



Infant Mortality

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والمجتمع

Infant mortality

- *Infant mortality* is the death of young children under the age of 1. This death toll is measured by the infant mortality rate (IMR), which is the number of deaths of children under one year of age per 1000 live births. The under-five mortality rate, which is referred to as the child mortality rate, is also an important statistic, considering the infant mortality rate focuses only on children under one year of age.

Infant Mortality

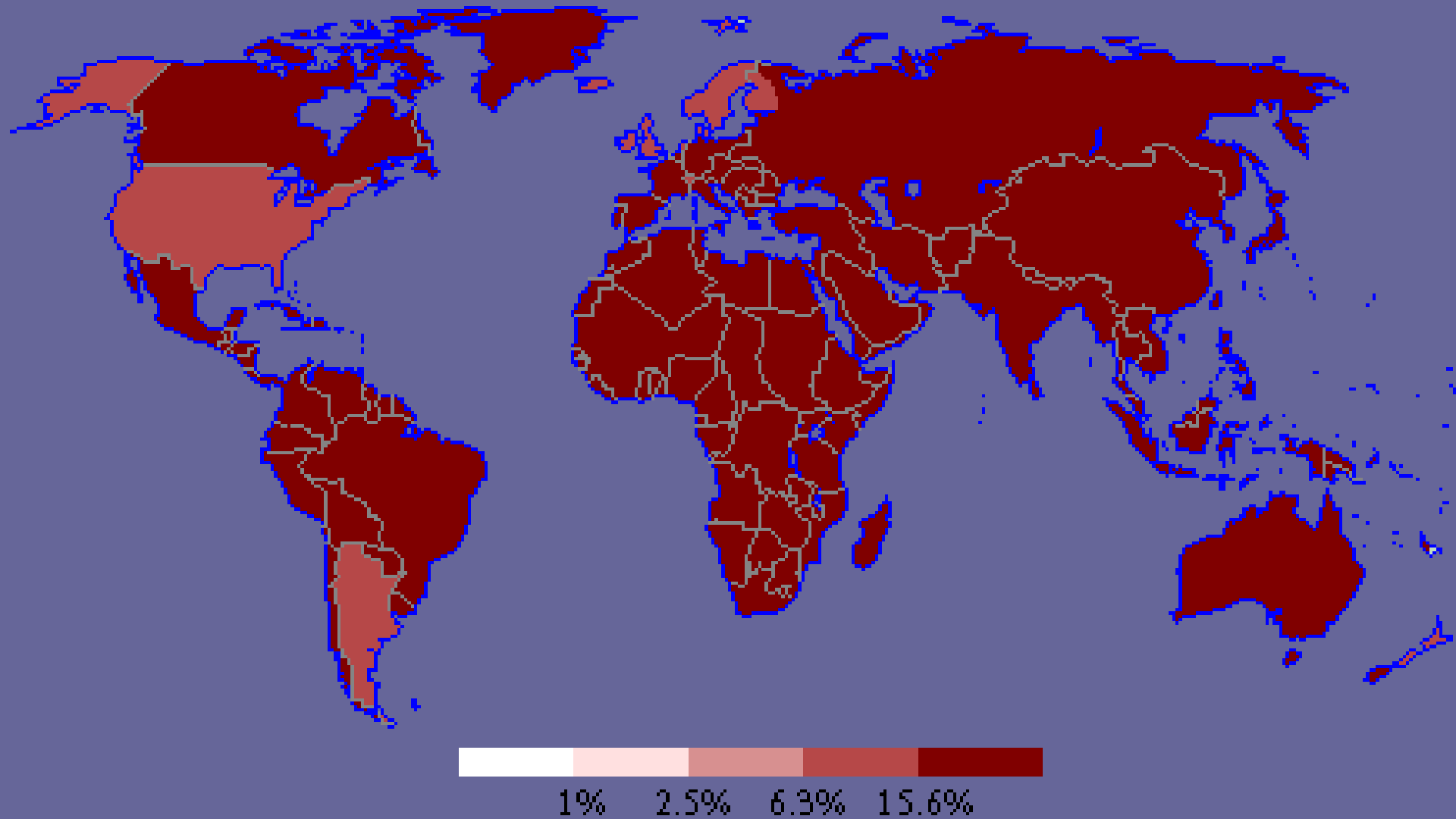
Every day, 28,000 children under 5 die

10 million children annually

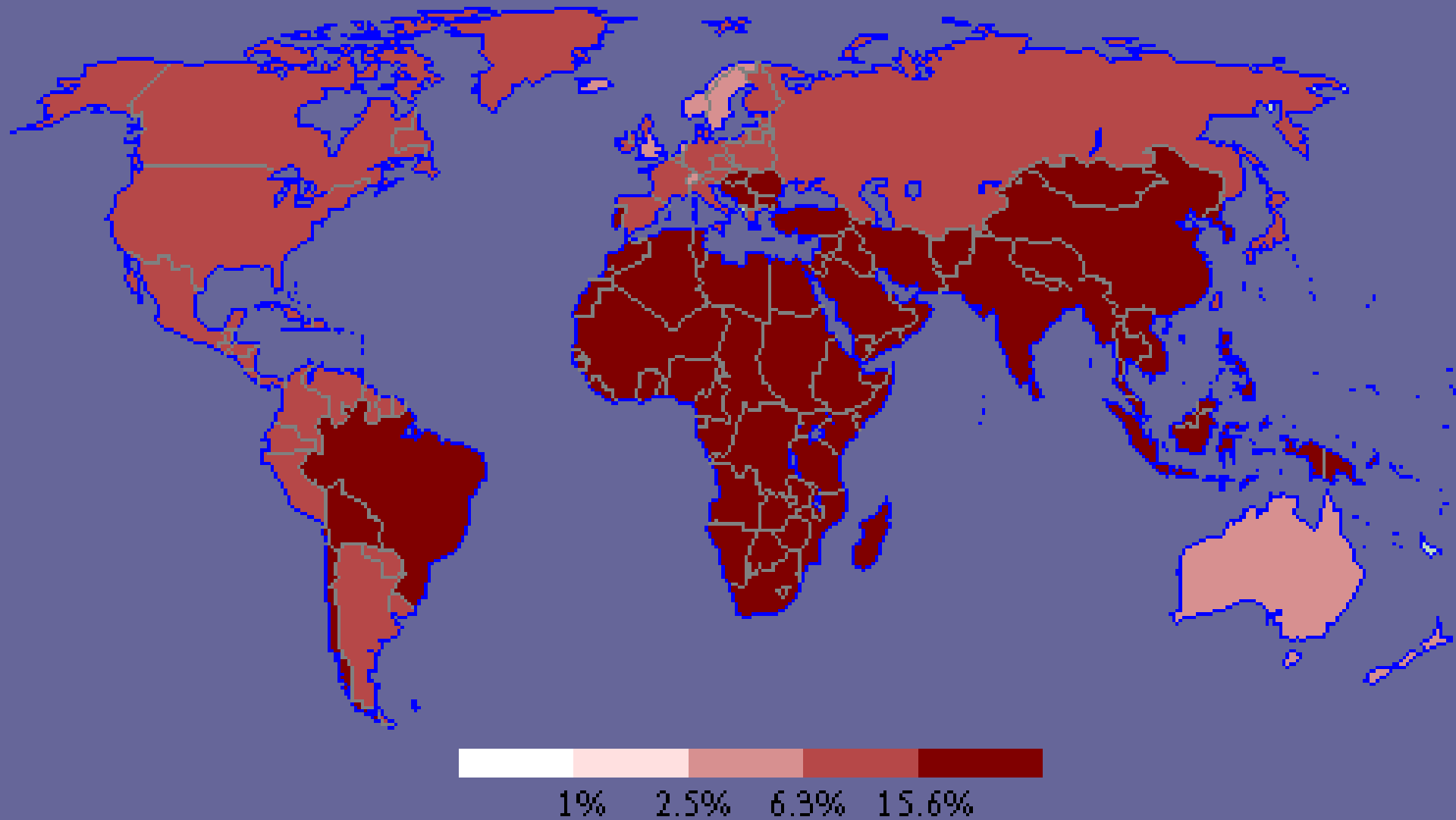
40% of those are newborns in their first month

2 million die on the day they are born

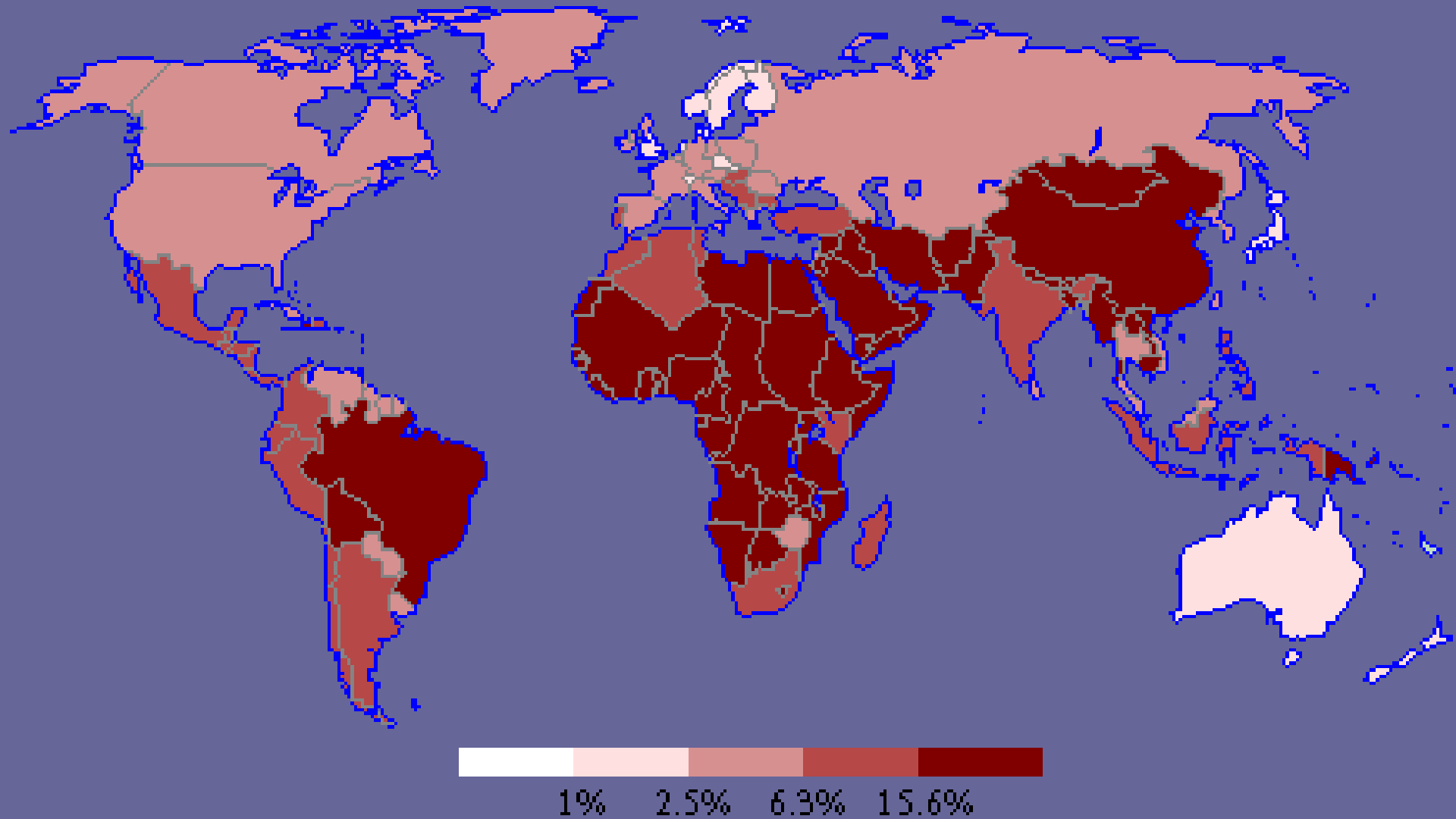
Infant Mortality Rates, 1900



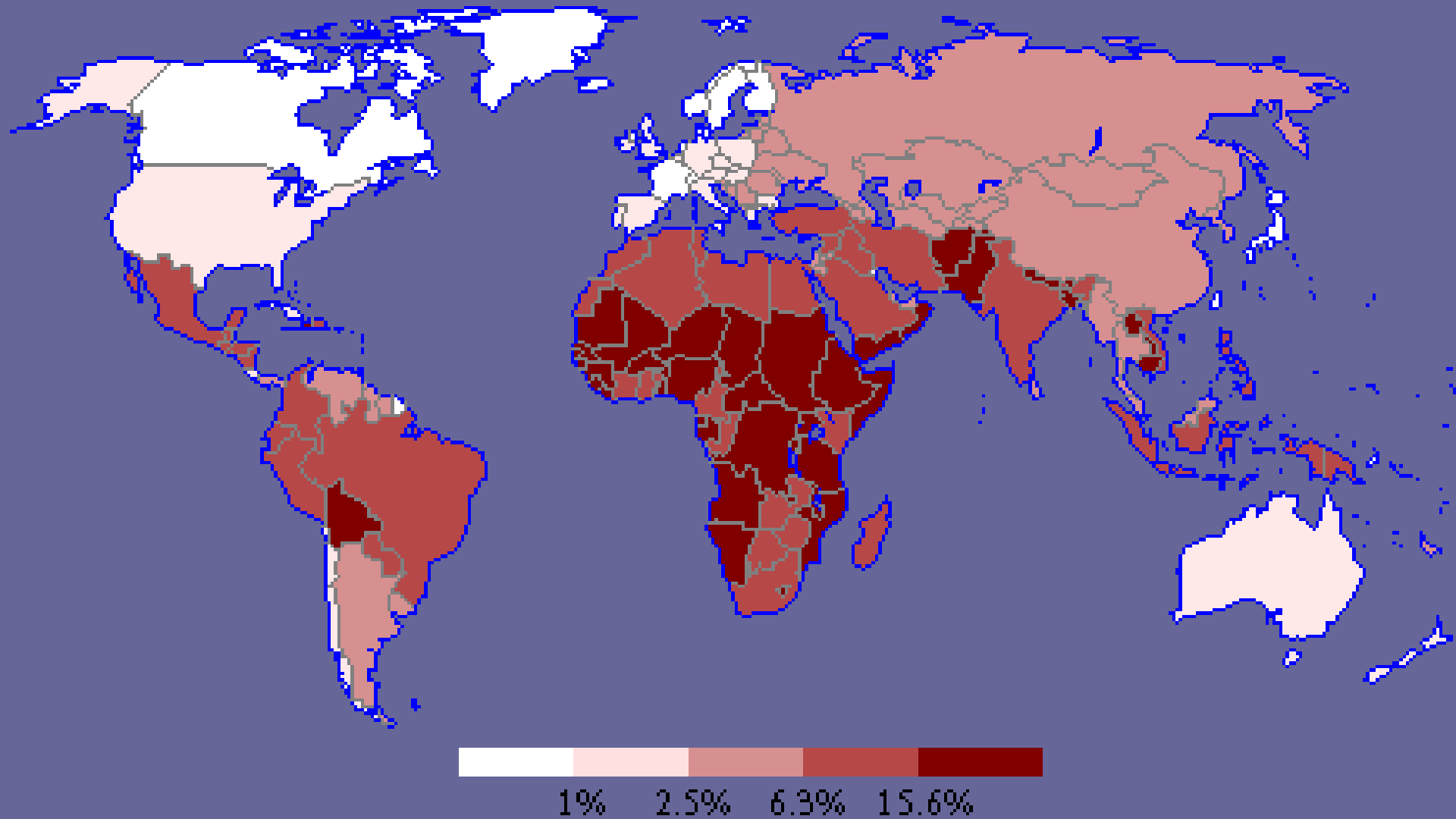
Infant Mortality Rates, 1930



Infant Mortality Rates, 1960



Infant Mortality Rates, 1996



Infant Mortality in Less Developed Countries

Poverty

- Children born in the developing world have a 4 in 10 chance of living in extreme poverty.
- In 1998 over half a billion children lived on less than \$1 a day.

Family Size

- Children in larger families receive smaller share of family resources.
 - More likely to be malnourished.
- Girls are often given fewer family resources, including medical care and food, than boys.



Mother's Educational Level

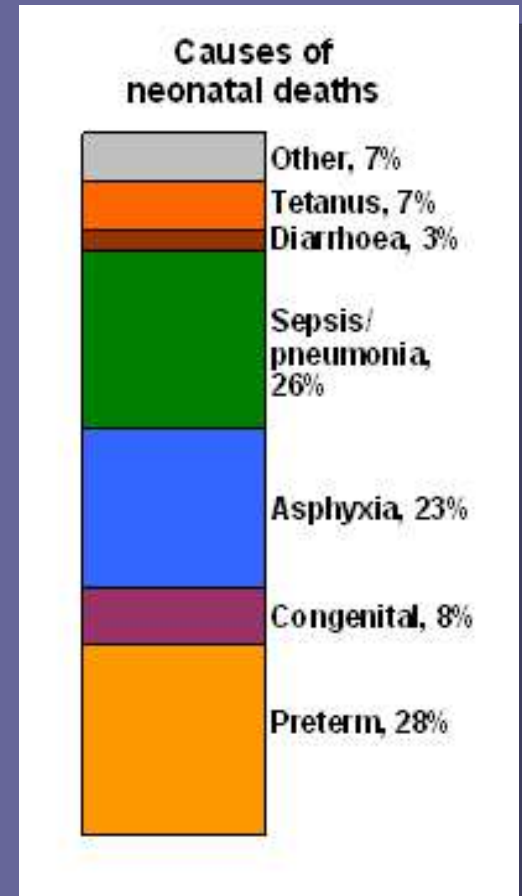
- Adult female literacy rate
 - In countries where the adult female literacy rate is higher, the IMR is consistently lower.
 - Mozambique: female literacy rate (23 percent), IMR (130)
 - Tanzania: female literacy rate (57 percent), IMR (92)
- Delayed marriage and first birth
 - Babies born to women in their 20s and 30s have a lower risk than those born to women younger than 20.
- Family planning and smaller families
 - Reproductive health care for themselves
 - Take better care of their children's health needs.

HIV/AIDS

- Increasing impact on children of all ages
 - 4.3 million children under age 15 had died of AIDS (12/03)
 - In 2000, 1.4 million children under 15 years of age were living with HIV/AIDS, up from 830,000 in 1996.
 - One million live in sub-Saharan Africa
 - 1,600 children infected each day.
 - Mother-to-child transmission of HIV during pregnancy, birth, or breastfeeding accounts for more than 90 percent of all infections in children.
 - One-third of infants born to HIV-infected mothers become infected.
- Children orphaned by AIDS
 - More than 13 million children lost either their mother or both parents by the end of 1999.
 - Ninety percent in sub-Saharan Africa
 - Likely to be malnourished

Illness & Disease

- 70% caused by preventable, treatable diseases
 - Respiratory infections
 - Diarrhea
 - Malaria
 - Measles
- The physical environment is responsible for one-fourth of all preventable disease
 - Water supply
 - Sanitation
 - Urban versus rural resources



Physical Environment

- Safe drinking water and sanitation
 - Over one billion people lacked access to safe drinking water in 2000
 - Inadequate sanitation, unsafe drinking water, air pollution and crowding
 - malnutrition, diarrhea and acute respiratory infections
- Urban versus rural resources
 - Urban residents have greater access to medical surveys and educational campaigns
 - Large-scale campaigns have constituted the most recent child health initiatives
 - In Bolivia the child mortality rate in rural areas in 1998 was 134, versus 72 in urban areas.

Responses

- Ensure the well-being of mothers
- Invest in basic, low-cost solutions to save children's lives
- Expand the availability of health care
- Increase the use of basic, lifesaving services
- Increase government support for proven solutions

-State of the World's Mothers, Save the Children, 2007

Ensure the well-being of mothers

- Nutrition
 - Stronger mothers
 - Fewer birth complications
 - Healthier babies
- Skilled care during childbirth
- Family planning



Family Planning

- Could prevent one in four of the deaths in children under five by helping women to space births at least two years apart.
 - Can also improve the survival of the next sibling.
- Helps women to have children during their healthiest reproductive years
- Enables couples to have their desired number of children

The United States, through the U.S. Agency for International Development (USAID), provides voluntary family planning and reproductive health services in over 60 developing countries. According to USAID, 50 million couples in the developing world use family planning directly as a result of its efforts.

Invest in basic, low-cost solutions

- Antibiotics
 - Newborn sepsis
 - Pneumonia
- Insecticide-treated mosquito nets
- Oral rehydration therapy
- Breastfeeding

“Recent analysis has shown that nearly 3 million of...newborn deaths could be prevented annually by improving access to basic, cost-effective interventions that are not yet reaching those who need them most.”

*-State of the World's Mothers
Save the Children, 2007*

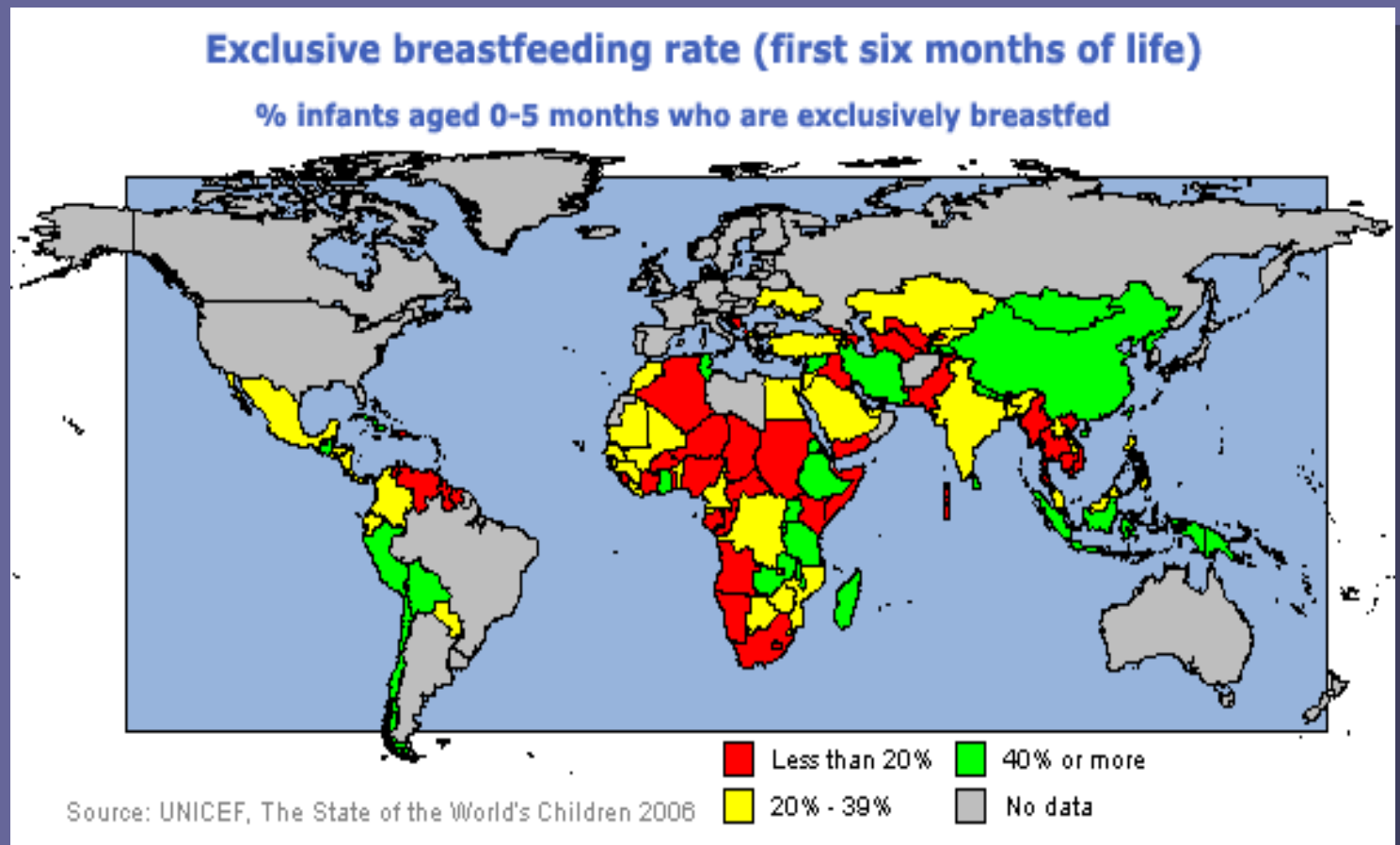
Oral rehydration Therapy (ORT)

- Low-cost, low-technology method to control diarrhea
- Prepackaged mixture of salts and sugars combined with water
 - Replaces fluid and salts lost through diarrhea
- Throughout the 1990s, it was used in 80 percent of all episodes.



Increased Breastfeeding

- One of the most cost-effective interventions
 - Saves the lives of six million infants every year



Increased Breastfeeding

- If a child is breastfed for six months, she is significantly less likely to contract or die from diarrhea and acute respiratory infections.
- Beyond 6 months, breastfed alongside age-appropriate feeding
 - Almost one-fifth of all child deaths
 - Save an additional two million children each year

Expand the availability of health care

- Trained health workers
 - Urban and rural
- Basic newborn care
 - Home visits
- Mass media, public education campaigns
 - Promote healthy behaviors
 - Raise awareness

Increase use of basic, lifesaving services

- Community case management linked to local health facilities
- Community education and mobilization

Encourage family members to use lifesaving, home-based practices to care for their infant.

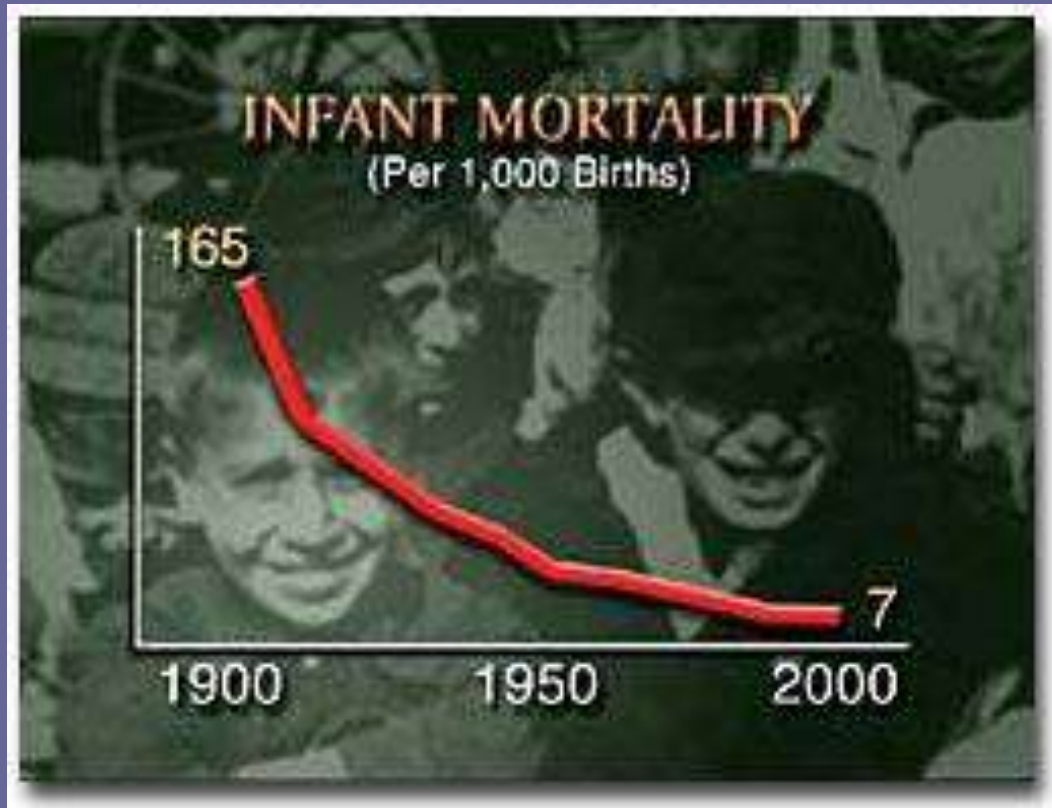
Increase government support for proven solutions

- Basic education
- HIV/AIDS awareness
- Family planning
 - Funding
 - Policies



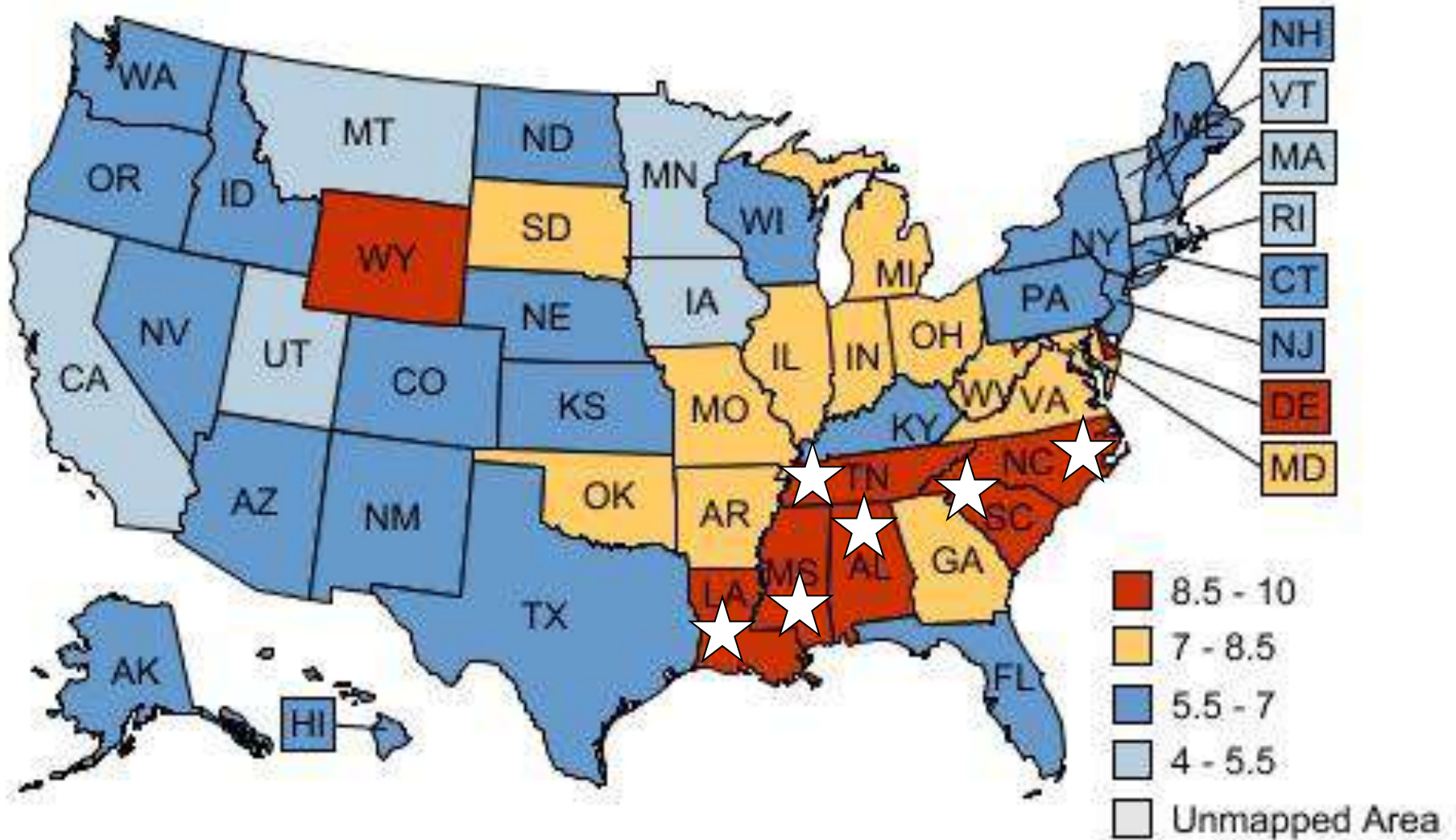
More Developed Countries

IMR and the Industrial Revolution

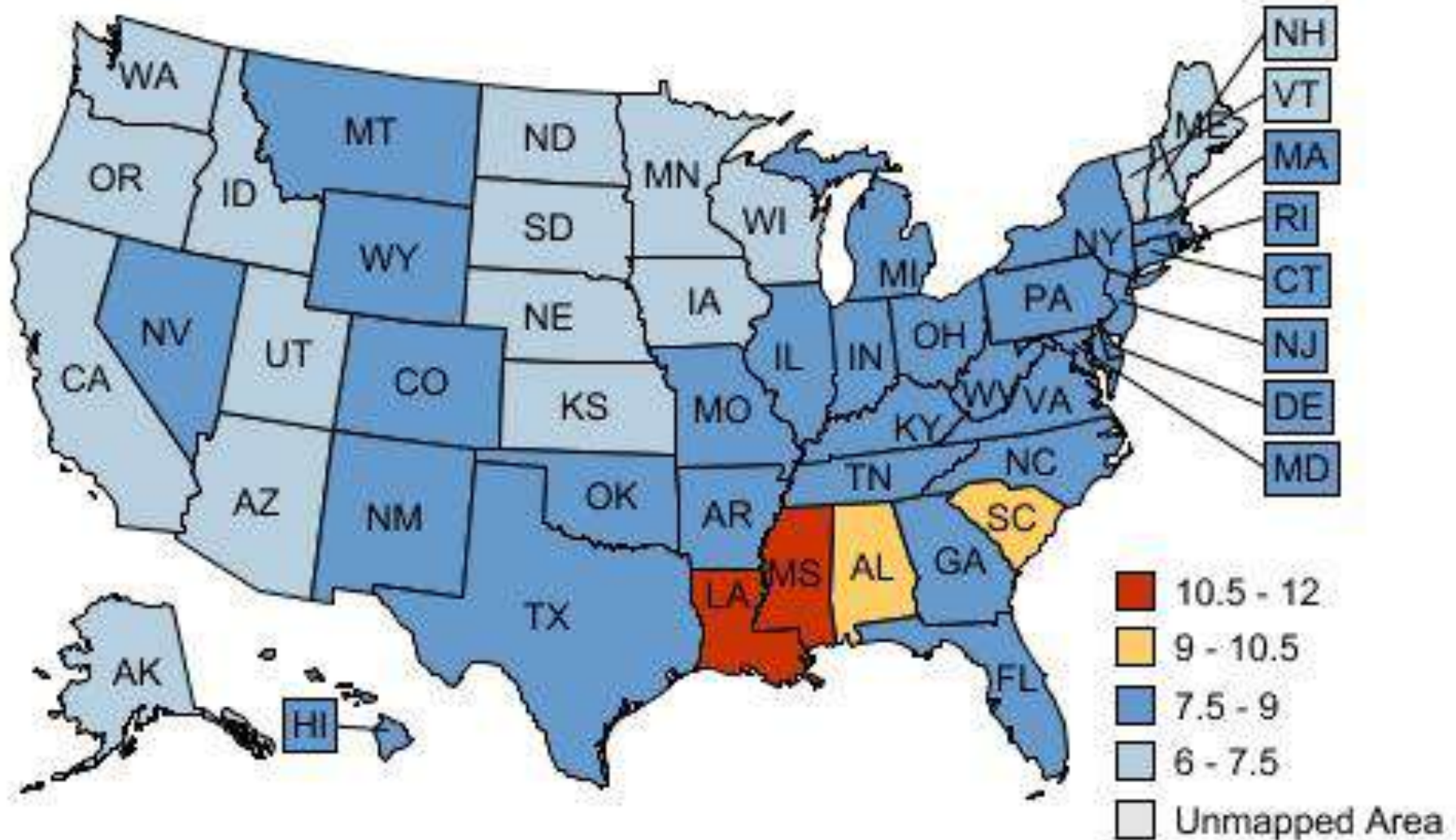


- Rates have been steadily decreasing
- Major decline in 20th century
- Attributed to
 - Cleanliness
 - Sewage systems
 - Central heating
 - Clean drinking water
 - More food
 - Cheaper clothing
 - Use of hospitals
 - Antibiotics and vaccines

U.S. Infant Mortality Rates, 2004



Low Birth Weight Babies, 2004



Contributing Factors

- Health of Baby
 - LBW
 - Birth Defects
 - Disease/Illness
- Health of Mother
 - High-risk pregnancy
 - Poor nutrition
 - Obesity
- Poverty
- Health Insurance
 - Reduced access to care
 - Lack of insurance



Responses

- Address Disparities in Infant Mortality
- Provide Pre-Pregnancy Education and Counseling
- Ensure Timely Prenatal Care for All Women
- Expand Access to Medical Care for Infants in the First Month of Life (Neonatal)
- Expand Access to Well-baby Care and Parenting Education
- Expand Programs for the Prevention of Child Abuse and Neglect

-Annie E. Casey Foundation

Address Disparities

- Support research on the medical, socioeconomic and behavior factors that affect infant mortality, esp. low birth weight
 - African American and Puerto Rican babies most severely affected
 - Medical advances increase survival
 - Incidences of LBW are the same

The cost of a premature baby's hospital care can reach over a quarter-of-a-million dollars. A full-term healthy newborn costs a few thousand dollars.

Pre-Pregnancy Counseling and Education

- Health education and preconception counseling
 - Expectant mothers
 - Unplanned pregnancies
- Education about positive and negative behaviors that impact health of baby
- Effective monitoring and treatment of chronic diseases
 - Hypertension, diabetes, renal disease, urogenital infections
 - Addresses disparities (African American women)

Prenatal Care

- Infant mortality is 50 percent higher for children born into families in poverty
- Decreased access to prenatal care
 - Low-income women
 - Segregated rural and urban areas
 - Racial/ethnic minorities
- First trimester

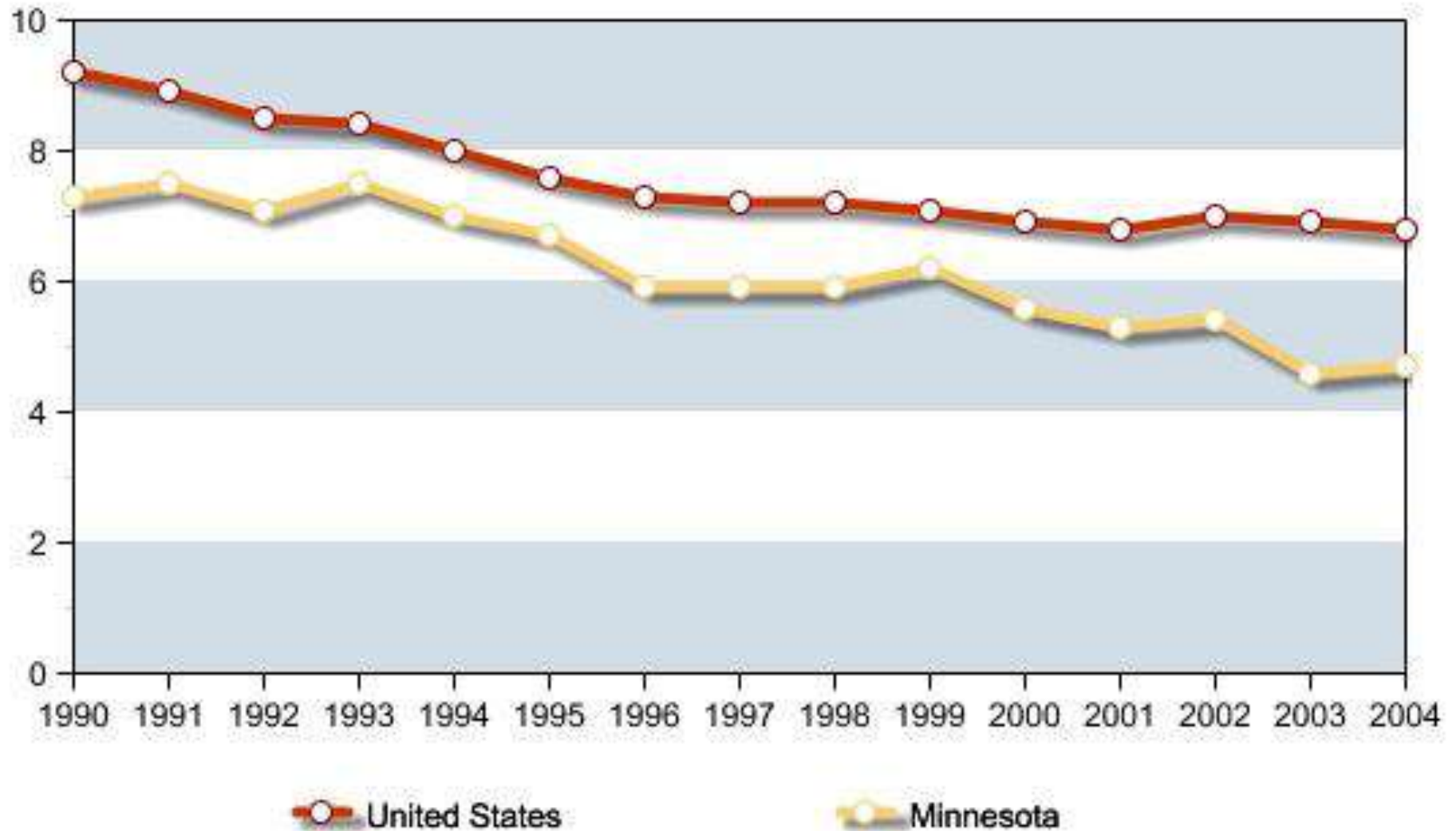


Prenatal Care

- Address barriers to prenatal care
 - Medically underserved areas
 - Regular source of care (Outpatient, ER)
 - Culturally competent providers
- Ensure that all eligible individuals receive Medicaid and SCHIP services
 - Covering All Families (www.coveringallfamilies.org)



Infant Mortality in the 1990s



Infant Medical Care

- Expand access to neonatal intensive care
- Timely, appropriate treatment for congenital anomalies
 - Birth defects cause 1 in 4 deaths
 - 1 in 3 are heart defects
 - Improvements in surgical treatment
- Reduce the incidence of respiratory distress syndrome
 - Preterm babies (less than 3 1/3 lbs, earlier than 32 wks)
 - 40,000 develop it each year; 1,400 die
 - Surfactant treatment
 - Reduce LBW incidence