Dis. 2010;20:S2-49-61.



Determinants of Father Involvement

How do boys become men, and how do men become fathers?



The primary task of every civilization is to teach young men how to be fathers.

Margaret Mead



Environmental Toxicants & Sperm DNA Damage

- tobacco
- alcohol
- drugs (e.g. anabolic steroids)
- caffeine
- poor diet
- radiation and chemotherapy
- testicular hyperthermia
- diabetes mellitus
- varicoceles
- epididymitis
- 1,2-dibromo-3-chloropropane
- nonylphenol
- polycyclic aromatic hydrocarbons (PAHs)
- polychlorinated biphenyls (PCBs)
- dioxins
- phthalates



Aitken RJ, Koonman P, Lewis SE. Seeds of concern. Nature. 2004 Nov 4;432(7045):48-5

What Do Fathers Have to Do with It?

1. Definition and Measurement
2. Determinants
3. Mechanisms and Pathways

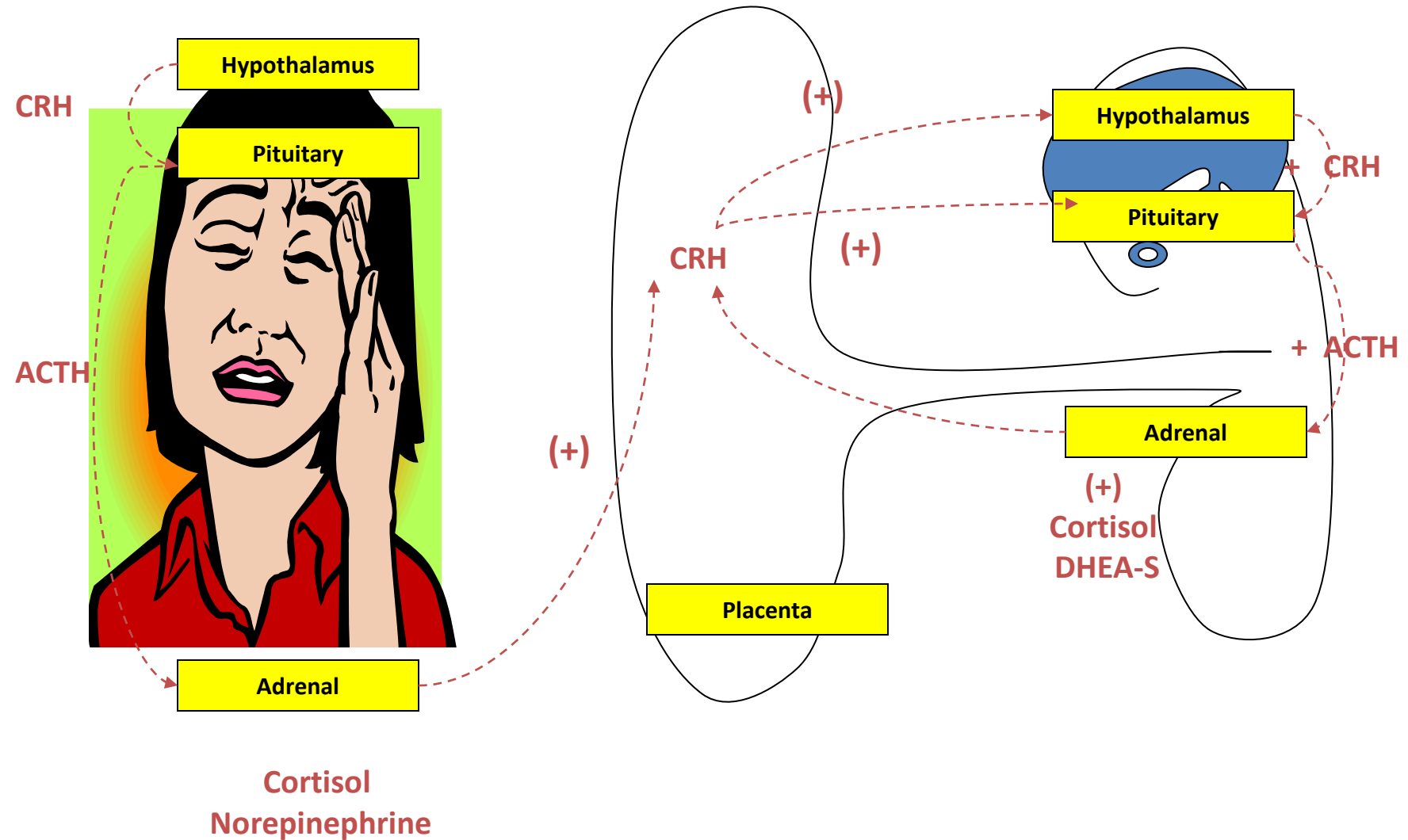


What Do Fathers Have to Do with It?

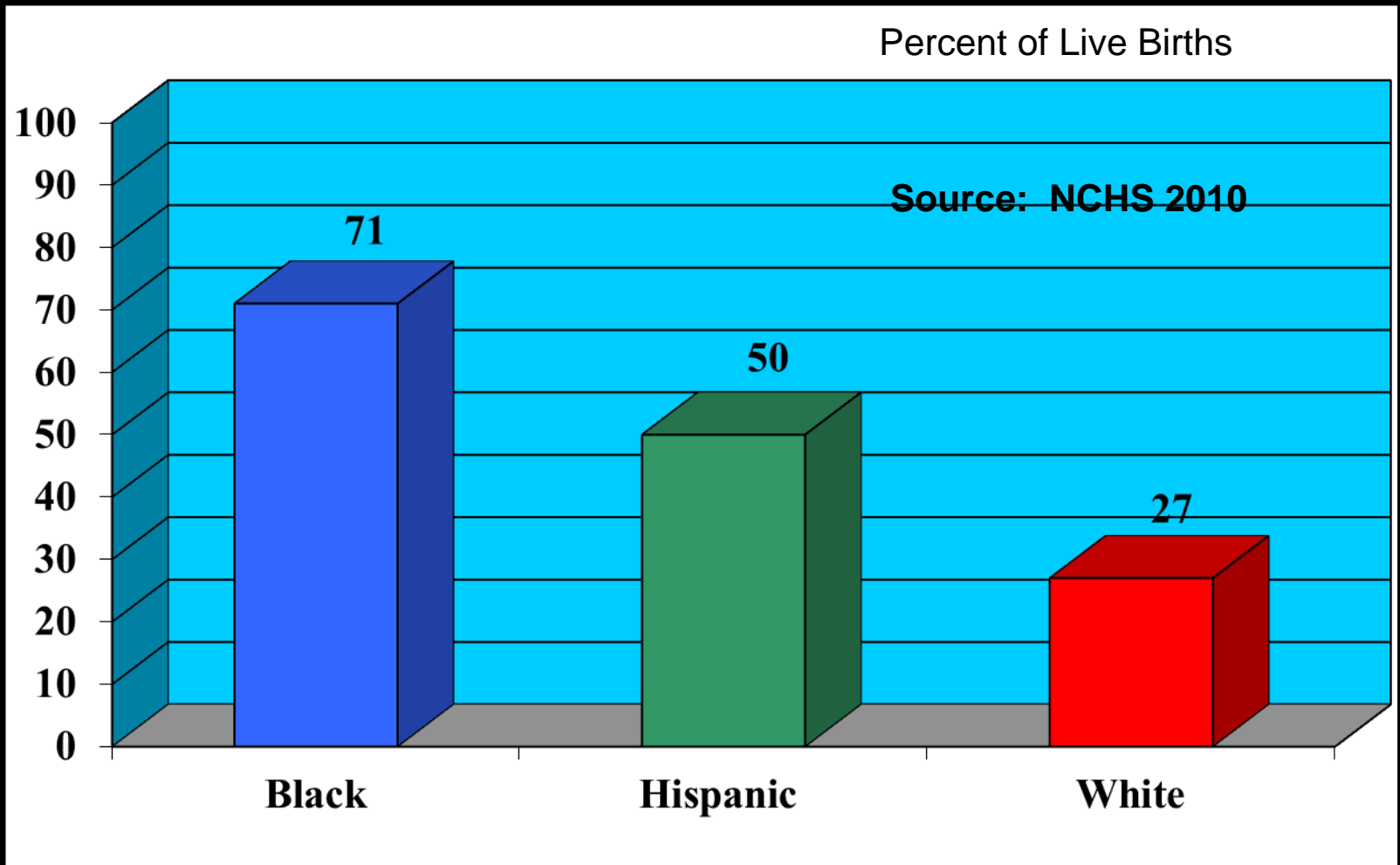
1. Stress
2. Infection & inflammation
3. Placental complications
4. Overdistension of the uterus



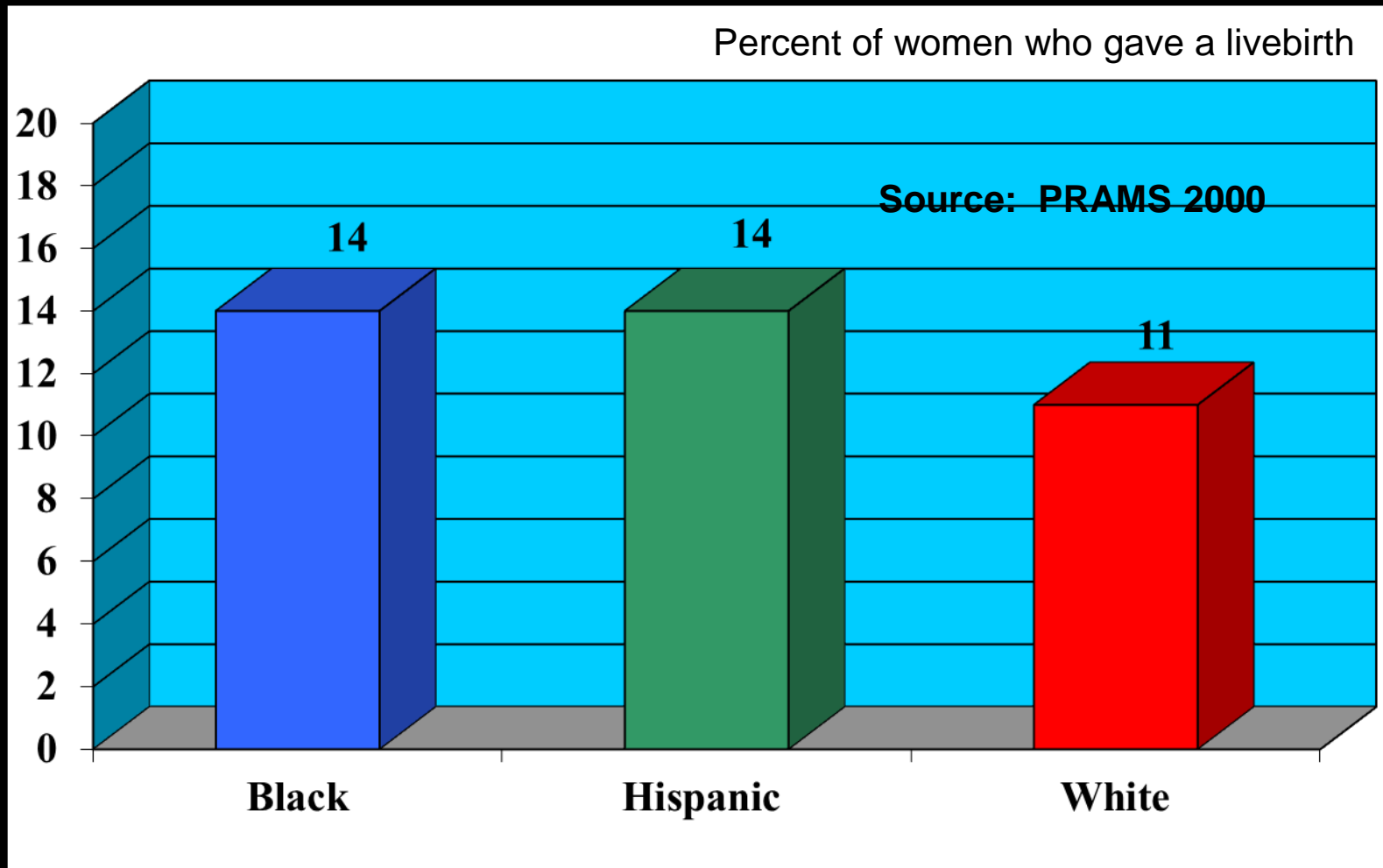
Stress and Preterm Birth



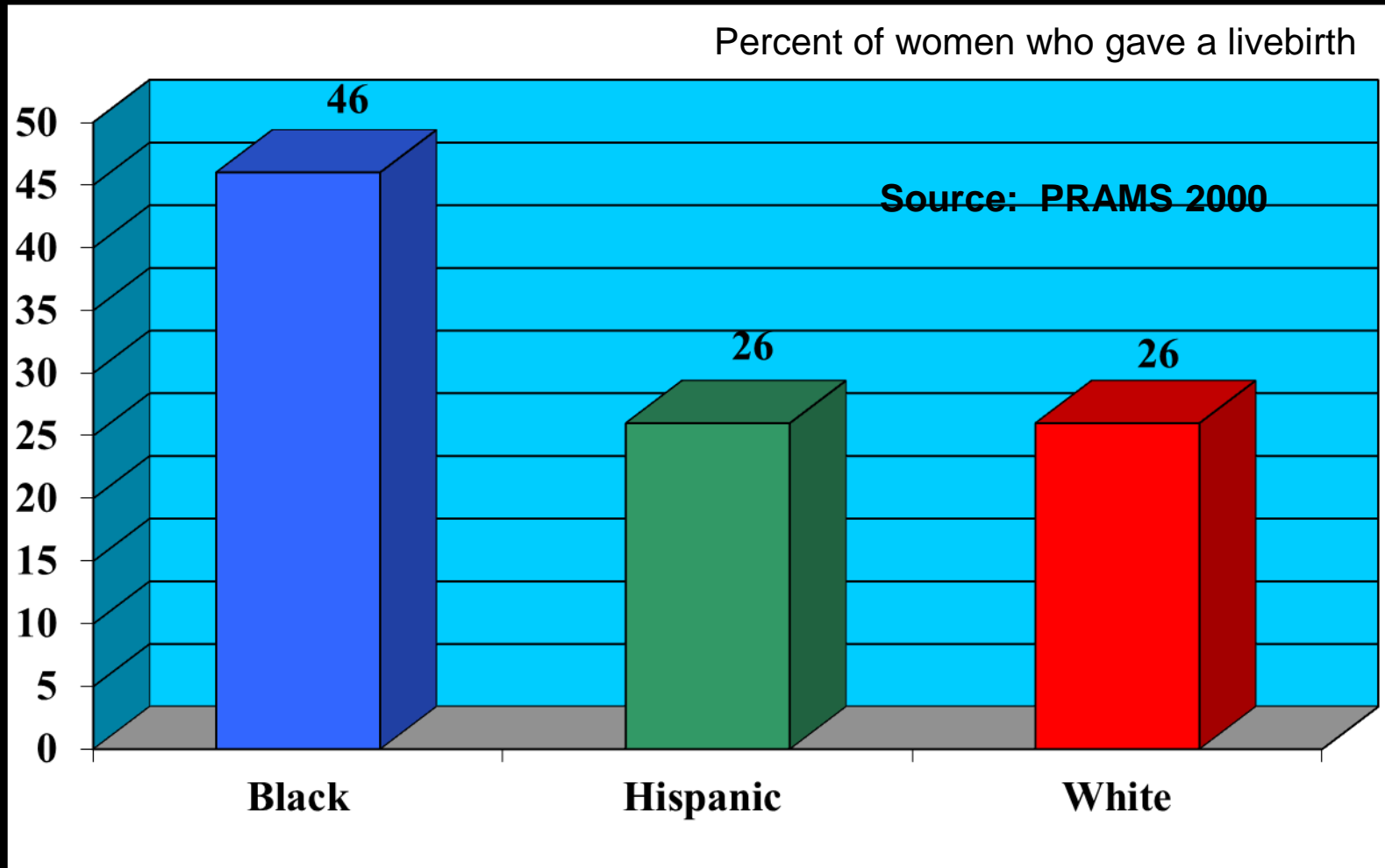
Births to Single Mothers



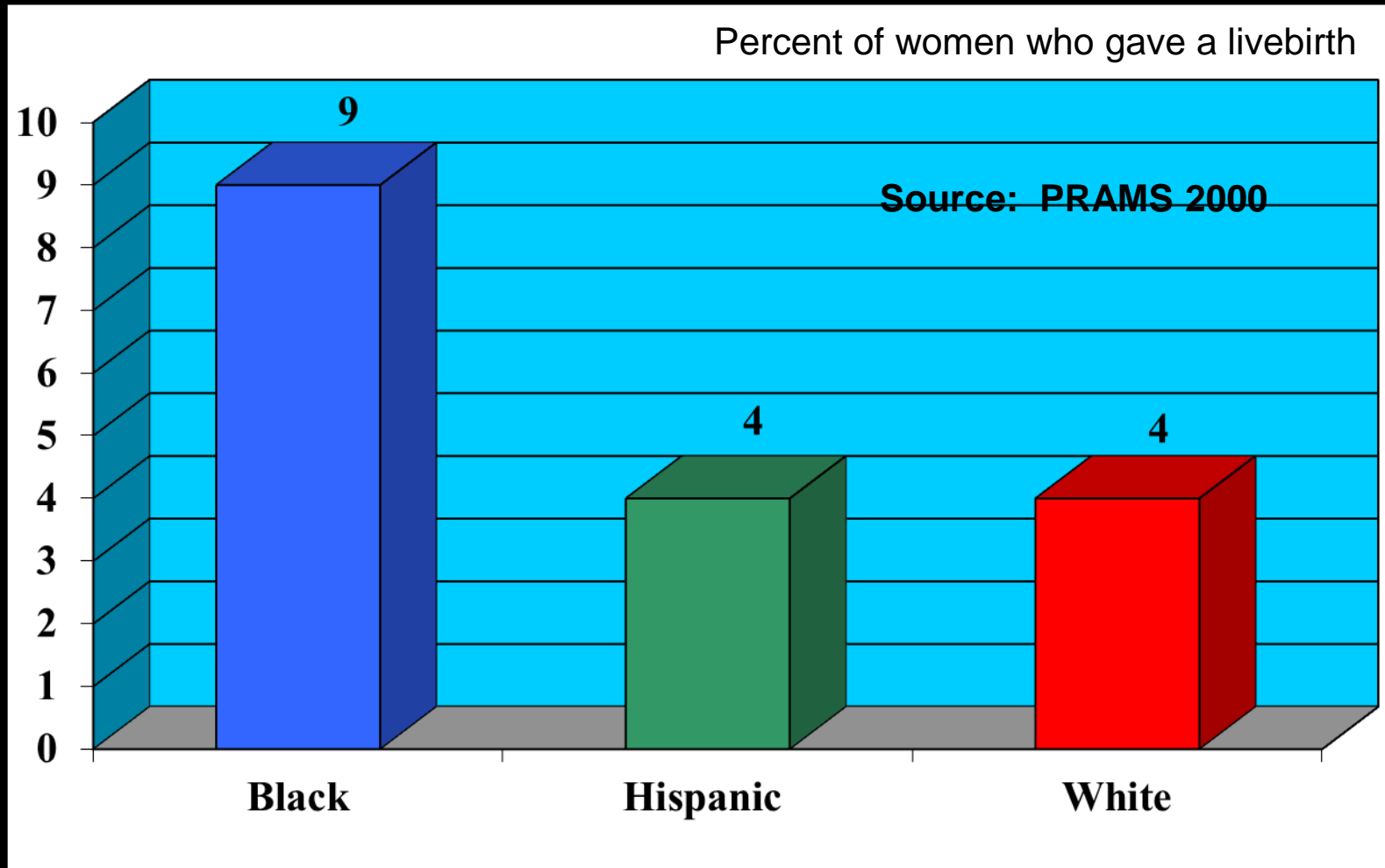
Husband or Partner Lost His Job



Argued with Husband or Partner More Than Usual



Husband or Partner Went to Jail



What Do Fathers Have to Do with It?

1. Definition and Measurement
2. Determinants
3. Mechanisms and Pathways
4. Interventions



Interventions

How would we design a multi-level, life-course intervention to improve father involvement and pregnancy outcome?

