

# A Portrait of Child Health in the United States

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# The Future of Children

PRINCETON-BROOKINGS



## Policies to Promote Child Health

VOLUME 25 NUMBER 1 SPRING 2015

# The Future of Children

- Journal headquartered at Princeton University that includes synthesis articles by experts on theme topics



# Objectives of this Talk

- Overview of child health in the U.S.
  - Trends over time
  - Current concerns
  - Variations within U.S.
  - International comparisons
- Themes from the volume overall and key issues going forward

# Source Materials

- Lead chapter of volume
  - “How Healthy are Our Children?”
  - Sara Rosenbaum & Robert Blum
- My own data compilation, synthesis, research
- Intro chapter of volume
  - “Introducing the Issue”
  - Janet Currie & Nancy Reichman

# Volume on “Policies to Promote Child Health”

- Covers the policy landscape in the U.S. vis-à-vis child health
- In the process, it discusses the major health issues and threats to health facing U.S. children today
- What policies/programs work
- Implications for research and policy



# The Case for Prevention

- Unhealthy children grow up to be unhealthy adults
- Poor health and low income go hand in hand
- Poverty and poor health → demands on public coffers

## *Therefore:*

- Promoting children's health is essential for improving population health
- Policies to prevent children's health problems can be wise investments
- Policy makers should implement carefully designed policies and programs to promote child health

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# Infant and child mortality

# A Success Story

- In 1910, the infant mortality rate in the US was 127.6 per 1000 live births; *by 2012, the rate dropped to **6 deaths per 1,000 live births***
- In 1910, mortality among children under age 5 stood at 403.6 deaths per 100,000 children; *by 2012, this figure fell to **7.1***

# Table 1. Causes of Mortality in Children and Adolescents: A Century of Change

Age	1910–12	2010–12
< 1 year	Diarrhea and enteritis Prematurity “Congenital debility”	Congenital anomalies Prematurity SIDS
1–4 years	Diarrhea and enteritis Prematurity Pneumonia	Unintentional injury Congenital anomalies Homicide Cancer Heart disease
5–9 years	Diphtheria and croup Scarlet fever Injuries	Unintentional injury Cancer Congenital anomalies Suicide Homicide
10+ years	Tuberculosis Injuries Typhoid fever	Unintentional injury Homicide Suicide Cancer Heart disease

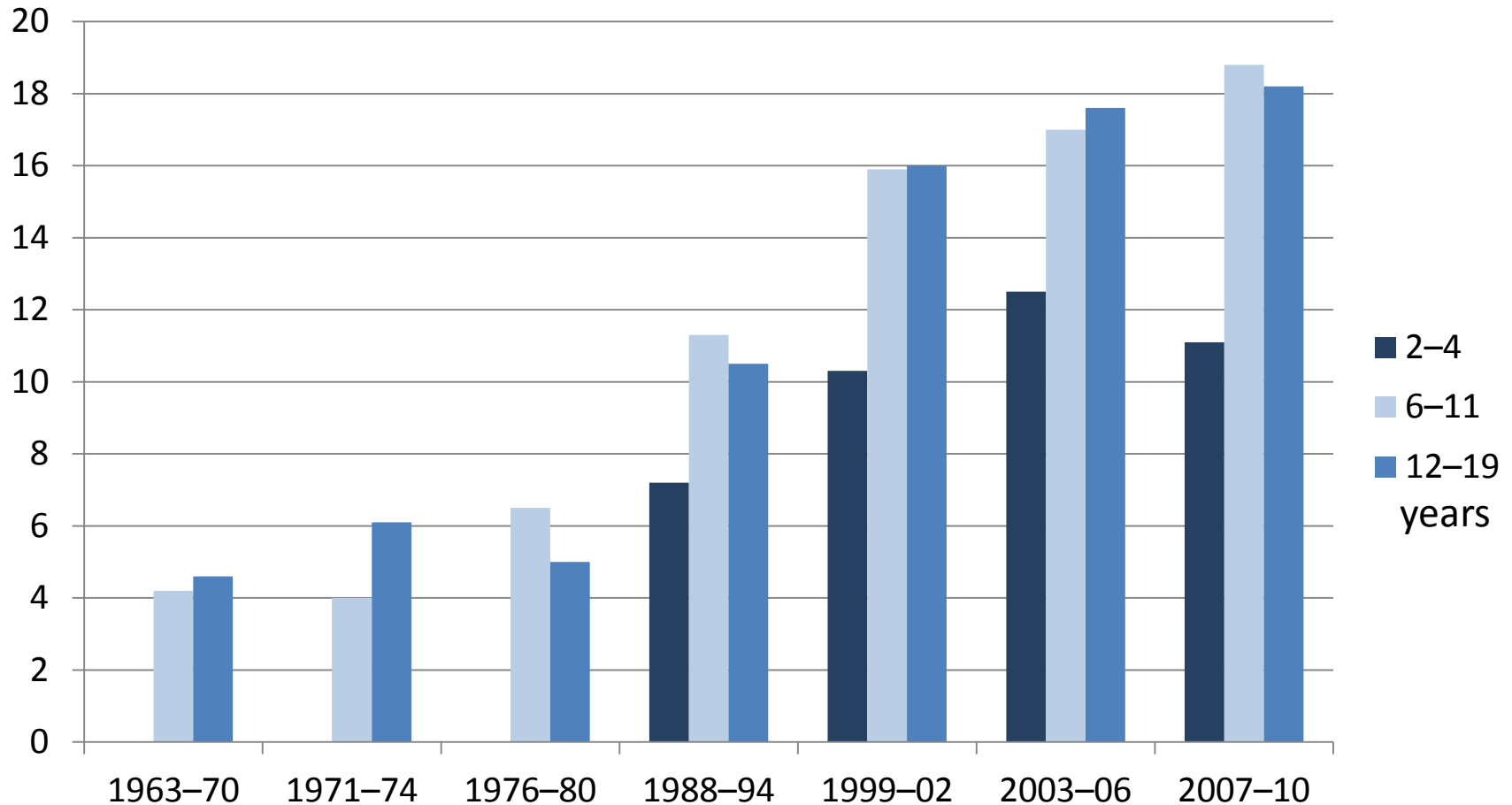
Source: Rosenbaum, S., Blum, R. How Healthy Are Our Children? *Future of Children* 2015  
Conditions in each cell are listed in order of prevalence

# Reasons for Success Story

- Advances in neonatal technology
- Vaccines
- Antibiotics
- Improved living standards

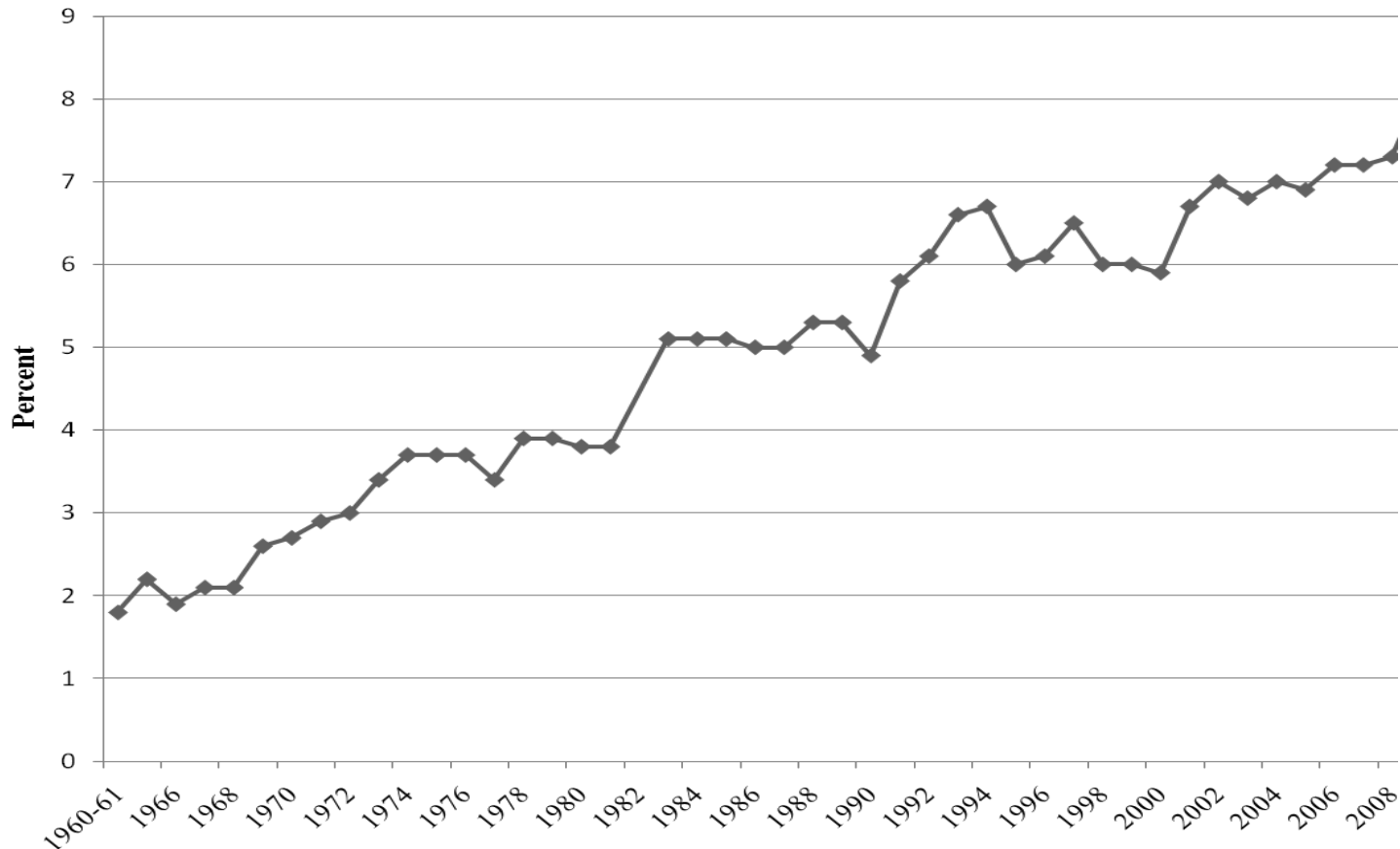
Different child morbidities have  
come to the fore

# Child Obesity Has Become Epidemic



Source: Health, United States, 2011

# Trend in limitation of activity due to chronic conditions for U.S. children 1960–2009



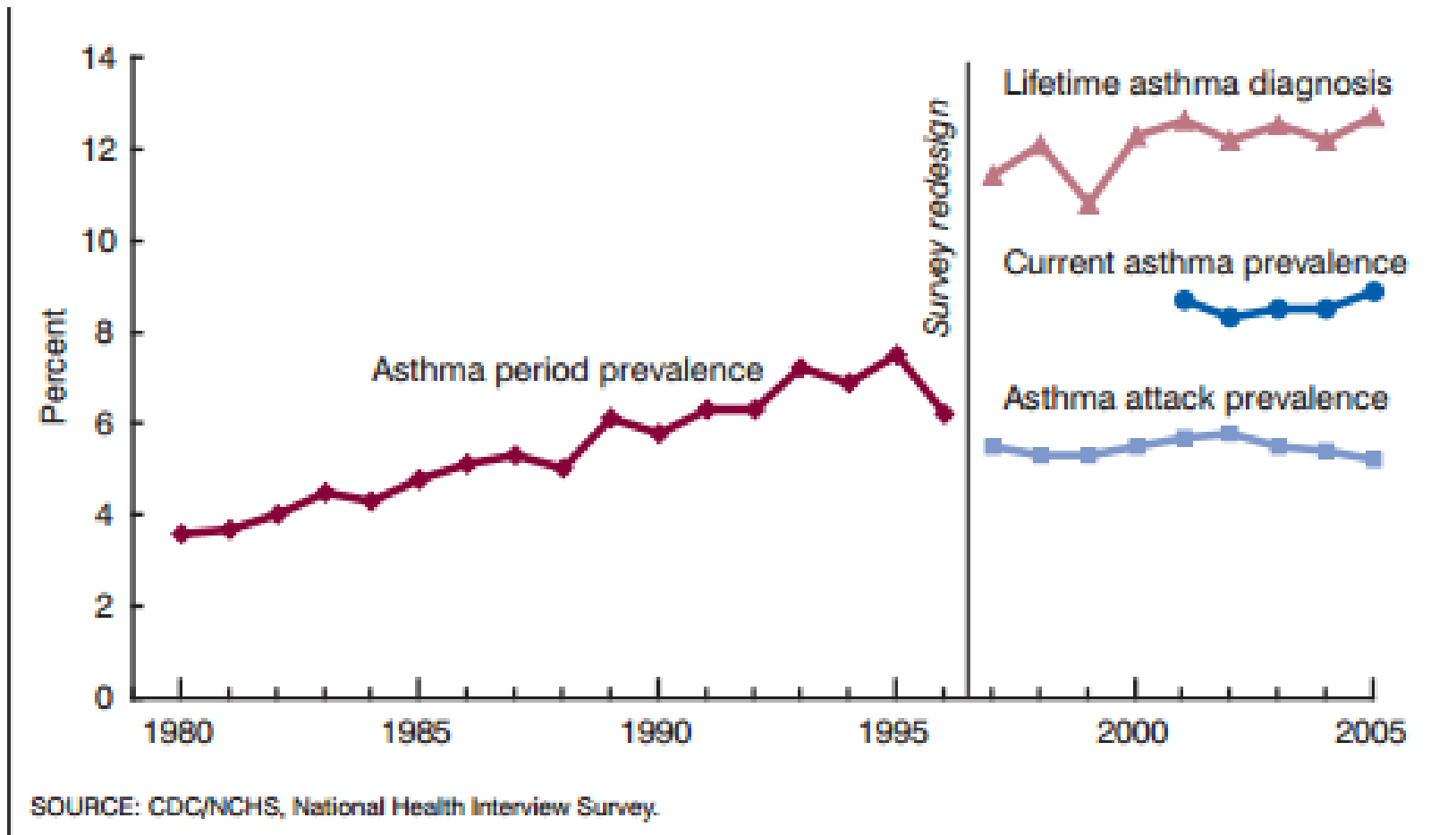
Source: Halfon N, Houtrow A, Larson K, Newacheck P. The changing landscape of disability in childhood. *The Future of Children*. 2012; 22(1):13–42.

# Prevalence of Specific Conditions

- 8% of children age 3-17 have been identified by a school official or health professional as having a learning disability (2013)
- 8.8% have been diagnosed with ADHD (2013)
- 1.8% have an ASD diagnosis (2011-12)
- 30% of students in grades 9-12 reported feeling sad or hopeless almost every day for 2+ weeks in a row in past year



# Asthma Has Become Key Child Health Concern

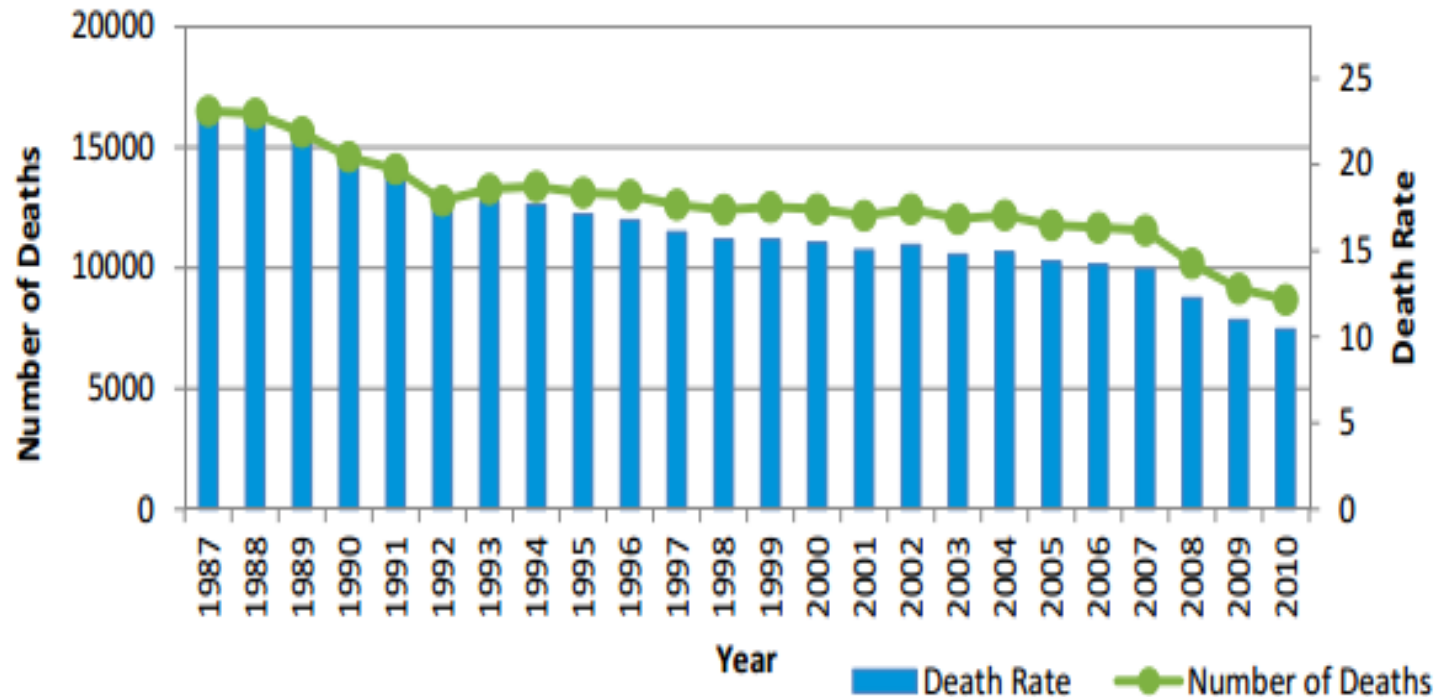


**Figure 2. Asthma prevalence among children 0–17 years of age for measures of asthma prevalence available in each year, United States, 1980–2005**

Source: CDC, 2006: <http://www.cdc.gov/nchs/data/ad/ad381.pdf>

# Another Success Story

Unintentional injury fatalities and death rate among children ages 19 and under, 1987-2010<sup>1</sup>



Source: CDC (2013): <http://www.cdc.gov/injury/wisqars/index.html>.

# But Injuries Still Key Child Health Issue

- **Nonfatal** unintentional injuries: 11.0 per 100 children (constant from 2001 to 2012)
- 1 in 9 children seen in an emergency department for non-fatal unintentional injuries

# Disparities

**Table 2: U.S. Infant and Child Mortality 2010, by Race/Ethnicity and Age (per 100,000 live births)**

	<b>Non-Hispanic White</b>	<b>Non-Hispanic Black</b>	<b>Hispanic</b>
<b>Infant</b>	528	1,051	458
<b>Early Child Ages 1–4</b>	24	38	24
<b>Child/Early Adolescent Ages 5–14</b>	13	18	11
<b>Adolescent Ages 15–19</b>	58.0	85.7	57.9

## Percentages of Children in U.S. with Select Health Conditions by Household Income Tercile, NHANES 1999-2006

	Low	Mid	High
<b>Diabetes</b>			
12-17 years	0.7	0.5	0.6
<b>Obese</b>			
4-11 years	<b>14.2</b>	<b>10.3</b>	<b>7.5</b>
12-17 years	<b>17.9</b>	<b>15.1</b>	<b>11.5</b>
<b>Low HDL</b>			
12-17 years	<b>17.2</b>	<b>15.9</b>	<b>15.9</b>
<b>High Cholesterol Ratio</b>			
12-17 years	<b>6.6</b>	<b>6.4</b>	<b>4.7</b>
<b>Hypertension</b>			
12-17 years	<b>0.8</b>	<b>0.6</b>	<b>&lt; .1</b>
<b>Asthma - Ever Diagnosed</b>			
0-3 years	12.4	6.4	7.2
4-11 years	15.6	15.1	11.8
12-17 years	18.7	16.8	19.5

Source: Reichman, N.E., Teitler, J.O. (2013)

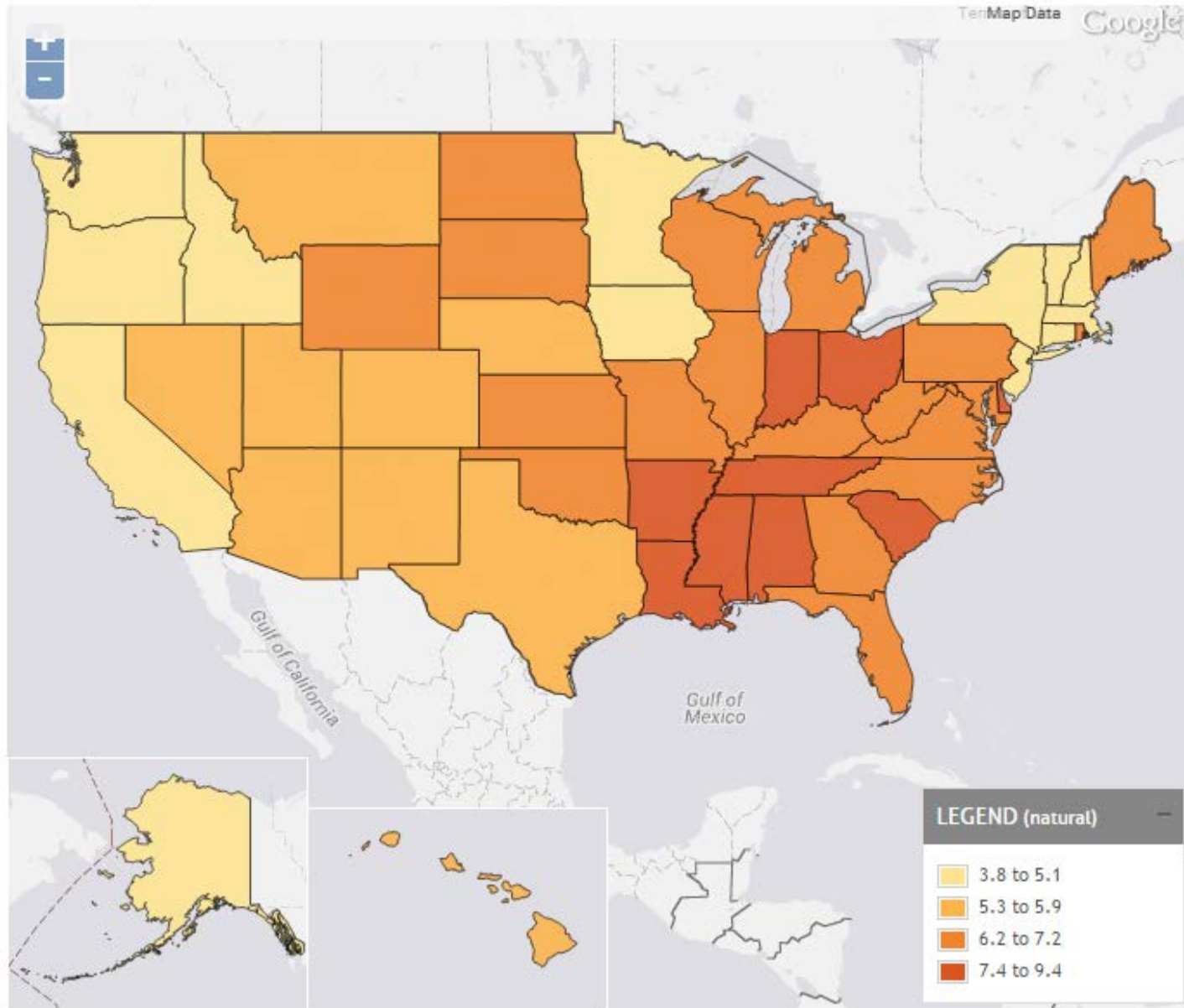
# State Variation

# Infant Mortality

Year(s): 2011 | Data Type: Rate per 1,000

Data Provided by: National KIDS COUNT

**U.S. = 6.1**



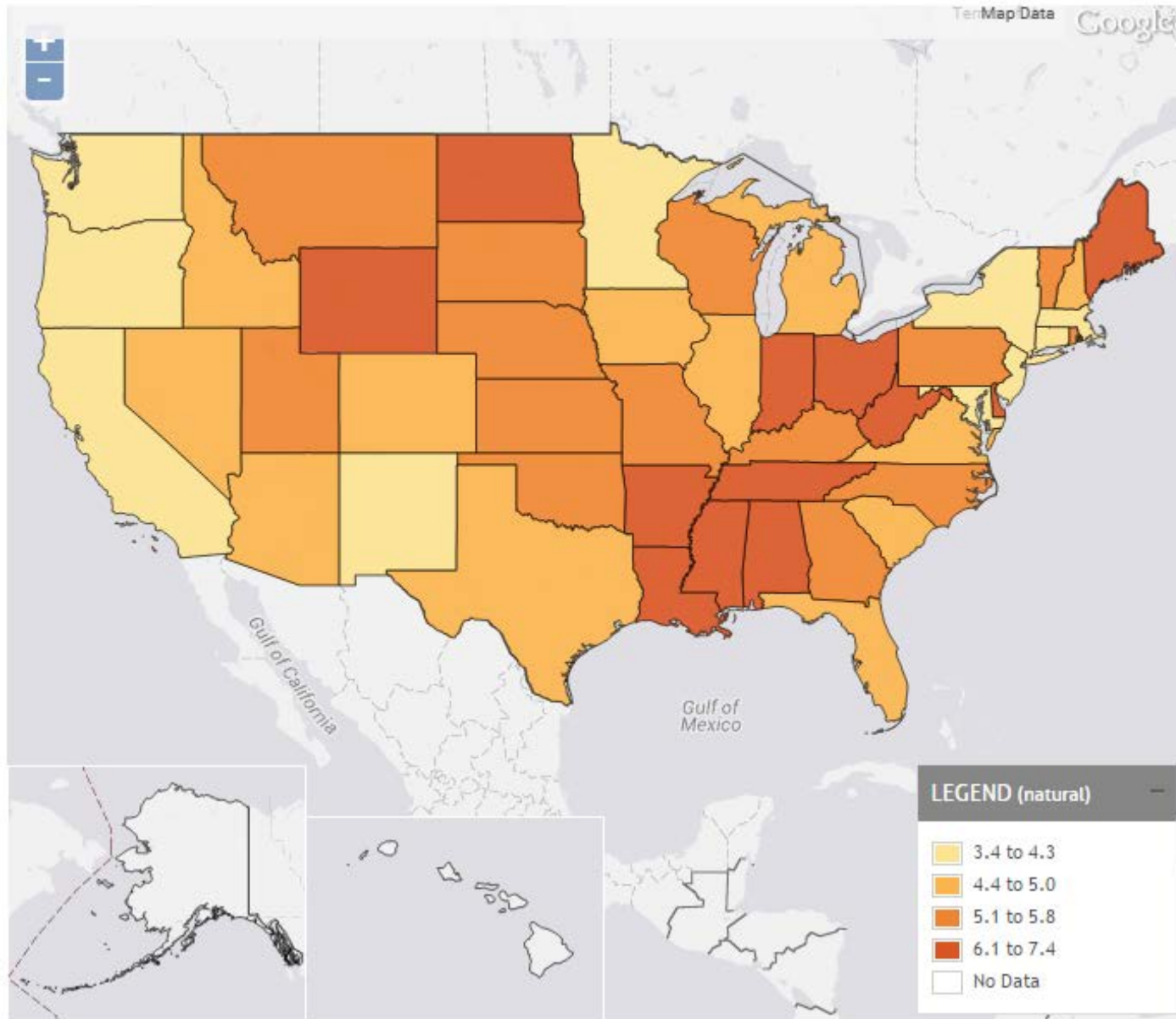


# Infant Mortality

Year(s): 2011 | Race: Non-Hispanic White | Data Type: Rate per 1,000

Data Provided by: National KIDS COUNT

**U.S. = 5.1**

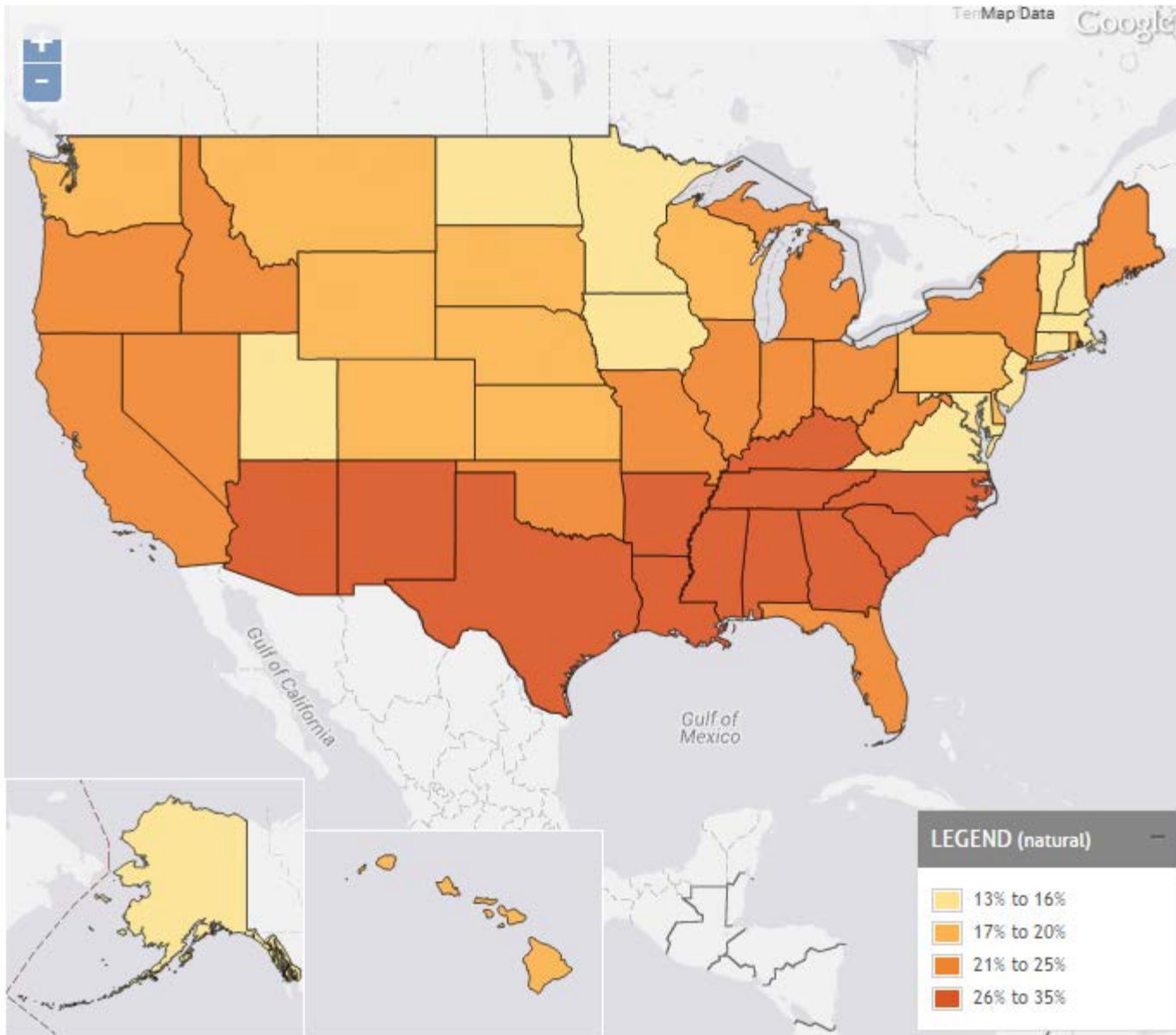


# Children In Poverty (100 Percent Poverty)

Year(s): 2012 | Data Type: Percent

Data Provided by: National KIDS COUNT

**U.S. = 23%**

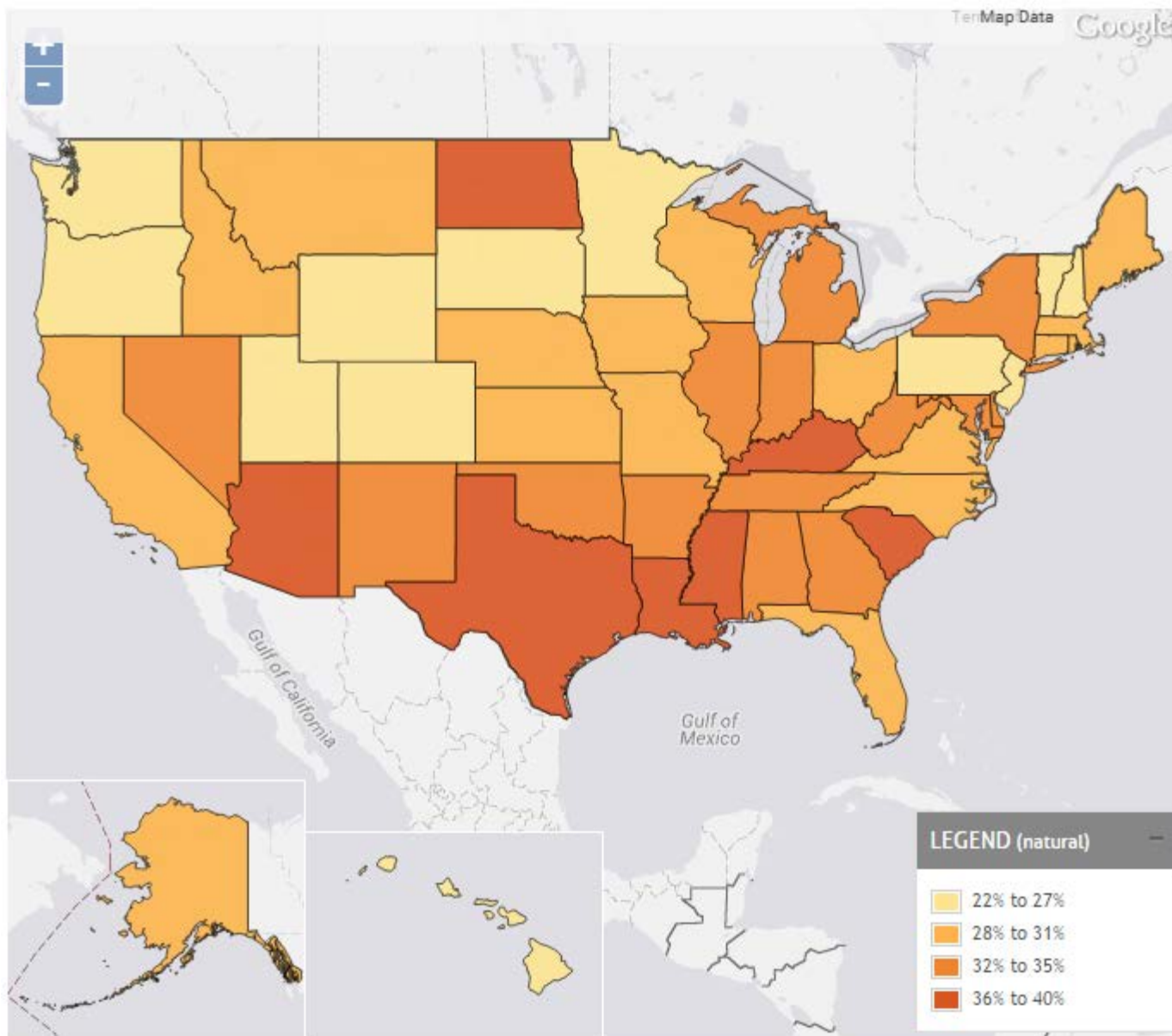


# Children And Teens Overweight Or Obese

Year(s): 2011-2012 | Gender: Total 10 to 17 | Data Type: Percent

Data Provided by: National KIDS COUNT

**U.S. = 31%**

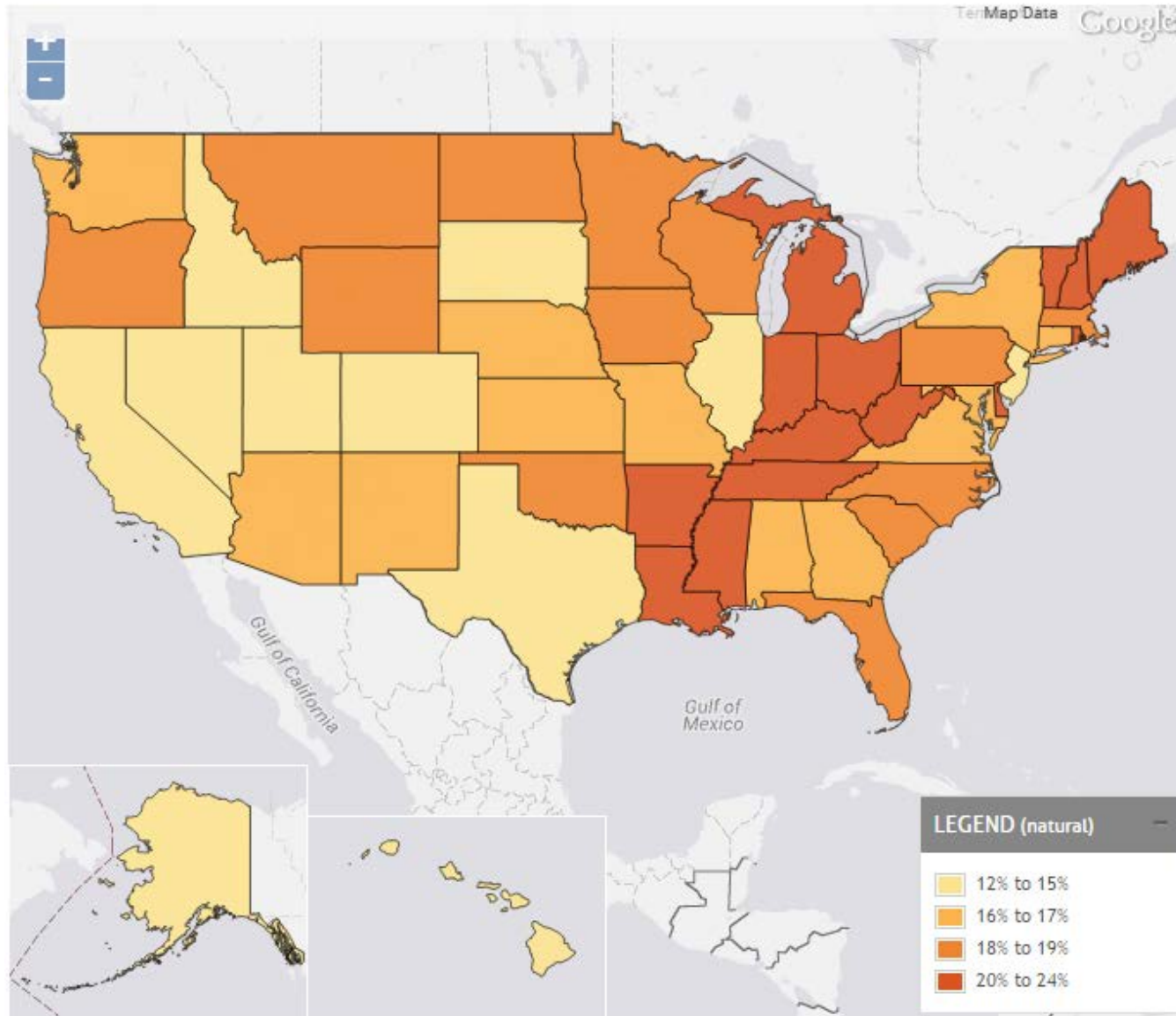


# Children Who Have One Or More Emotional, Behavioral, Or Developmental Conditions

Year(s): 2011-2012 | Data Type: Percent

Data Provided by: National KIDS COUNT

**U.S. = 17%**

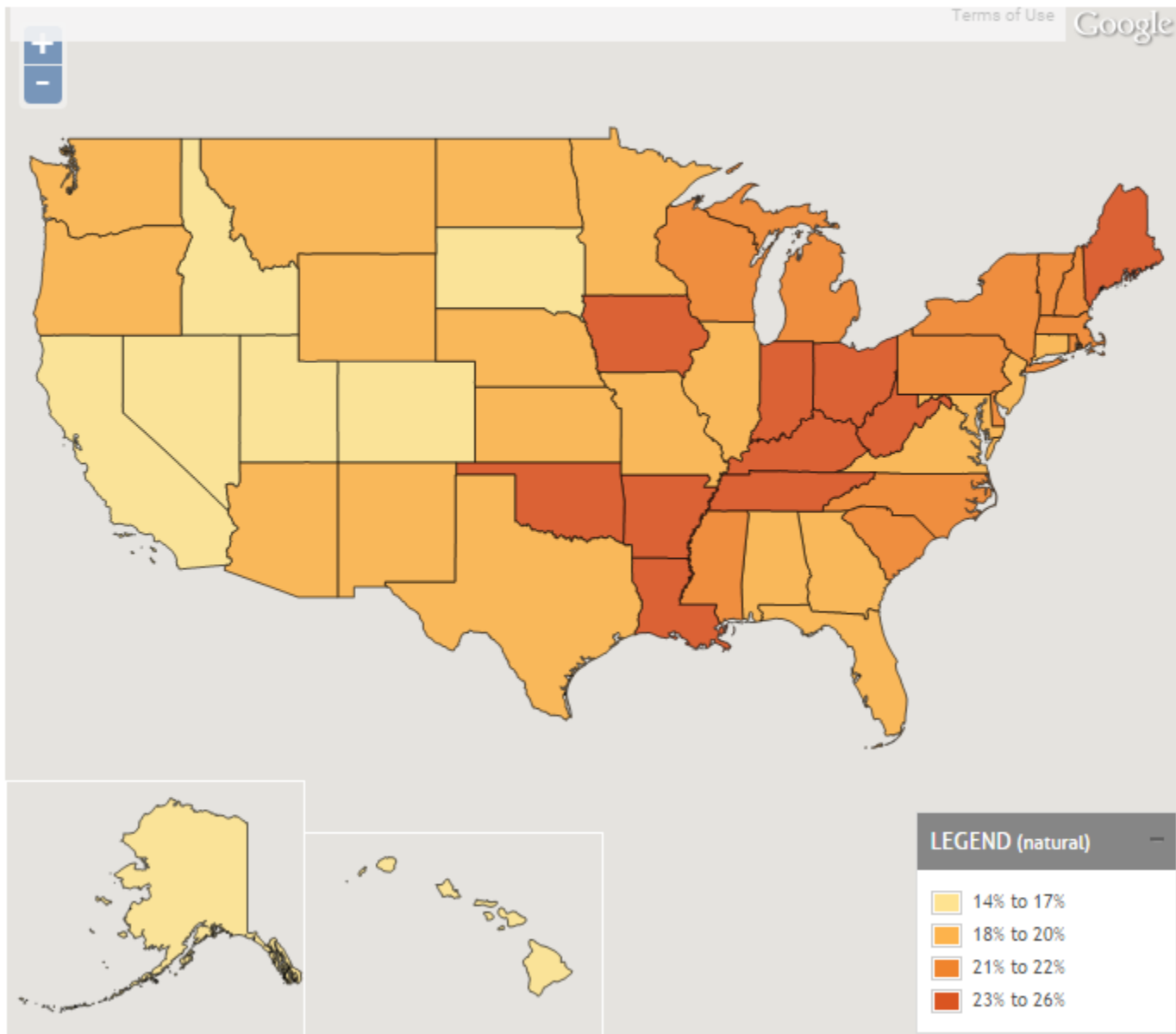


# Children With Special Health Care Needs

Year(s): 2011-2012 | Data Type: Percent

Data Provided by: National KIDS COUNT

**U.S. = 20%**



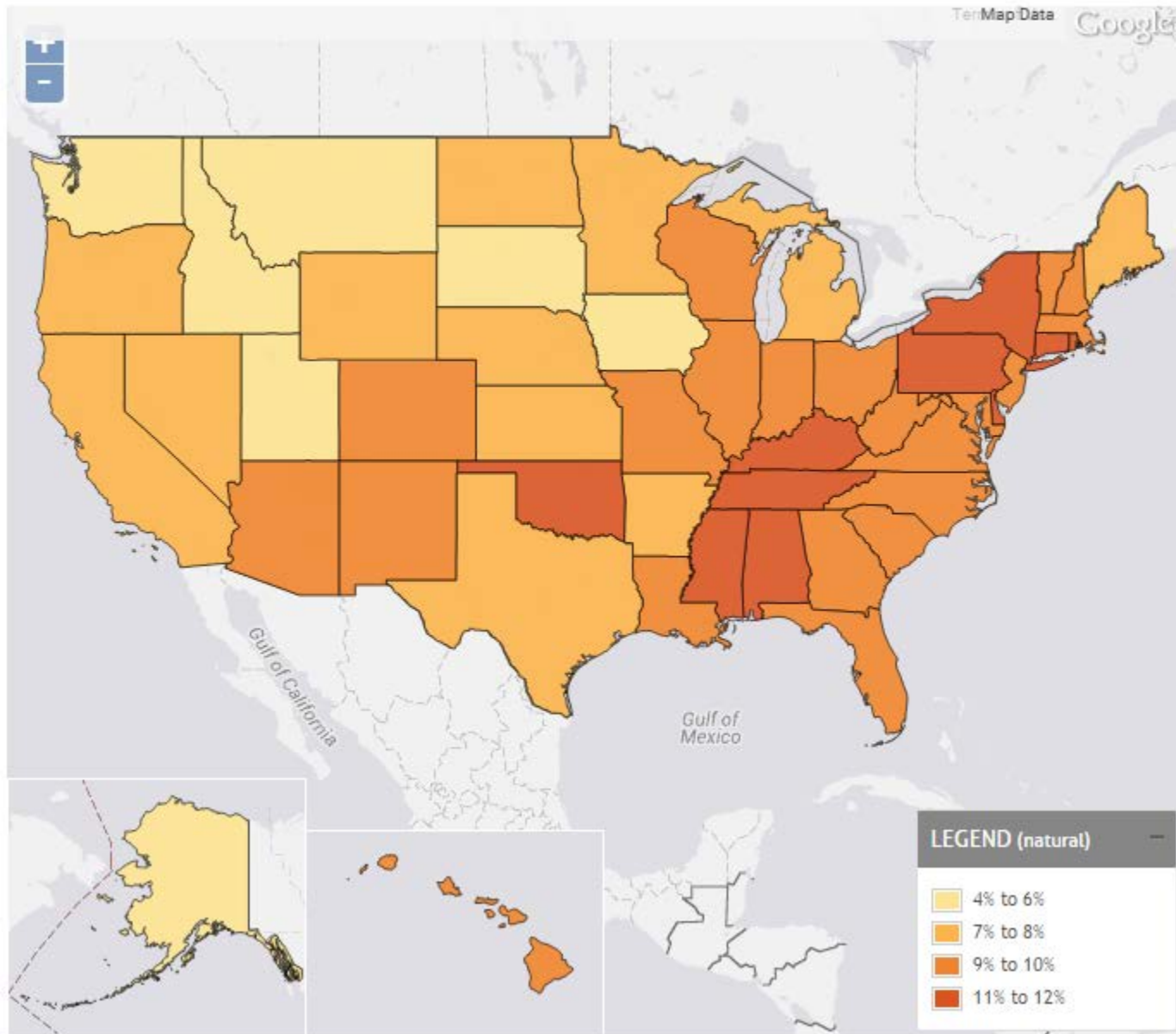


# Percent Of Children With Asthma Problems

Year(s): 2011-2012 | Data Type: Percent

Data Provided by: National KIDS COUNT

**U.S. = 9%**

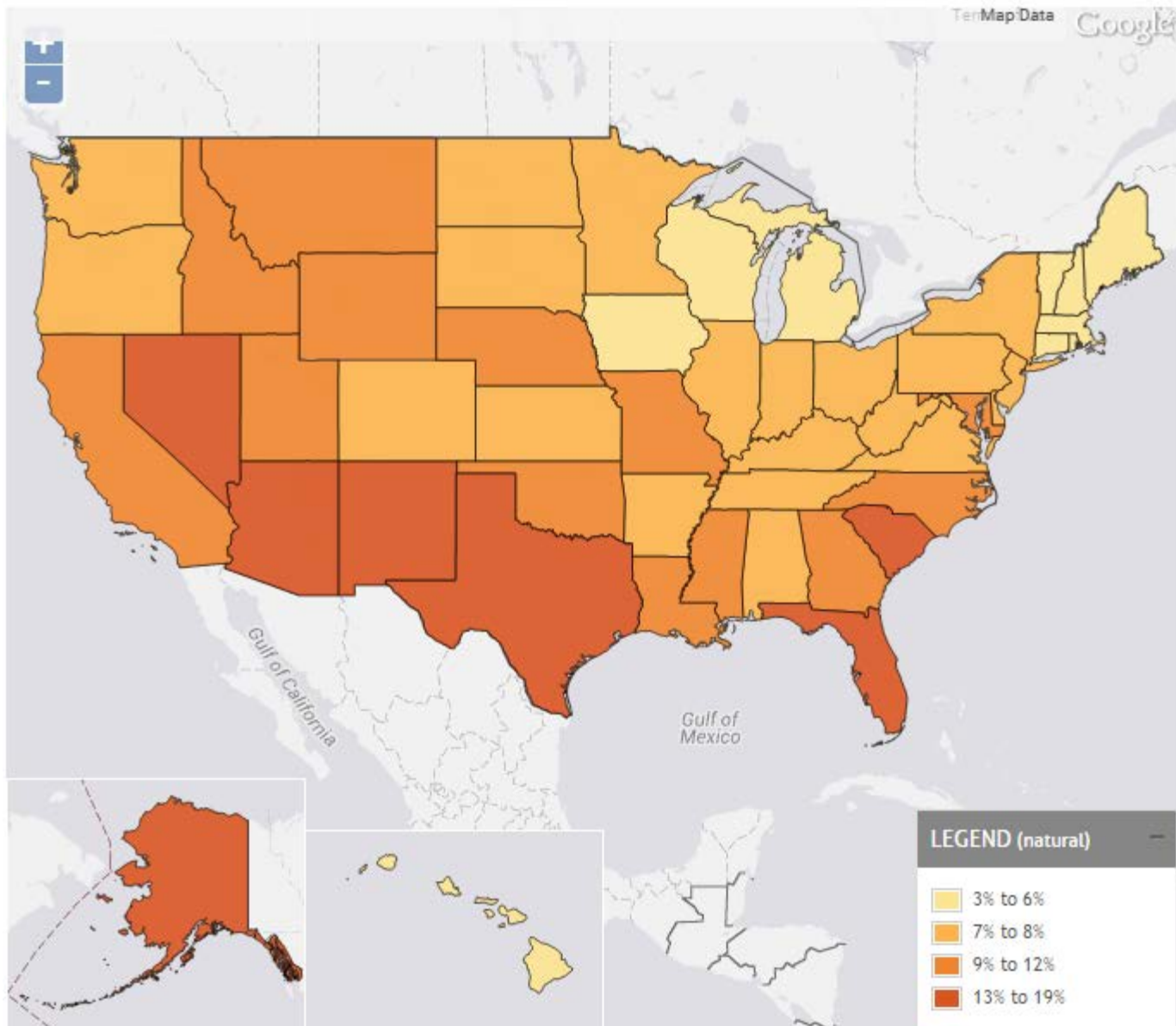


# Children 18 And Below Without Health Insurance

Year(s): 2011 | Data Type: Percent

Data Provided by: National KIDS COUNT

**U.S. = 10%**

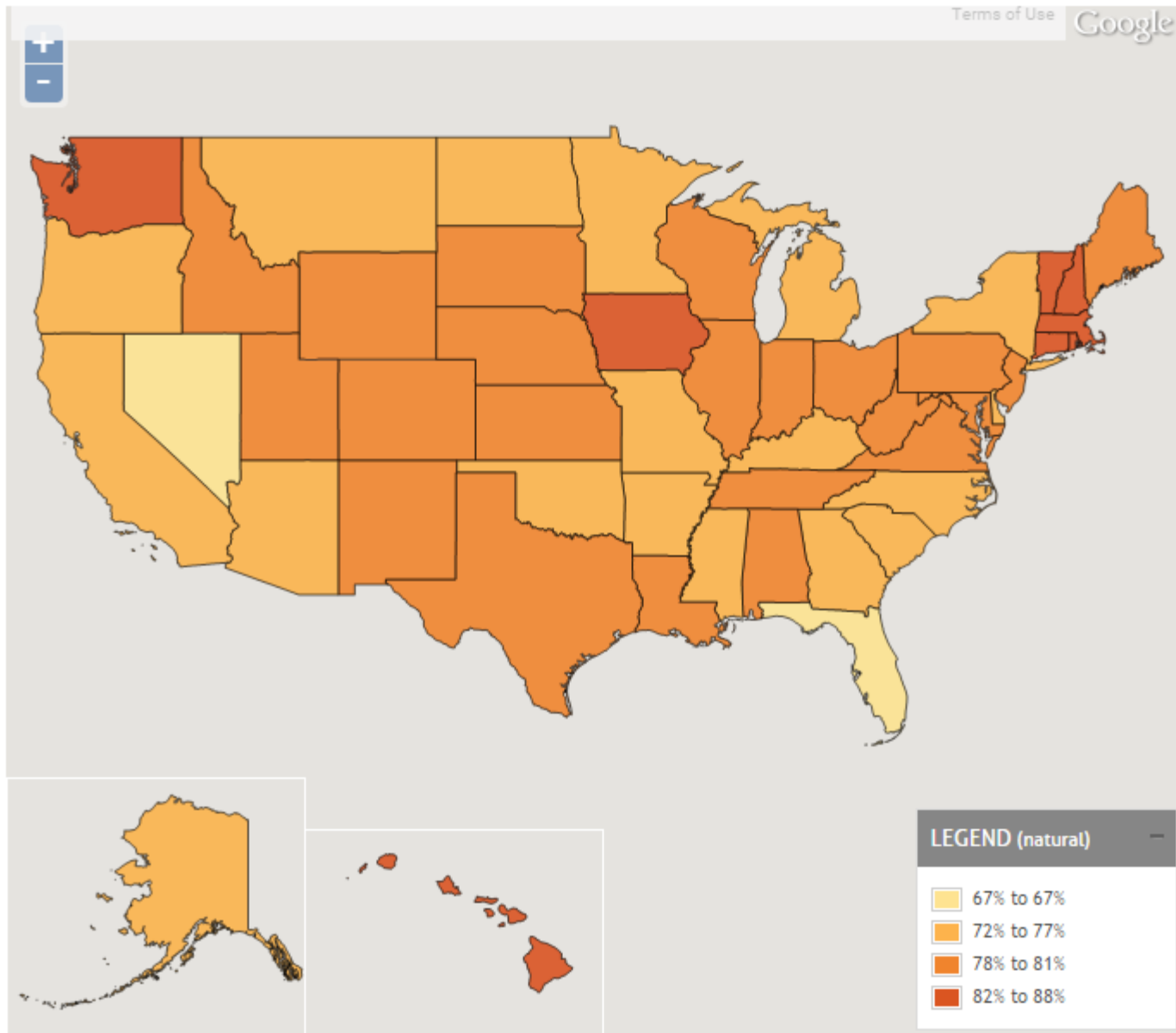


# Children Who Have Received Preventive Dental Care In The Past Year

Year(s): 2011-2012 | Data Type: Percent

Data Provided by: National KIDS COUNT

**U.S. = 77%**





International context

# Health Indicators by Age, Children in the United States and England, by Gender

	Females		Males	
	United States	England	United States	England
<b>Obesity</b>				
4–11 years	12.1	7.3*	11.1	7.1*
12–17 years	15.3	9.3*	15.3	6.0*
<b>Low HDL Cholesterol</b>				
12–19 years	11.0	6.8*	23.0	19.6
<b>High Cholesterol Ratio</b>				
12–19 years	4.6	3.4	9.3	5.8
<b>Hypertension</b>				
12–19 years	0.6	0.8	1.5	2.8*

\*Difference between England and US is statistically significant at  $P < .05$

All estimates are weighted based on the complex sampling designs in the NHANES and HSE

Source: Martinson, Teitler, & Reichman (2011)

# Health Indicators by Age, Children in the United States and England, by Gender

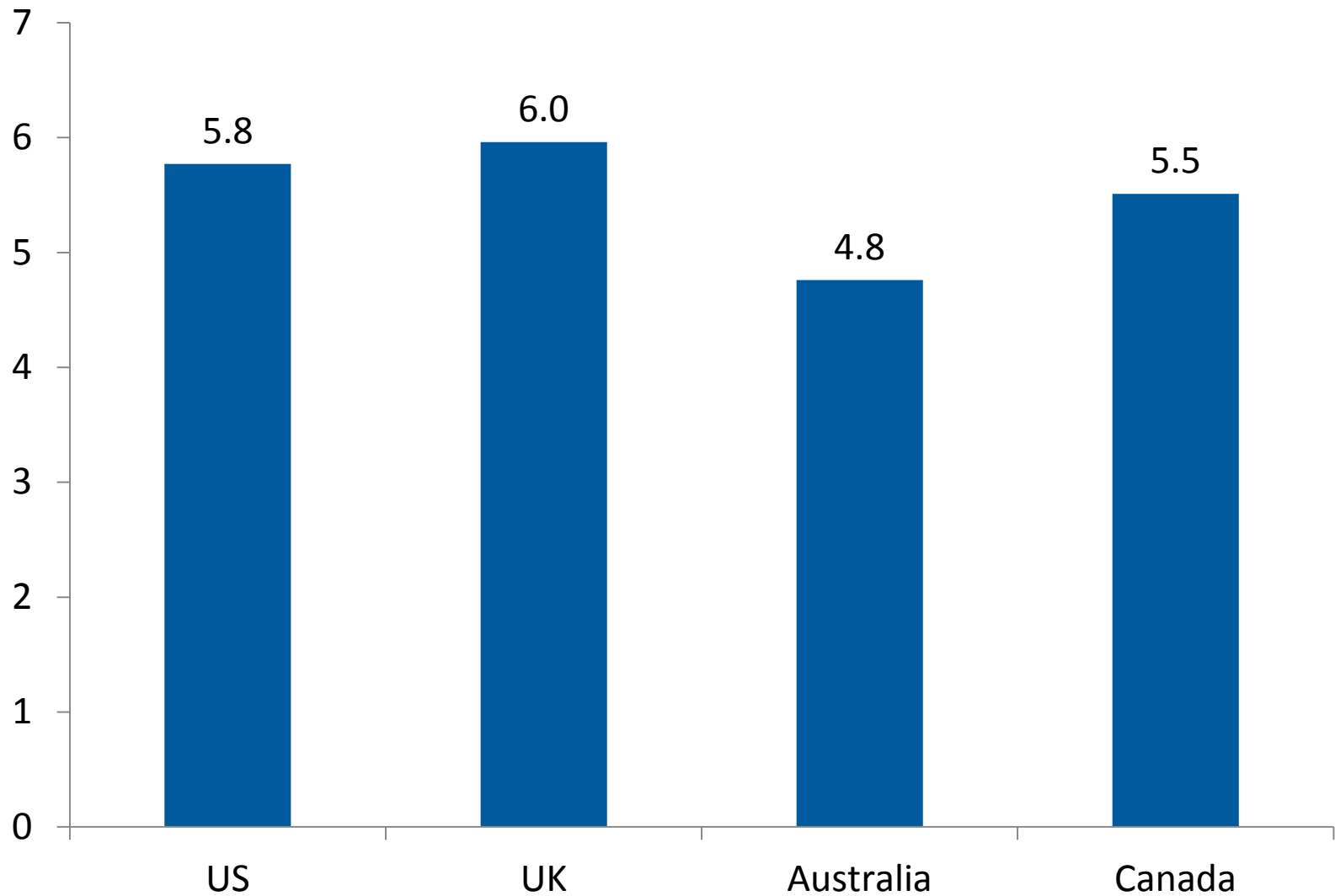
	Females		Males	
	United States	England	United States	England
<b>Diabetes</b>				
12–19 years	0.4	0.0	0.5	1.1
<b>Asthma</b>				
0–3 years	7.5	1.8*	10.8	5.5*
4–11 years	10.7	6.4*	18.2	10.6*
12–19 years	17.8	6.9*	17.4	9.0*

\*Difference between England and US is statistically significant at  $P < .05$

All estimates are weighted based on the complex sampling designs in the NHANES and HSE

Source: Martinson, M., Teitler, J., Reichman, N. Health across the life span in the United States and England. American Journal of Epidemiology 2011;173(8):858–65.

# % Low Birthweight by Country



Figures are weighted to be nationally representative of each country

Sources: US: ECLS-B (2001); UK: MCS (2000–2002); Australia: LSAC (2003–2004); CA: NLSCY (1998–2001)

# Back to FOC volume: Intro chapter

Currie, J., Reichman, N. Policies to promote child health: introducing the issue. *The Future of Children* 2015;25(1), 3–9.

# Themes of the Issue

- Wide range of policies important for promoting child health
- Responsibility for promoting child health is fragmented; lack of consensus about government's appropriate role
- “Crisis response” mentality
  - Doesn't focus on prevention
  - Often precludes implementing policies in ways that would let us thoughtfully evaluate efficacy
- Information about cost-effectiveness severely lacking
- Poor and minority children typically face greatest health risks

# What works?

- Health at birth and early childhood
  - WIC
  - Center-based early childhood care and education
- Food
  - SNAP
- Housing
  - Specific measures such as window bars on high rises
- Health care
  - Insurance expansions
- Families
  - Income augmentation (EITC)
  - Home visiting programs
  - Large-scale community-level primary prevention programs
- Mental health
  - A few specific programs

# Implications for Research and Policy

- Must view health and health policy broadly
- Fragmented nature of responsibility for child health has produced a chronic lack of coordination
  - Coordination would be helpful!
- Little attention paid to rigorous evaluation
  - But we know of many programs that work
  - Older children are important too
- Poor and minority children deserve special attention
- Investments in child health have the potential to repay current expenditures many times over



# Thank you!

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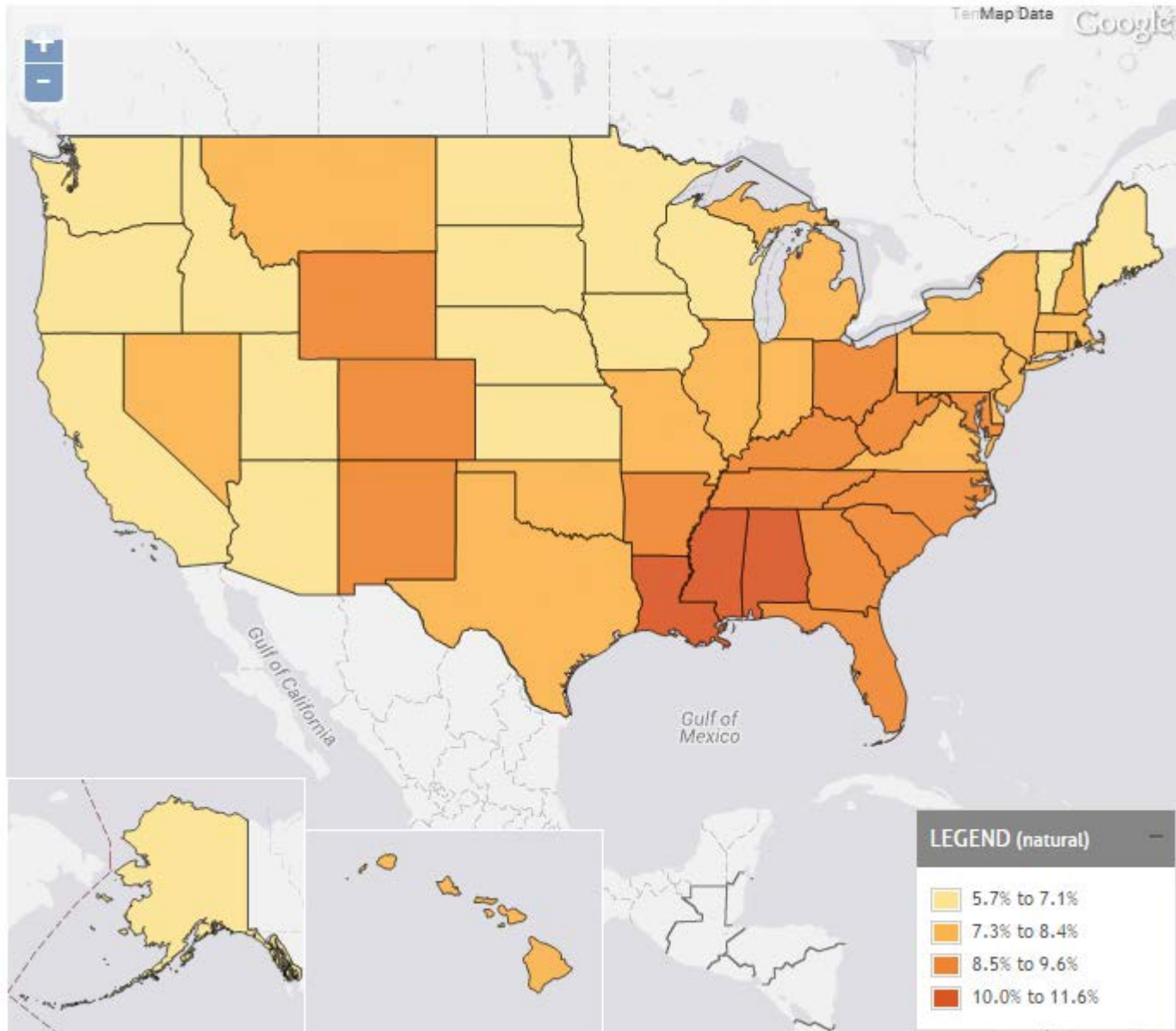
<http://futureofchildren.org/>

**EXTRA SLIDES**

# Low-Birthweight Babies By Race

Year(s): 2012 | Race: Total | Data Type: Percent

Data Provided by: National KIDS COUNT



# Low-Birthweight Babies By Race

Year(s): 2012 | Race: Non-Hispanic White | Data Type: Percent

Data Provided by: National KIDS COUNT

