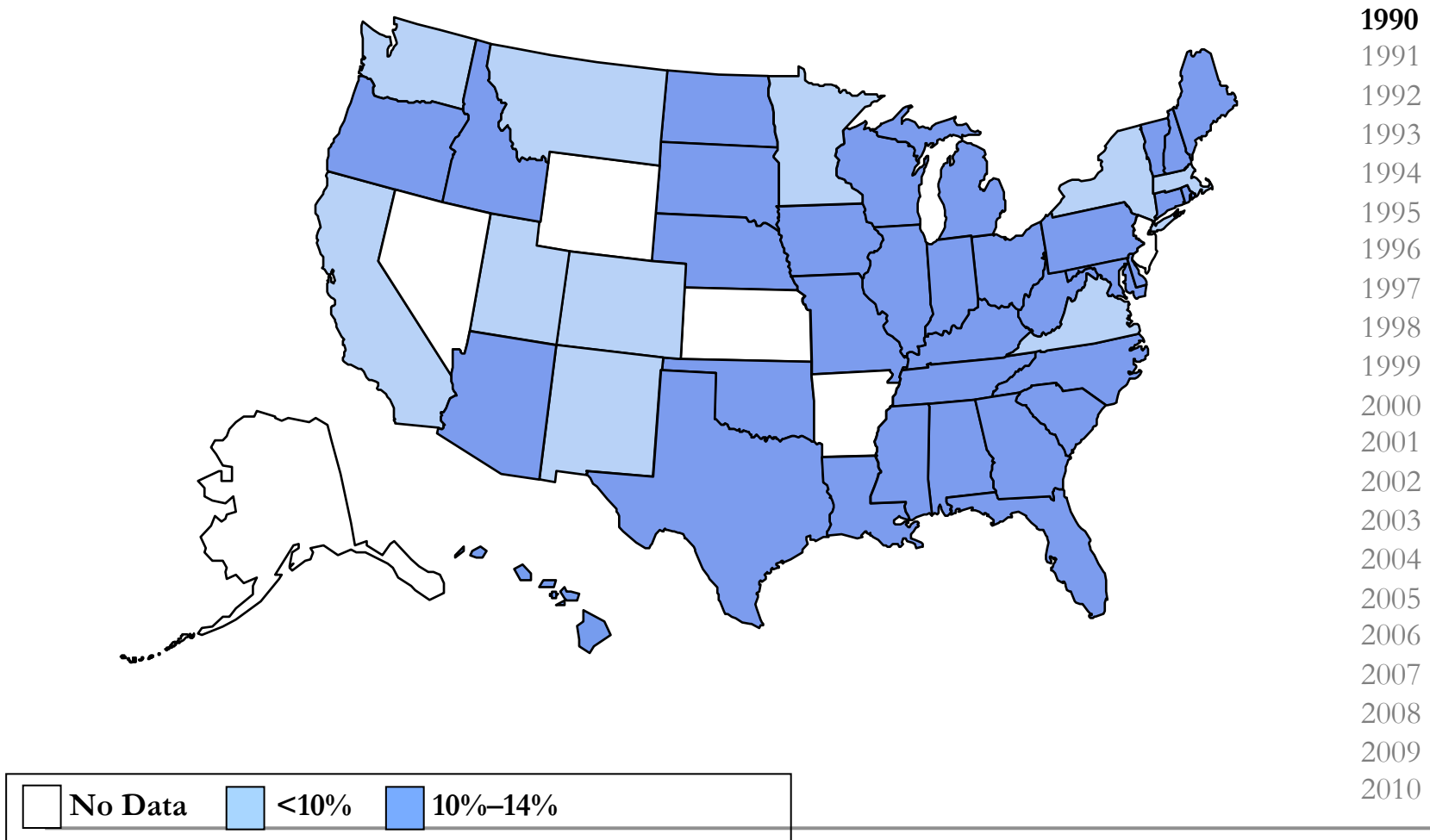


UNDERSTANDING FOOD

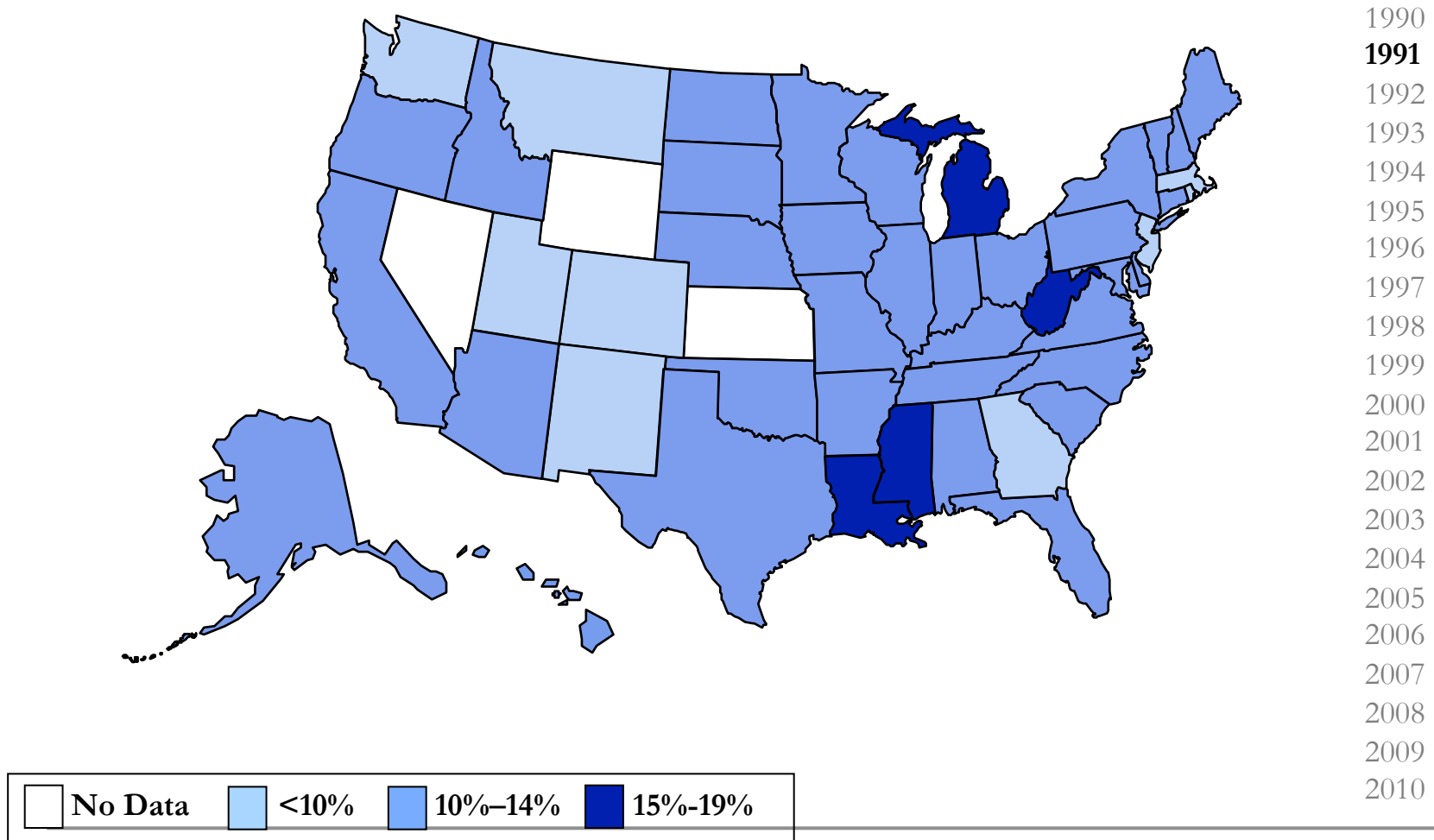
Nutritional Education with Data

15.071x – The Analytics Edge

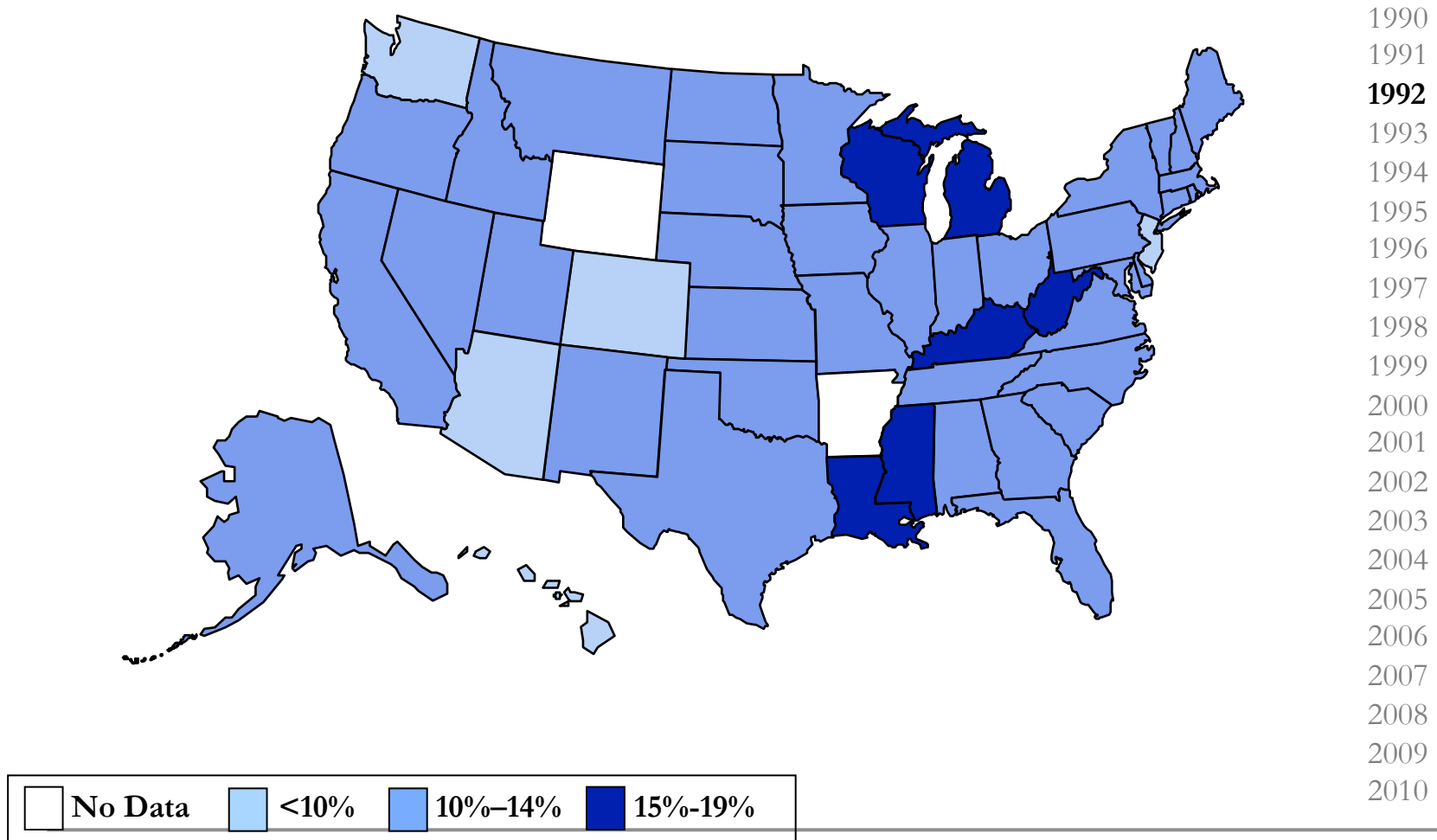
Obesity Trends Among U.S. Adults



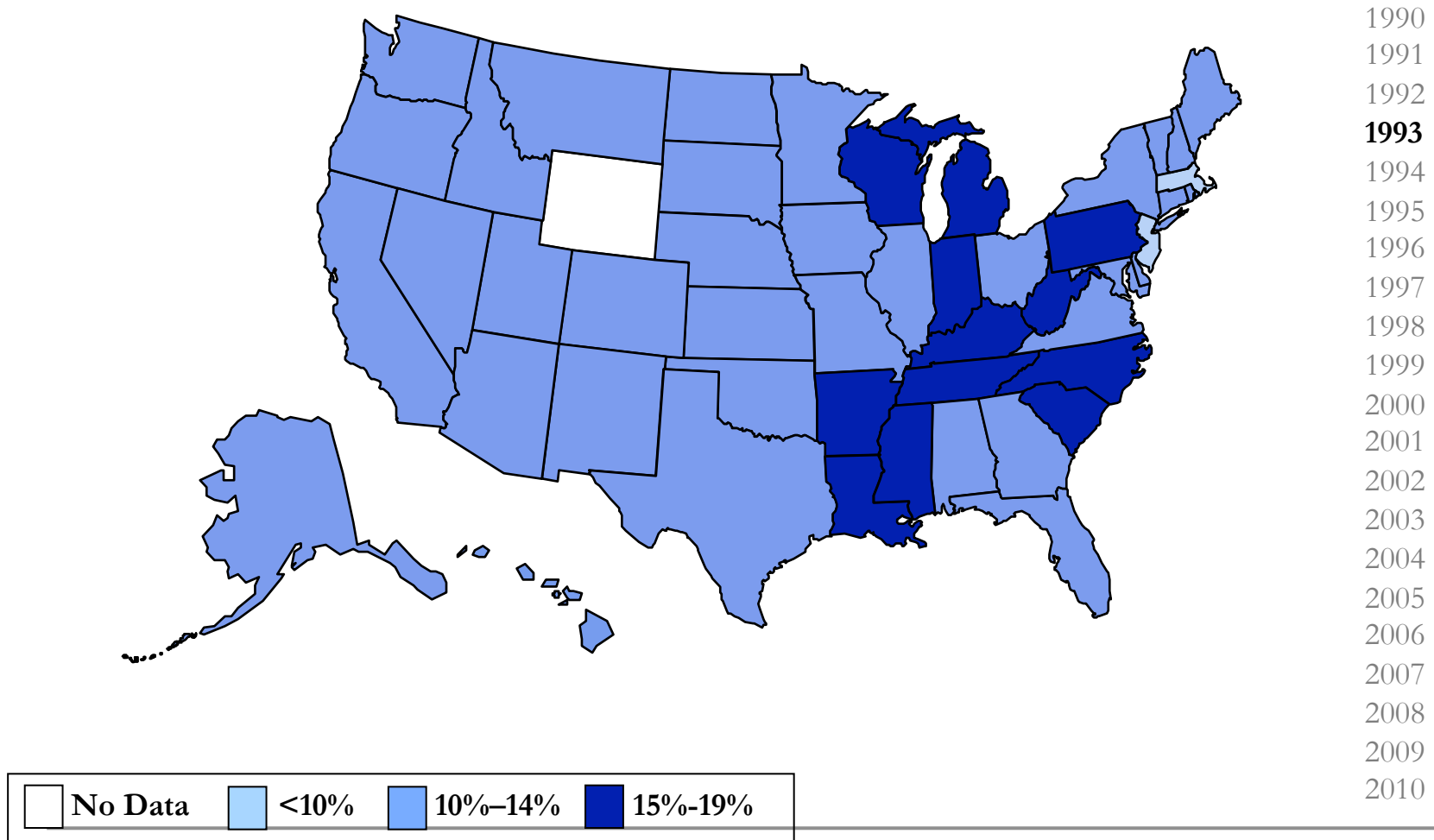
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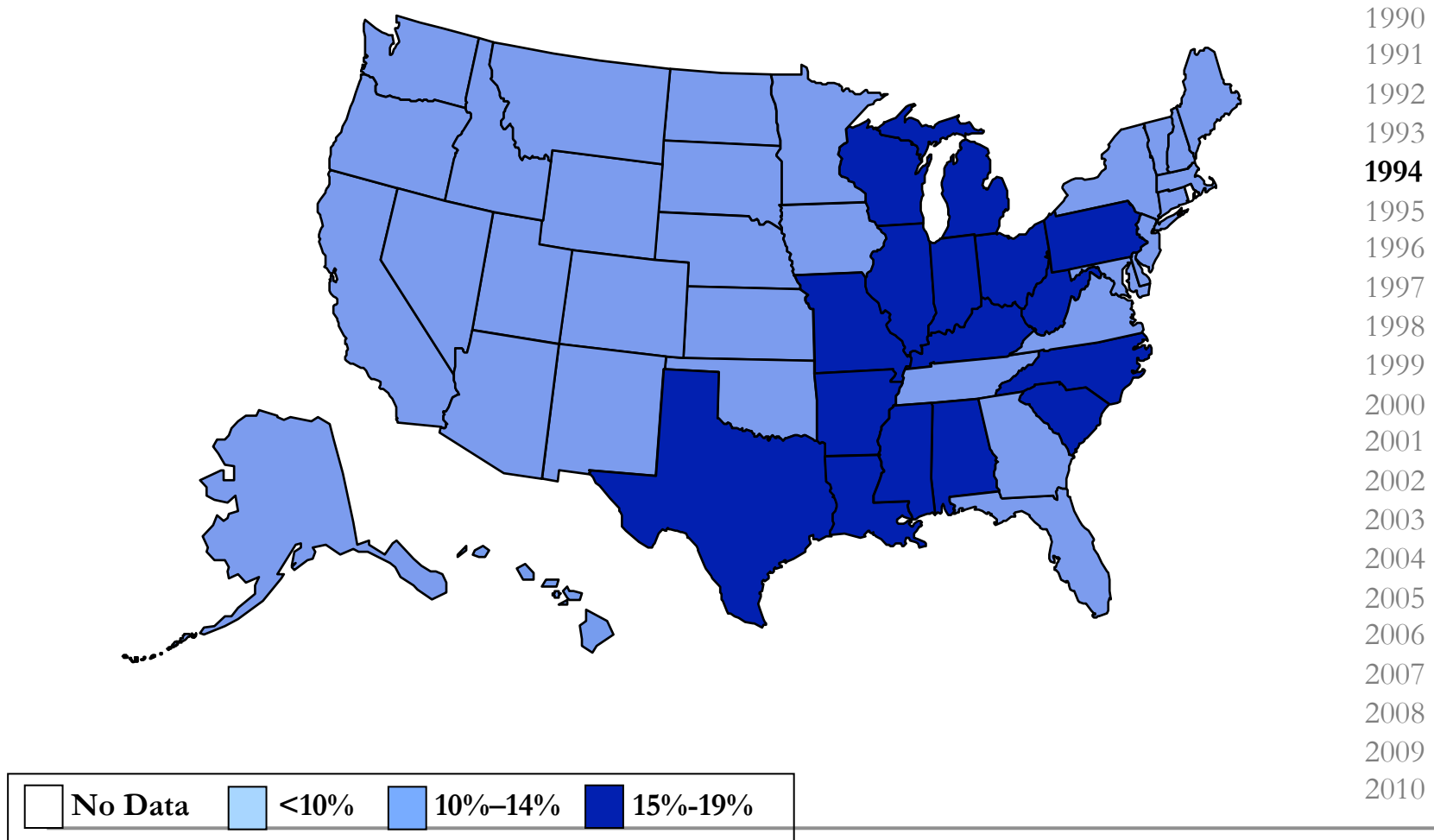
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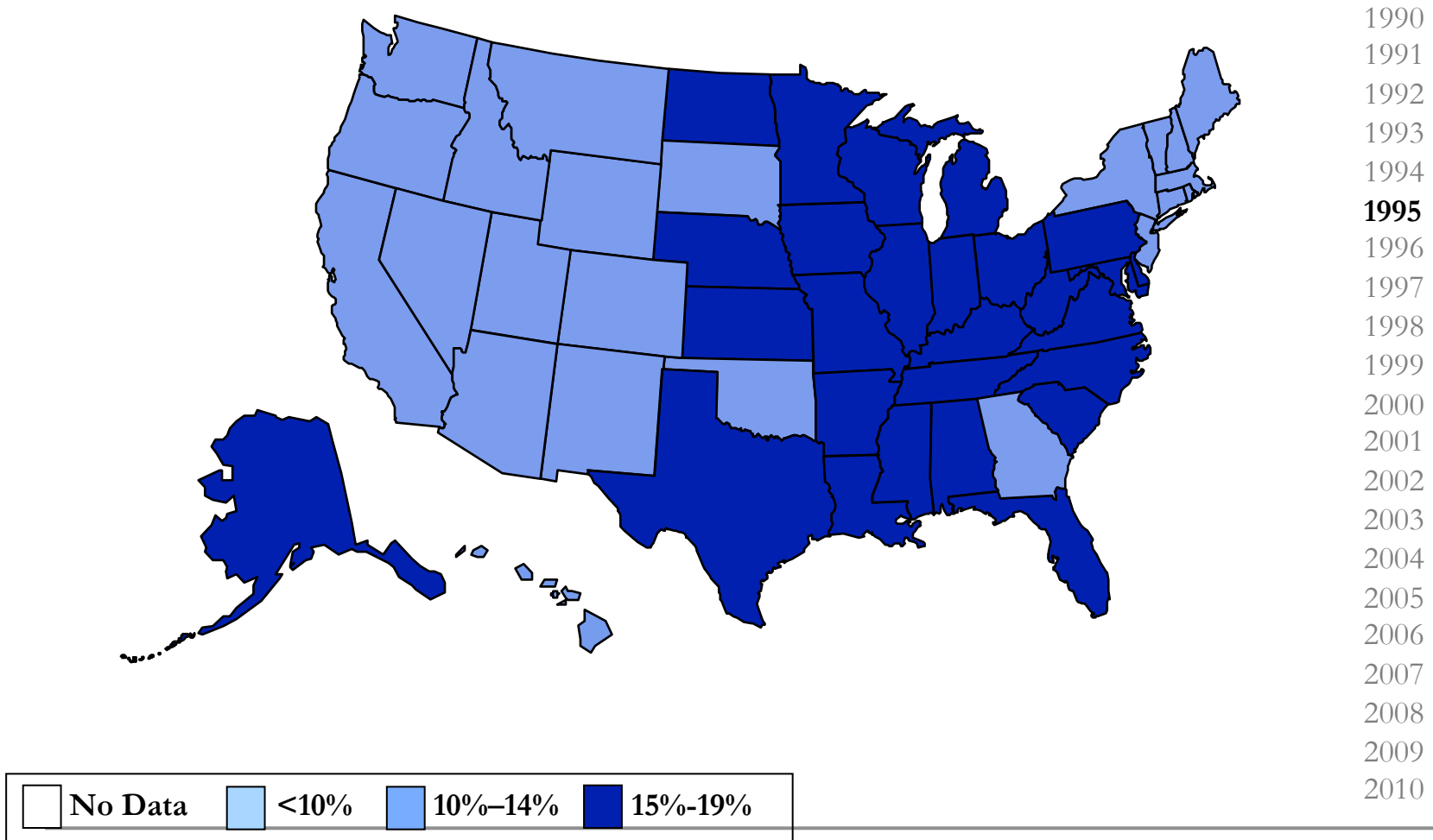
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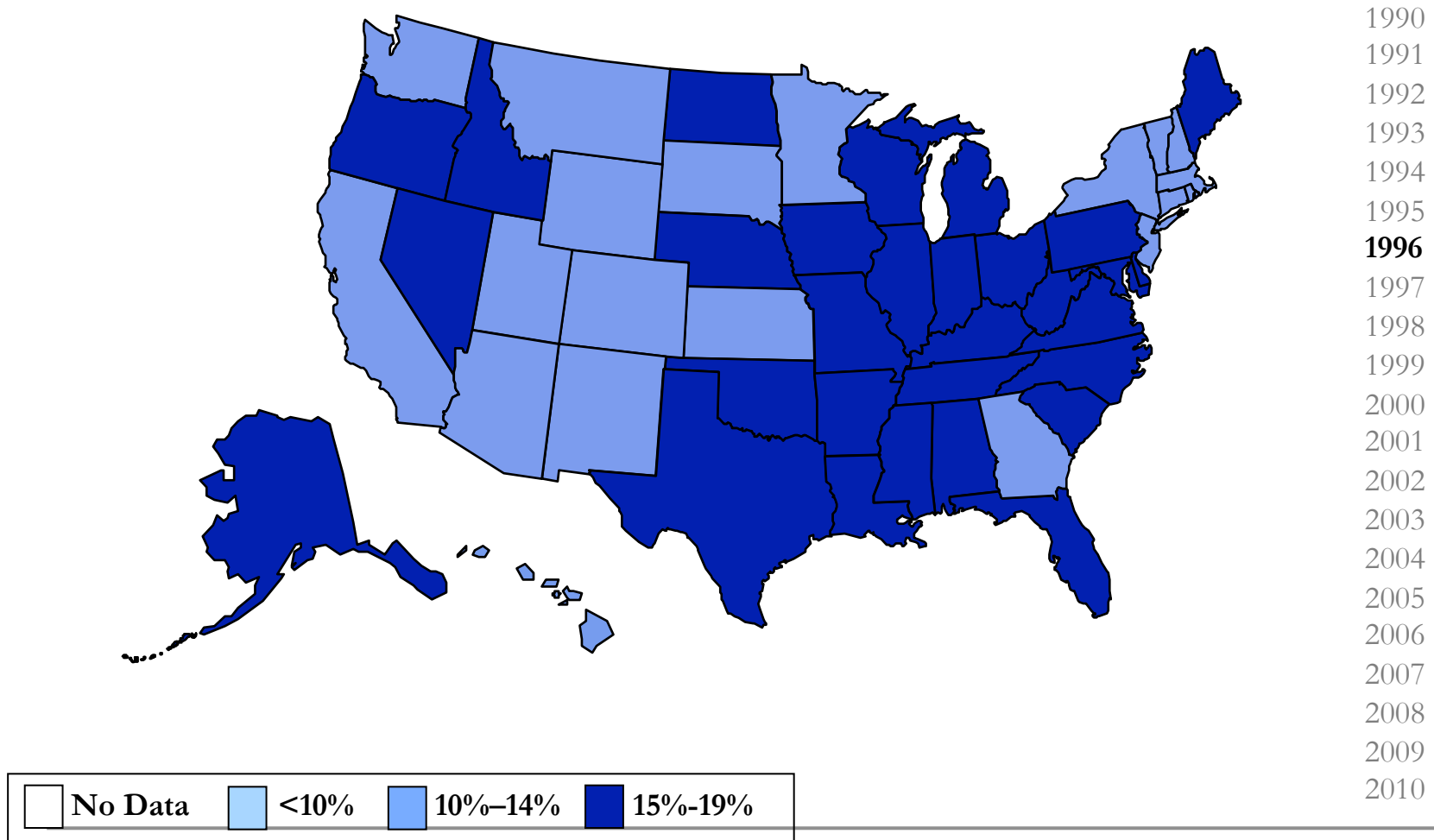
Obesity Trends Among U.S. Adults



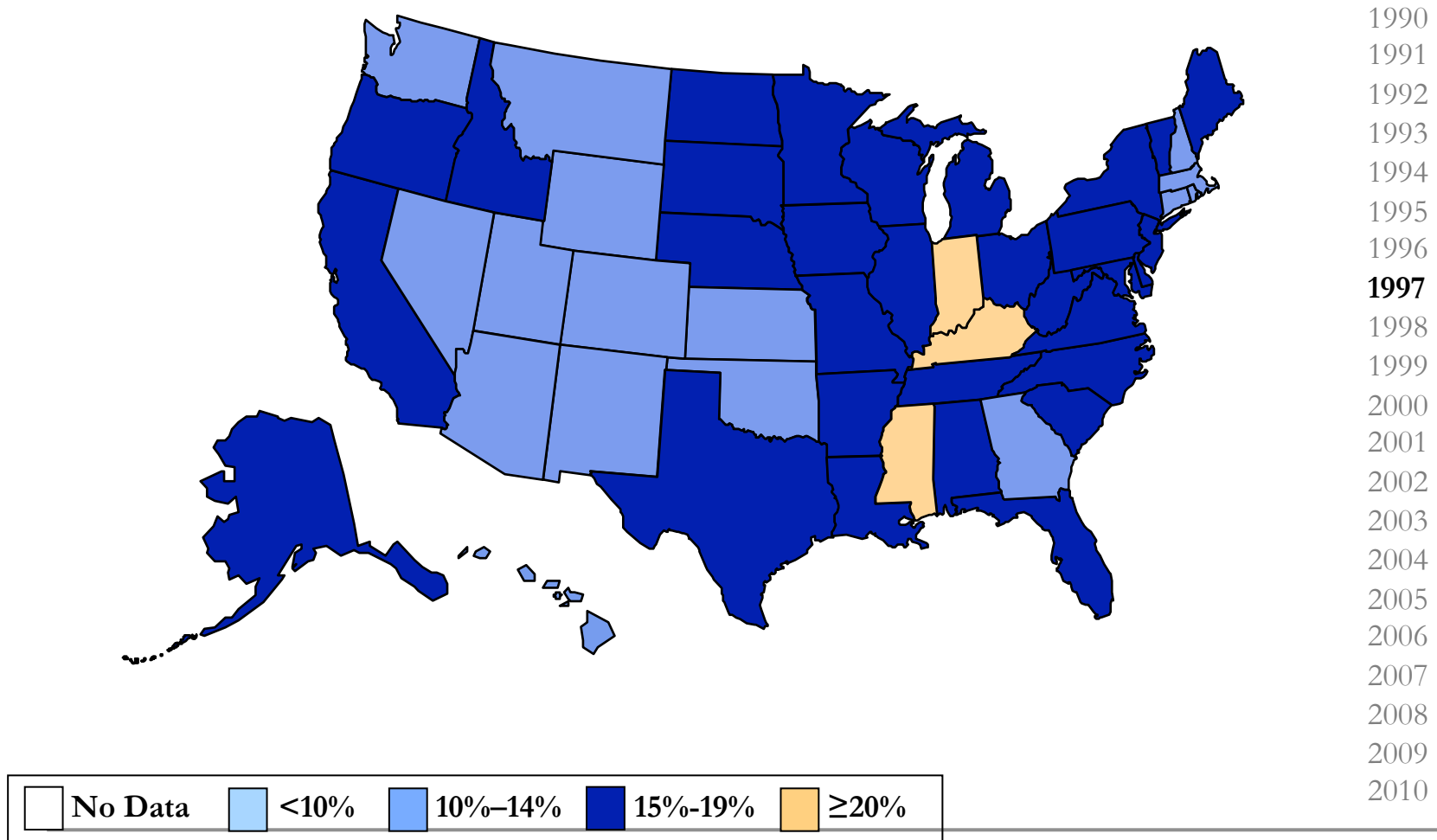
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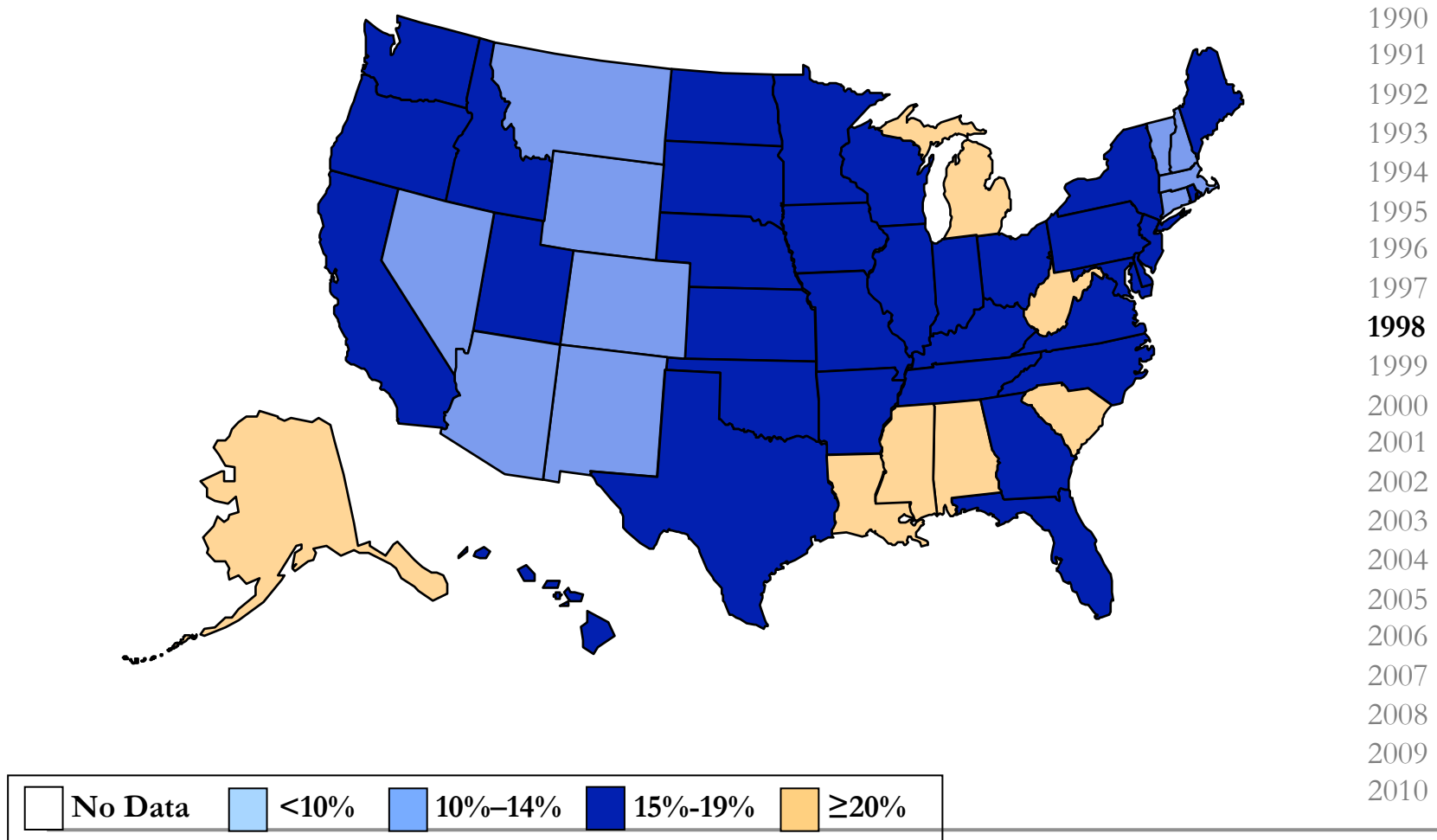
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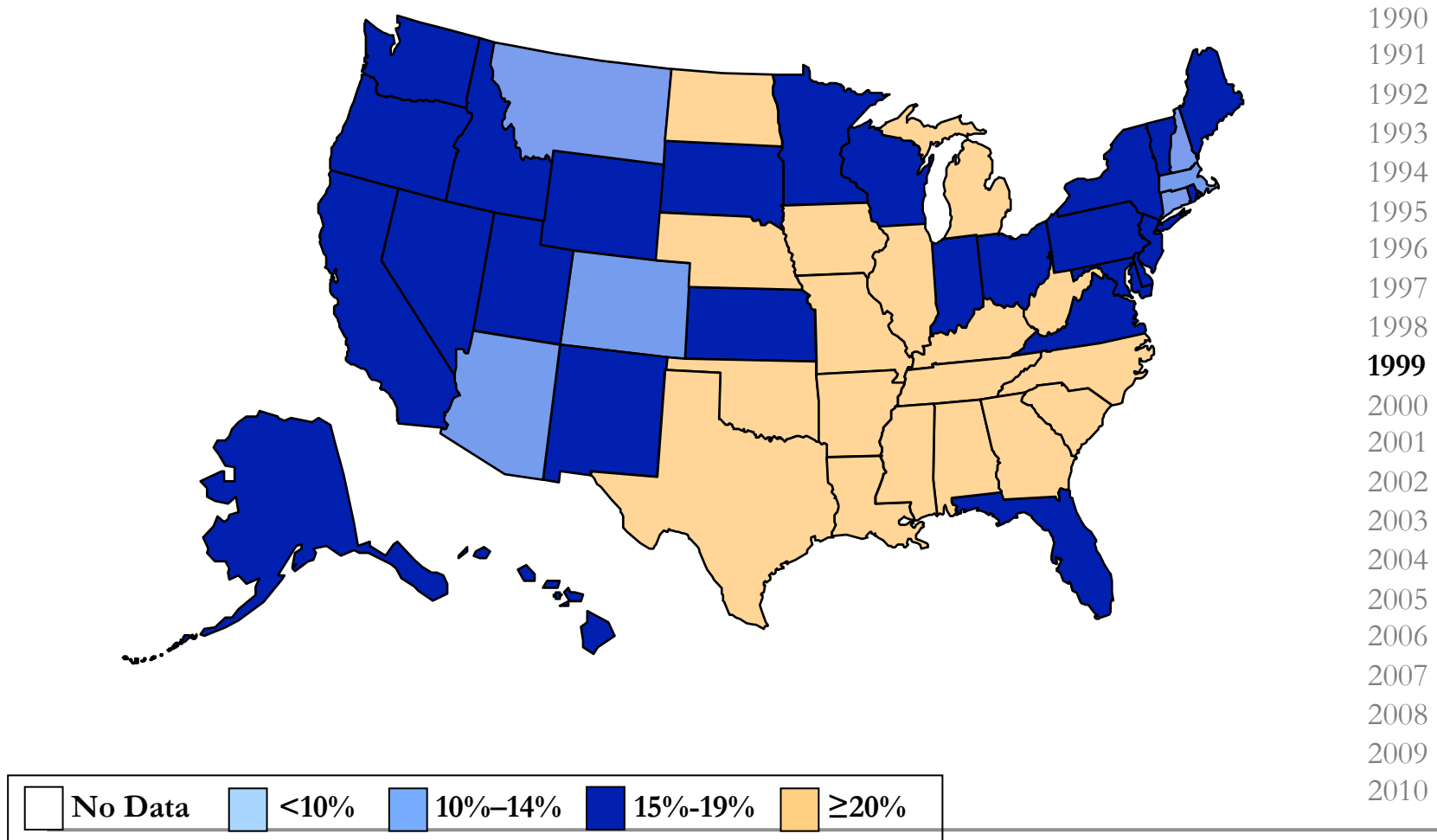
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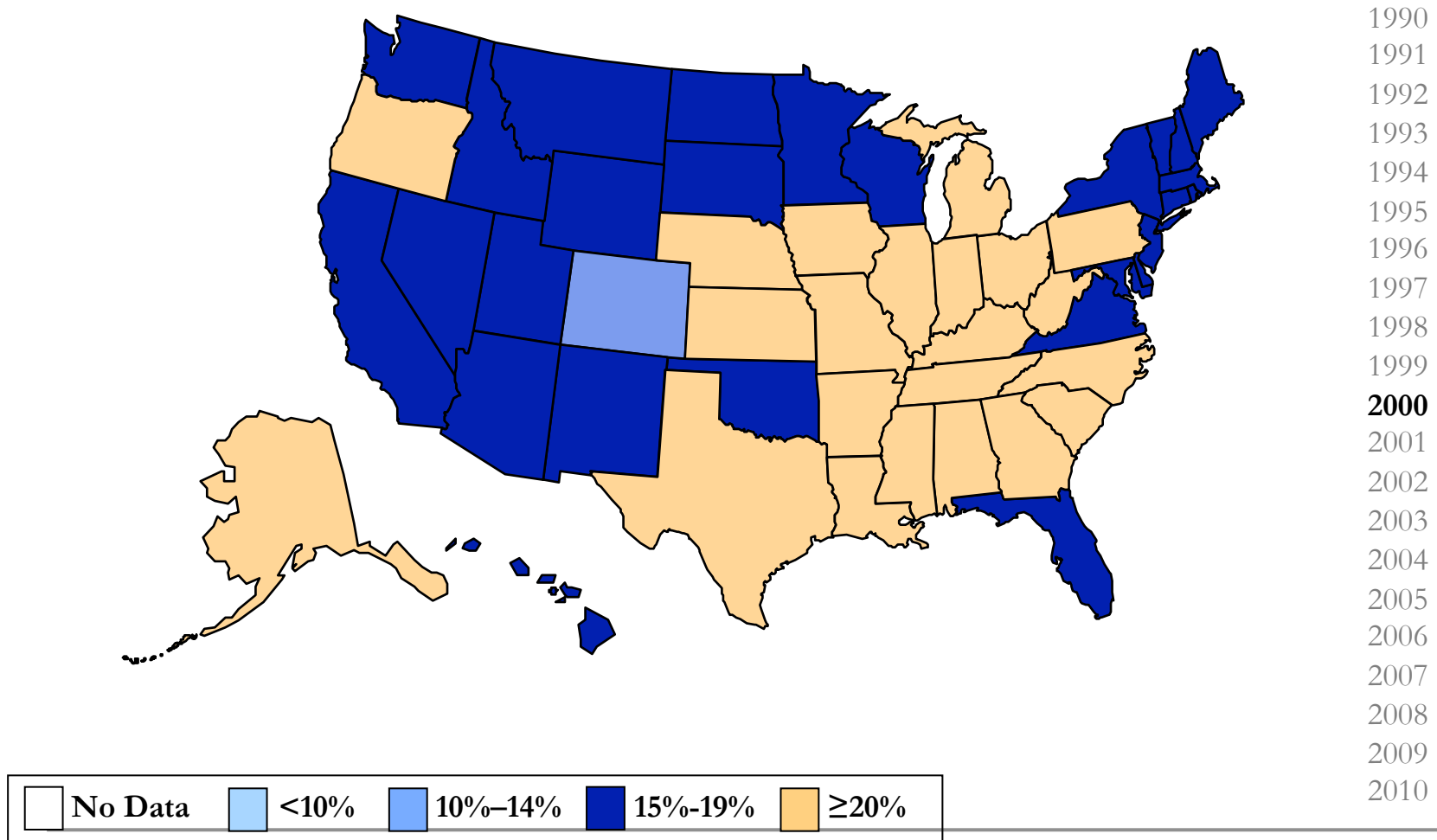
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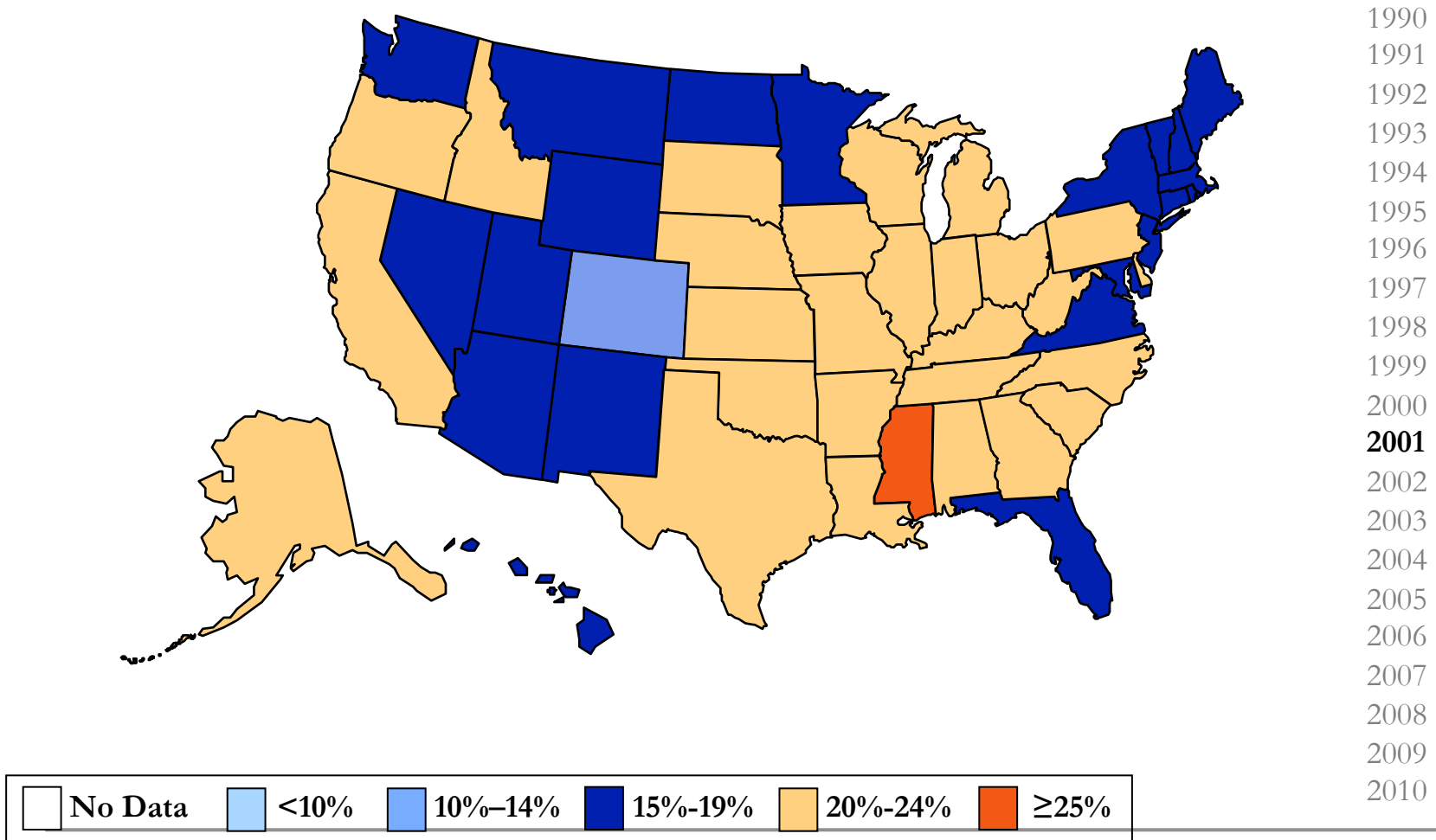
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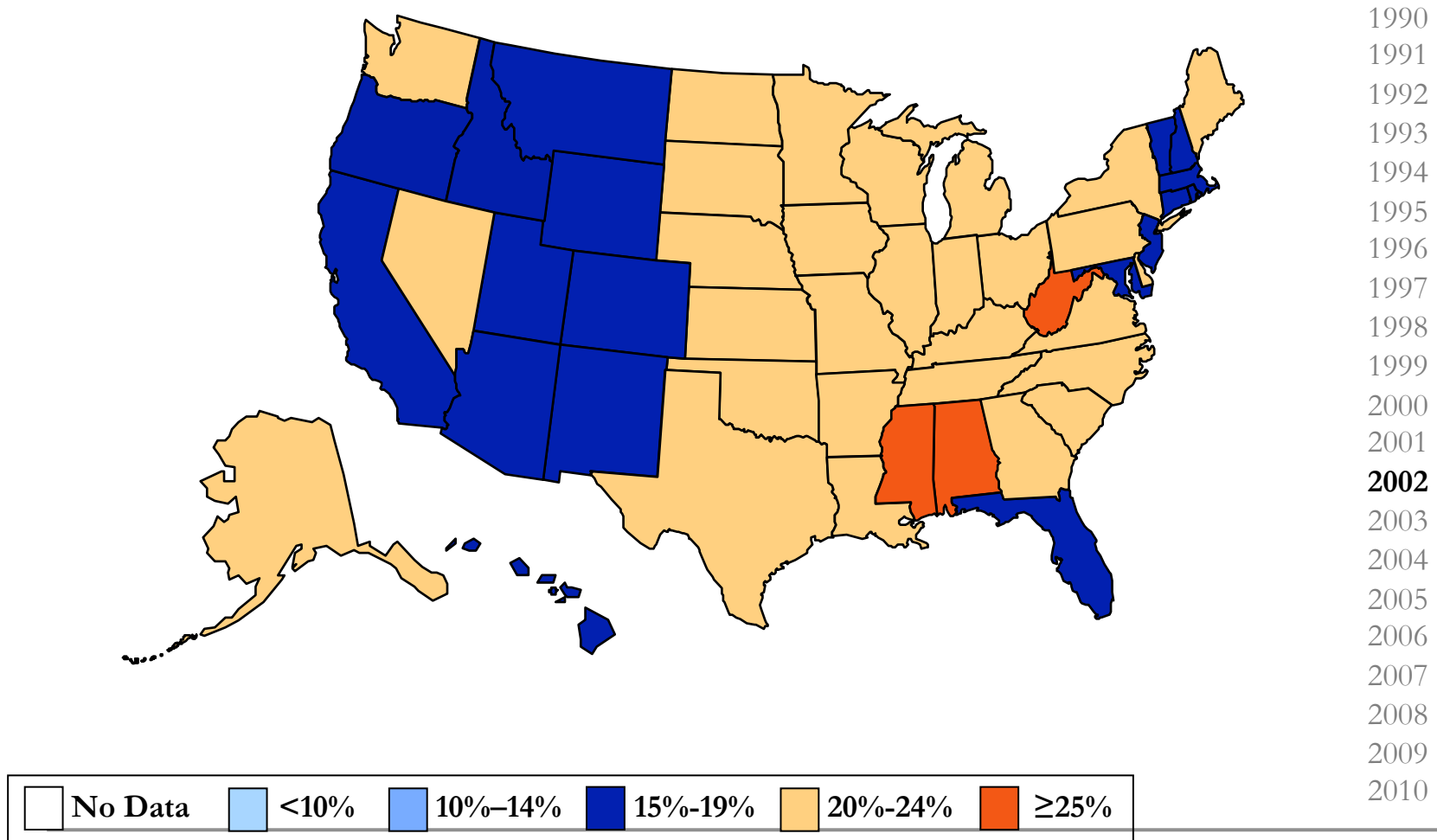
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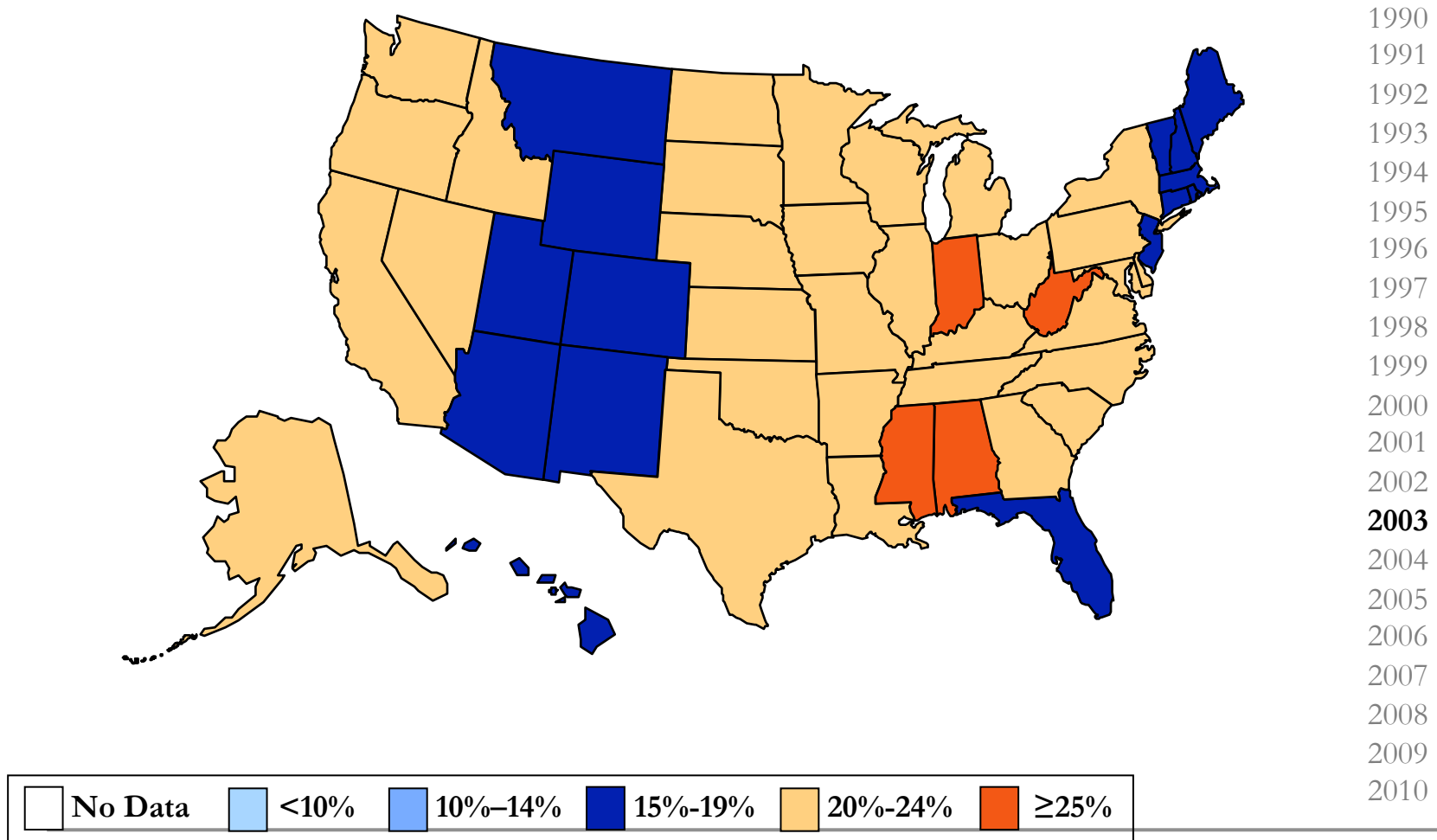
Obesity Trends Among U.S. Adults



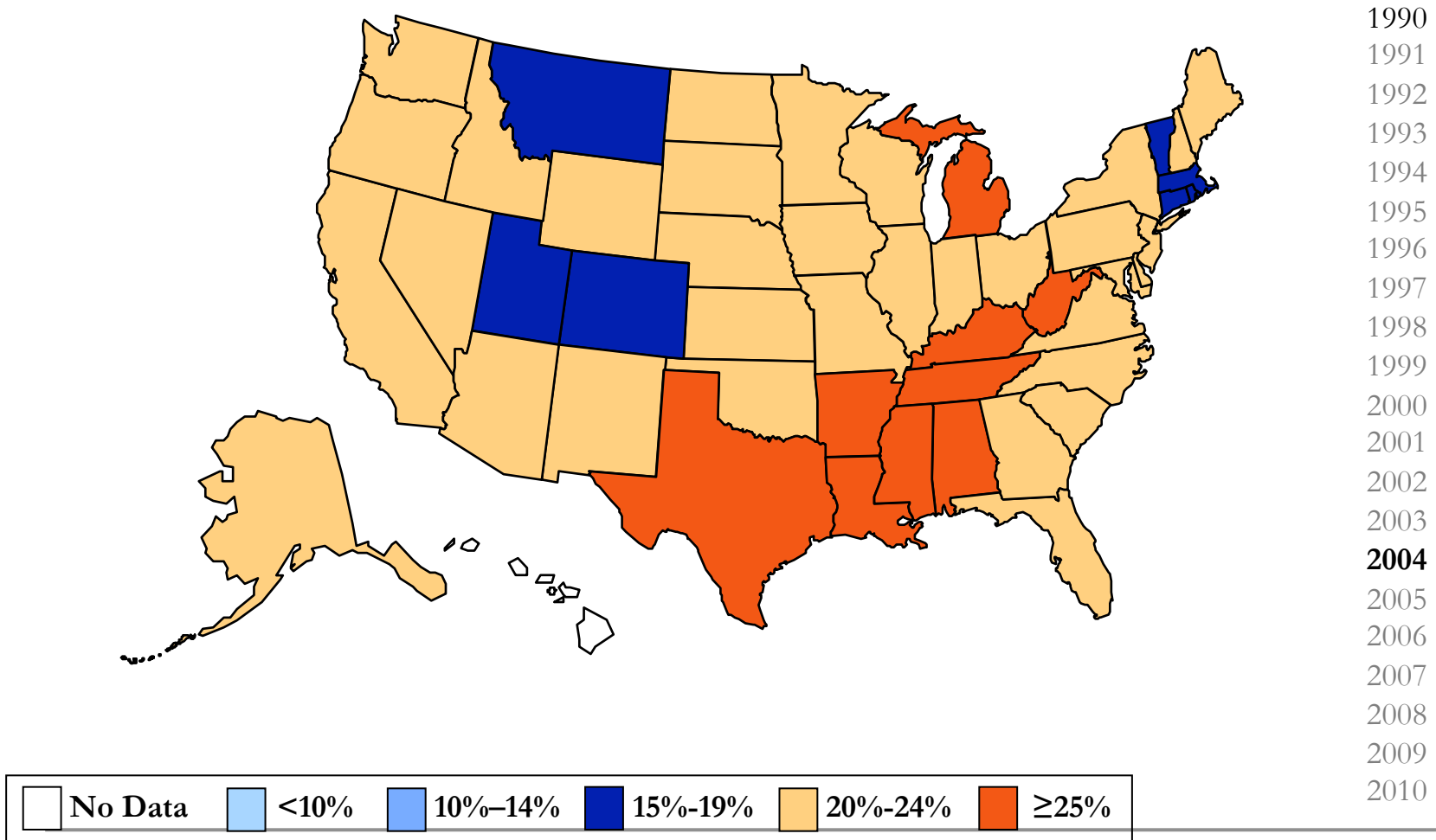
Obesity Trends Among U.S. Adults



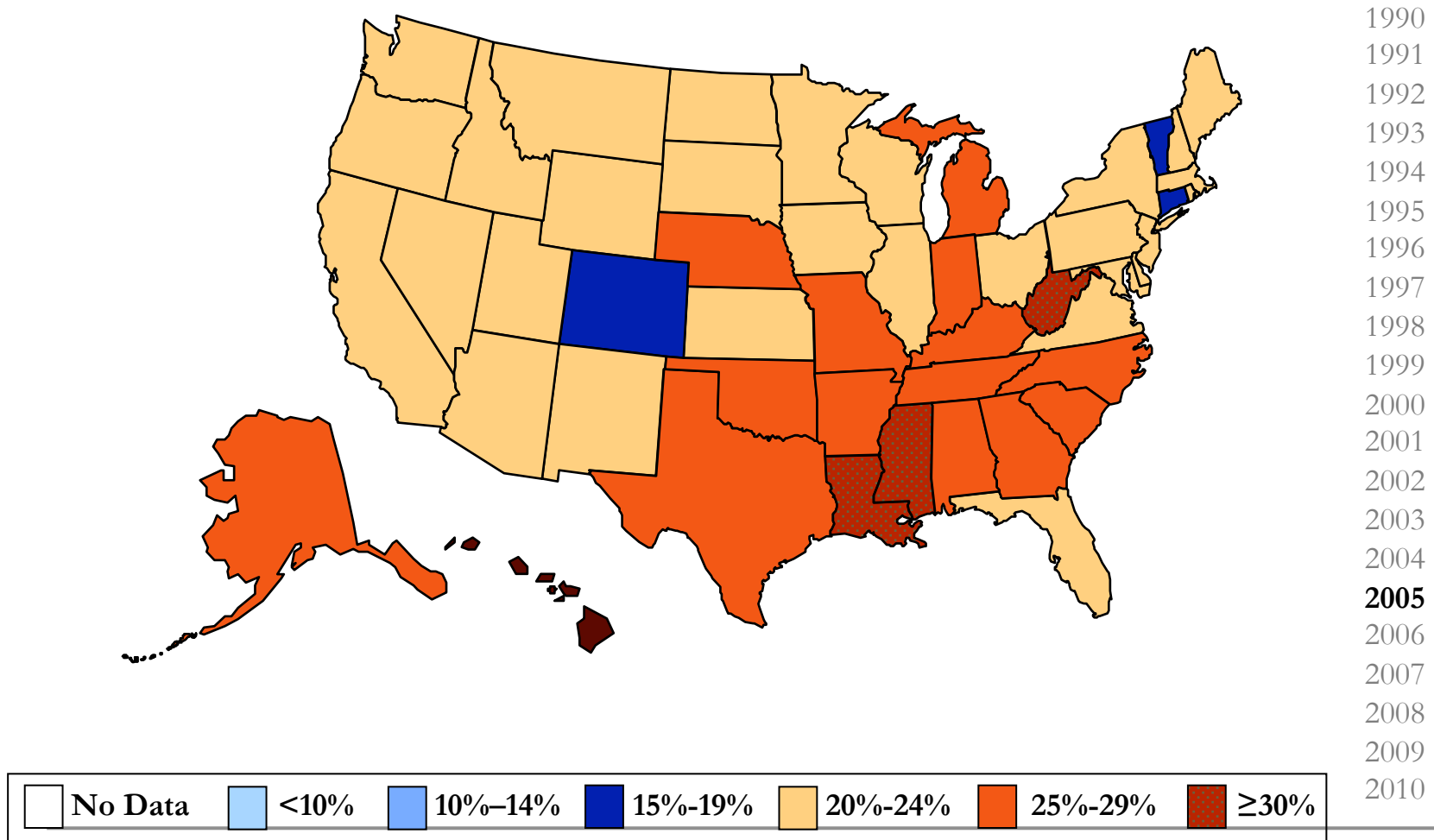
Obesity Trends Among U.S. Adults



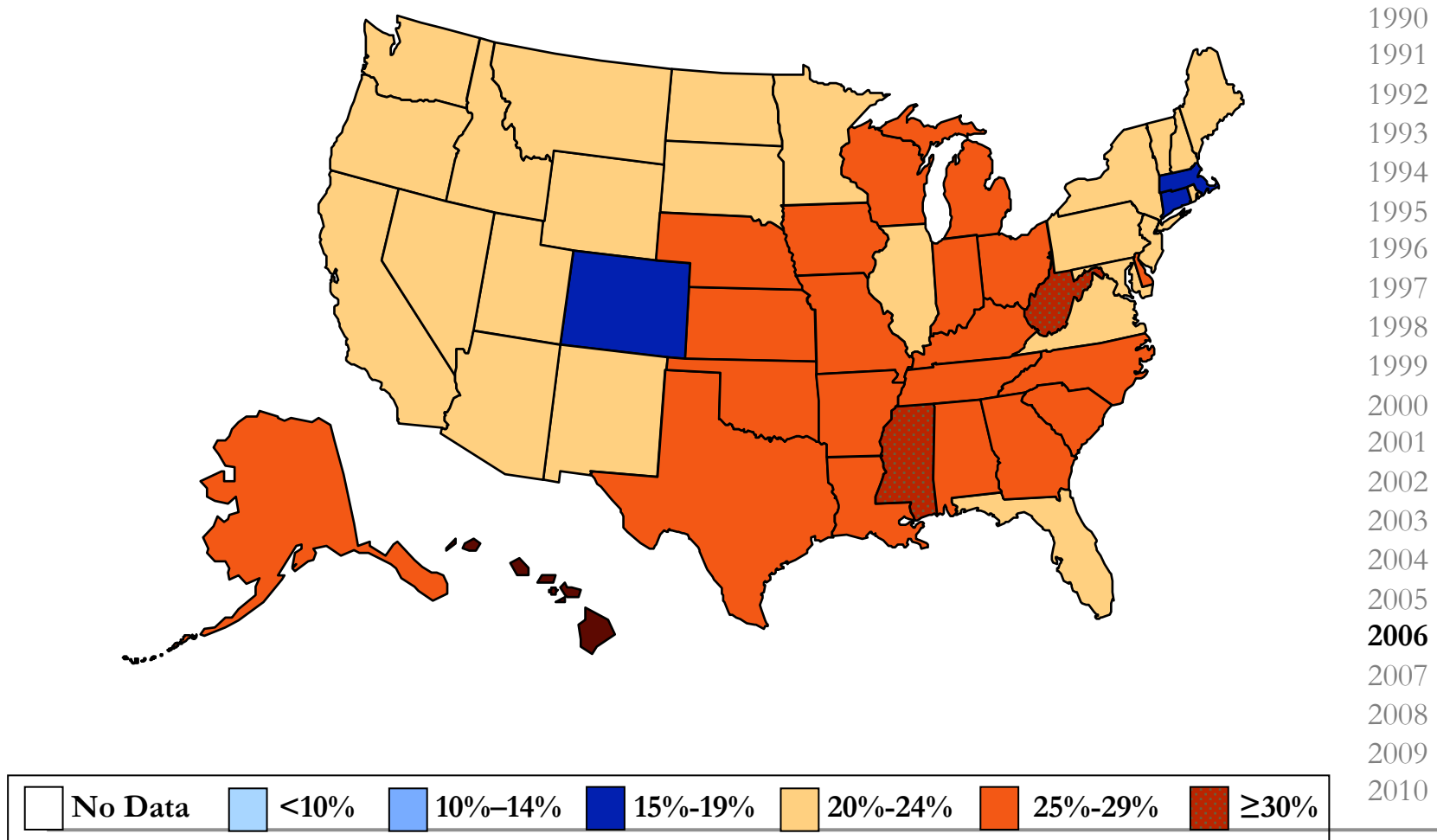
Obesity Trends Among U.S. Adults



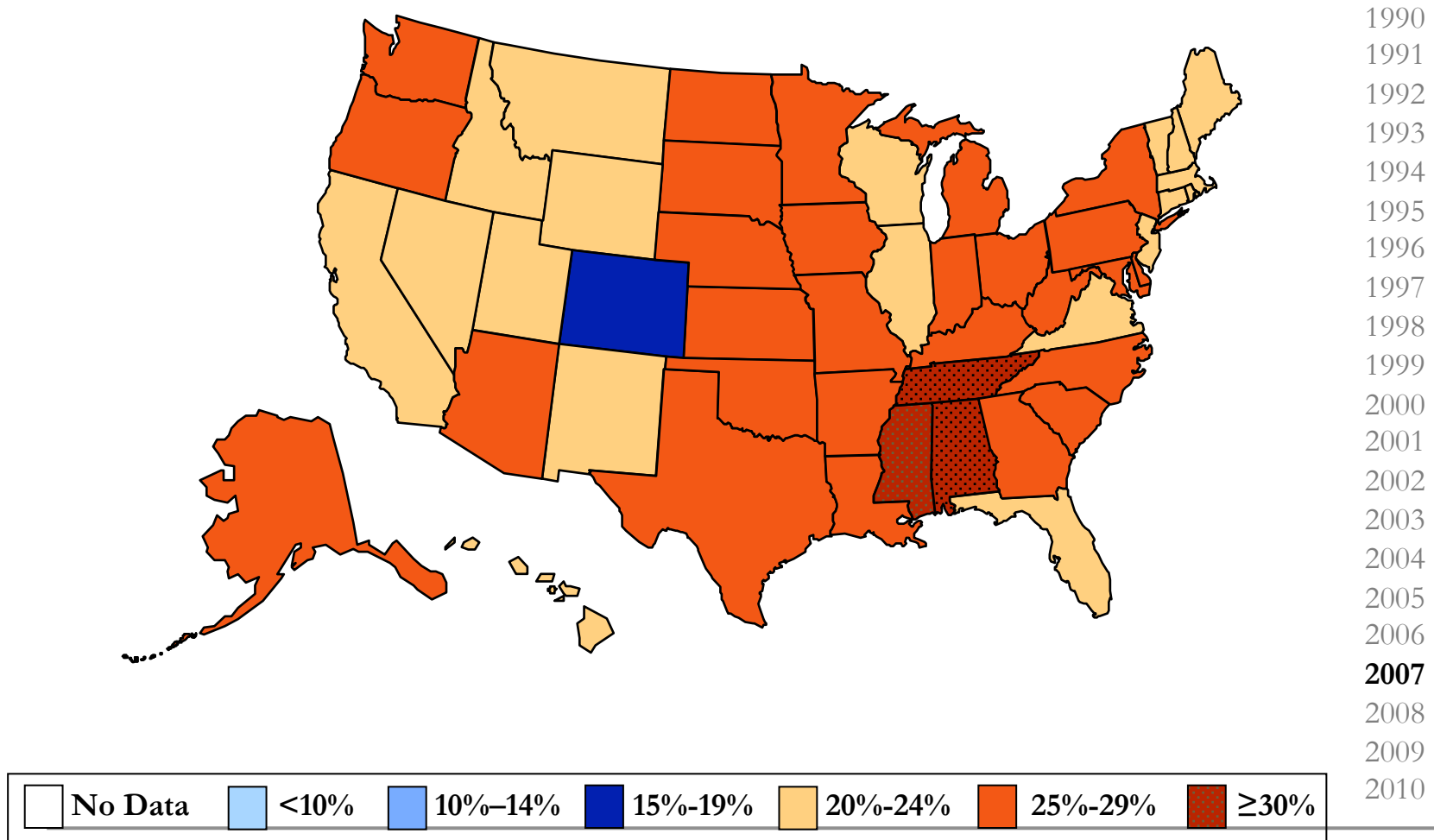
Obesity Trends Among U.S. Adults



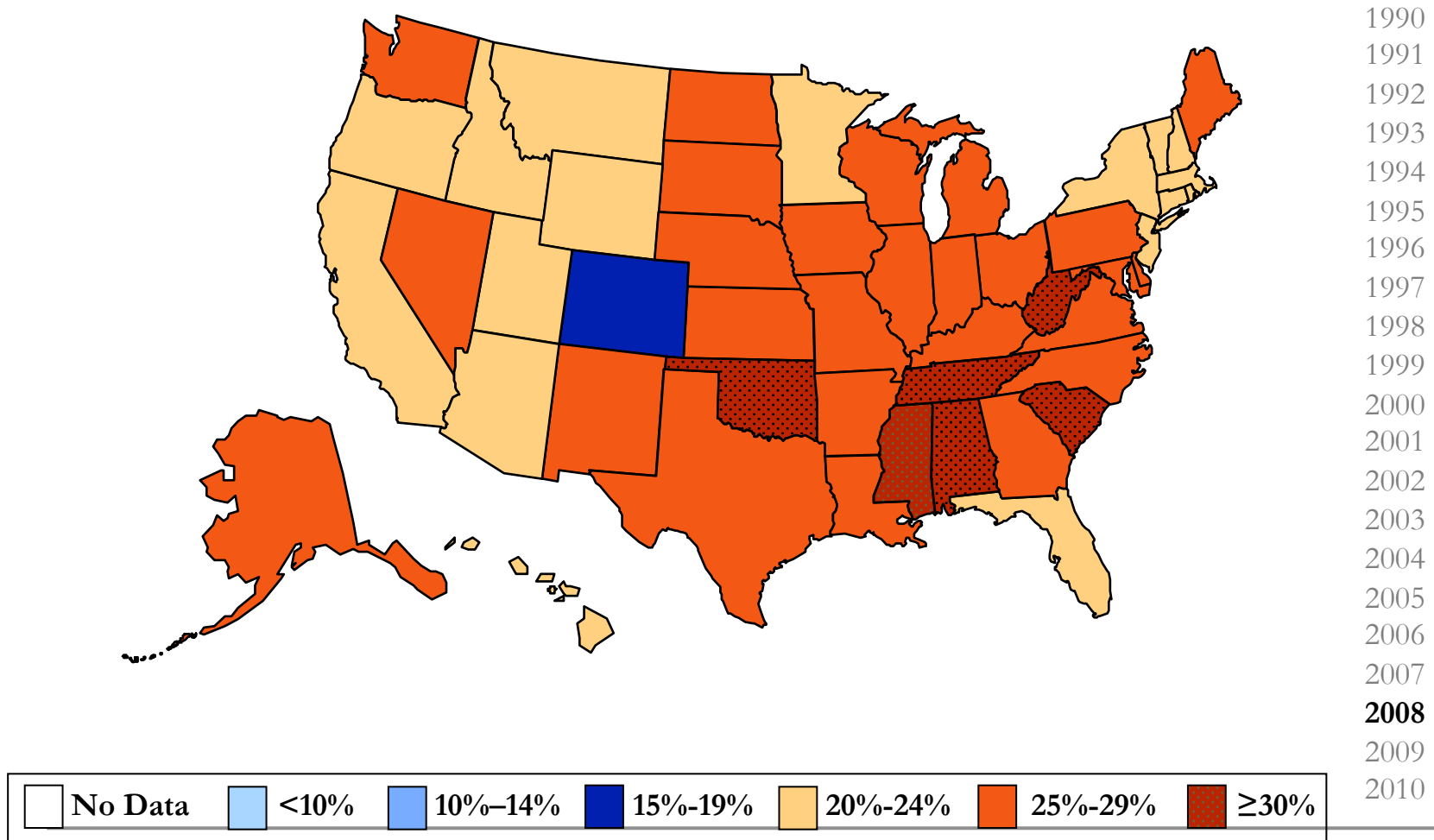
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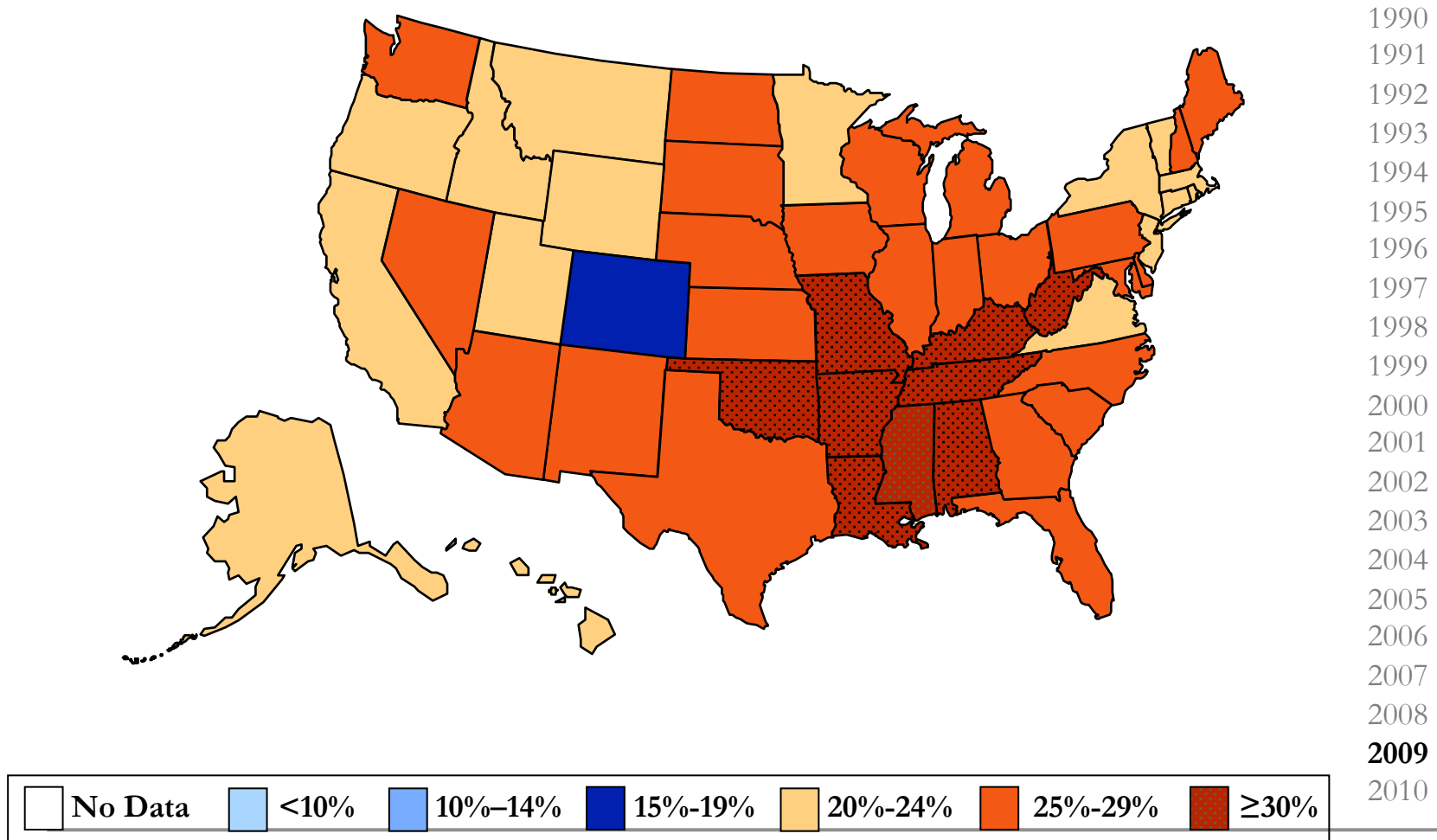
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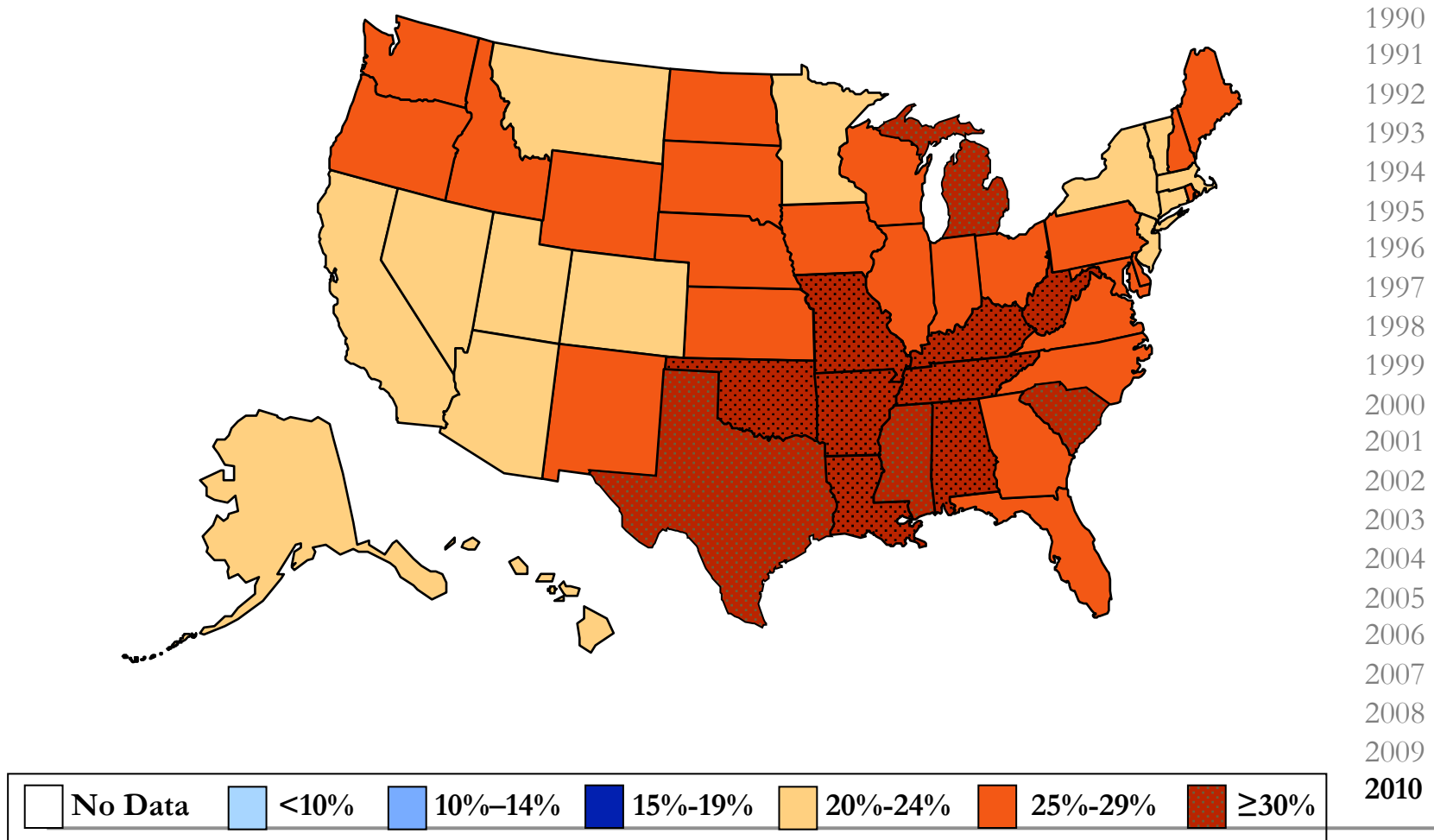
Obesity Trends Among U.S. Adults



Obesity Trends Among U.S. Adults



Obesity Trends Among U.S. Adults



Obesity



- More than 35% of US adults are obese
 - Obesity-related conditions are some of the leading causes of preventable death (heart disease, stroke, type II diabetes)
- Worldwide, obesity has nearly doubled since 1980
- 65% of the world's population lives in countries where overweight and obesity kills more people than underweight

Nutrition



- Good nutrition is essential for a person's overall health and well-being, and is now more important than ever
- Hundreds of nutrition and weight-loss applications
 - 15% of adults with cell phones use health applications on their devices
- These apps are powered by the USDA Food Database

USDA Food Database



- The United States Department of Agriculture distributes a database of nutritional information for over 7,000 different food items
- Used as the foundation for most food and nutrient databases in the US
- Includes information about all nutrients
 - Calories, carbs, protein, fat, sodium, . . .

Summarizing by Group: tapply

- The tapply function takes three arguments

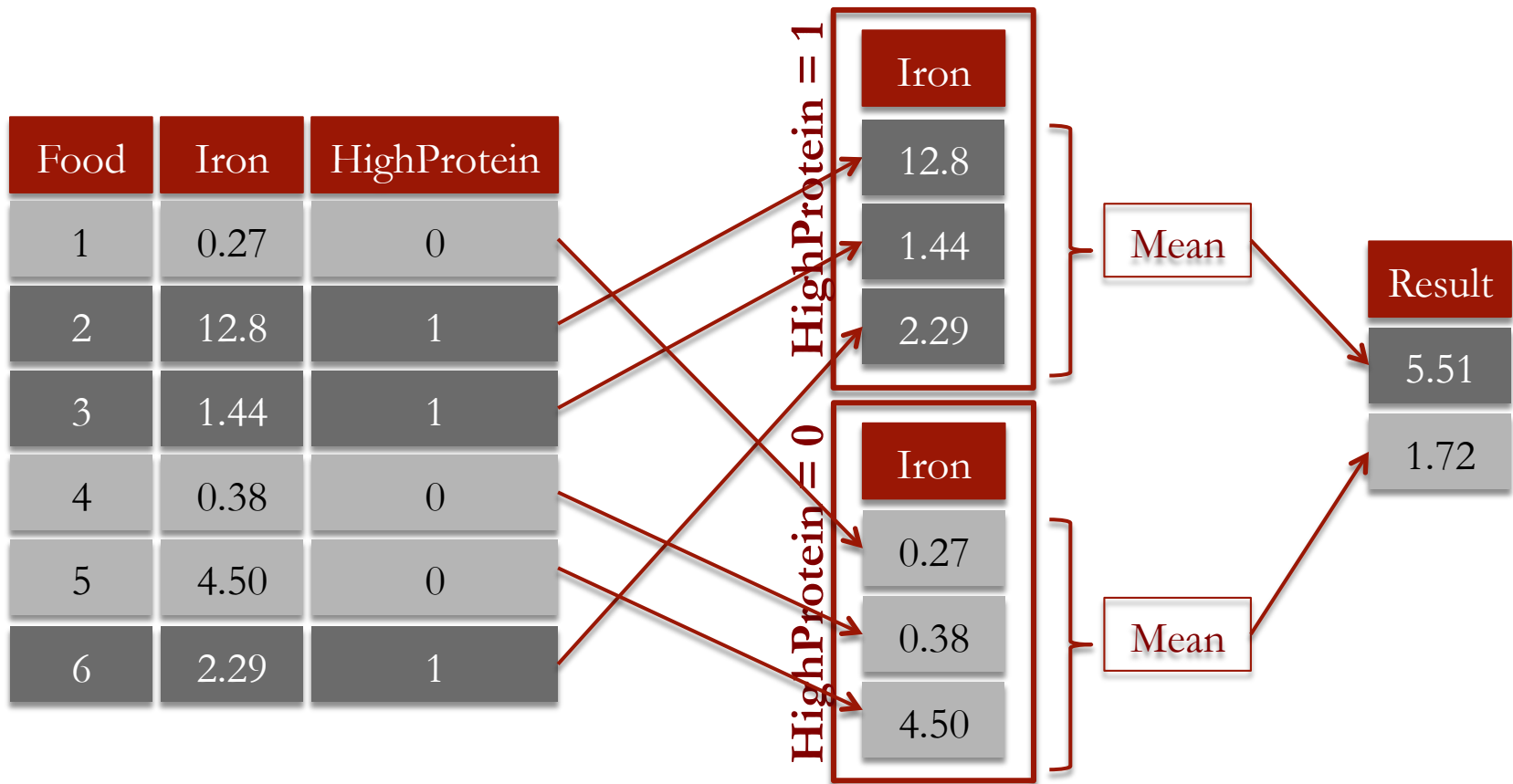
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tapply(argument1, argument2, argument3)
```

- Group argument 1 by argument 2 and apply argument 3
- To compute the average amount of iron, sorted by high and low protein

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tapply(USDA$Iron, USDA$HighProtein, mean, na.rm=TRUE)
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What exactly does tapply do?

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