

# Obesity and Physical Inactivity in Rural America

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At the Heart of Public Health Policy



# Obesity

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- How “big” is the problem
  - ◆ Among adults
  - ◆ Among kids
- What are some fixable barriers?



# What is “obese,” anyway?

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- **Obese:** BMI of 30 or more
  - ◆ For a 5'10" person: 210 pounds
- **Overweight:** BMI of 25 or more
  - ◆ For a 5'10" person: 175 pounds
- Associated health problems:
  - ◆ Hypertension
  - ◆ Diabetes
  - ◆ High cholesterol



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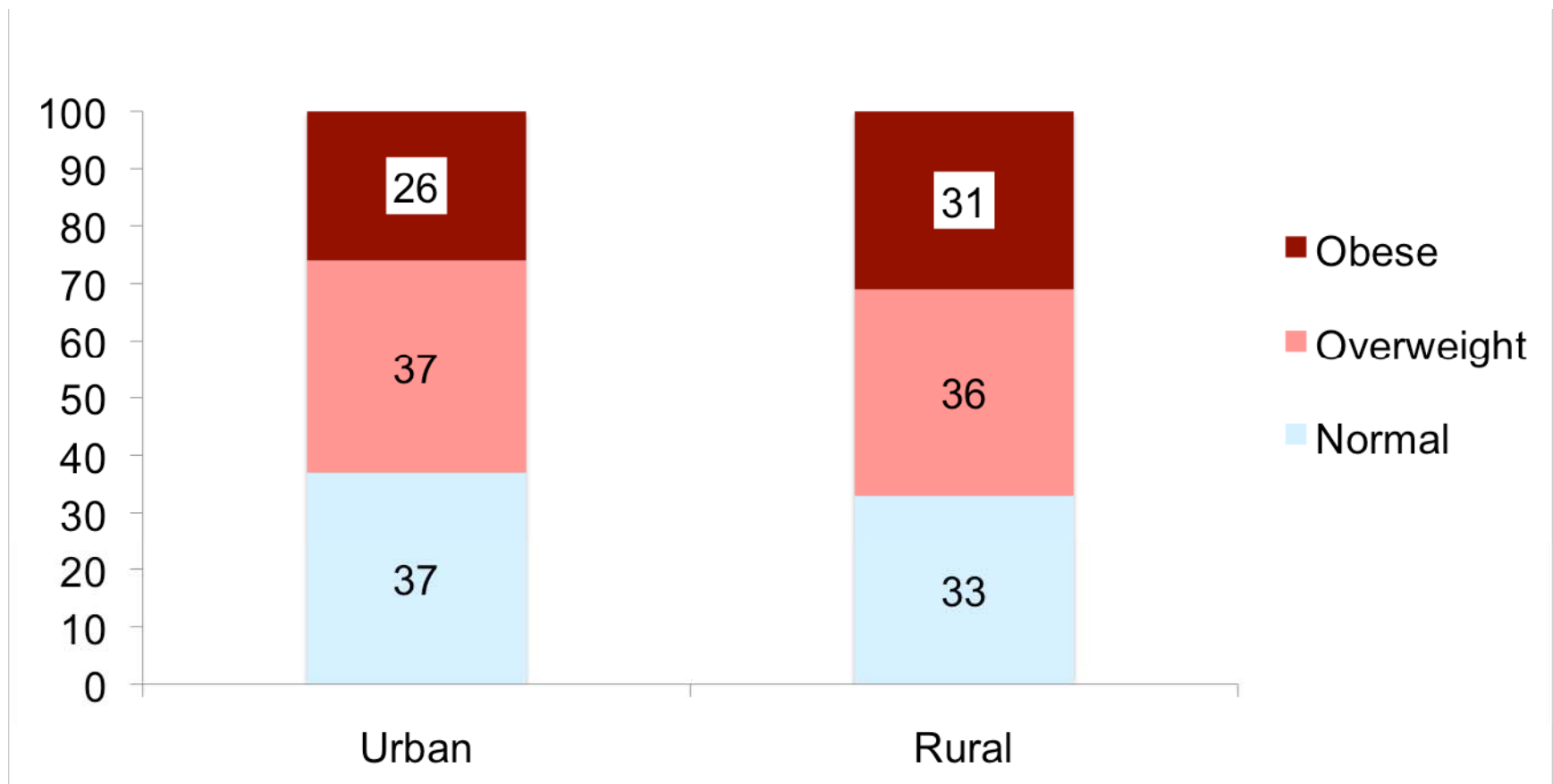
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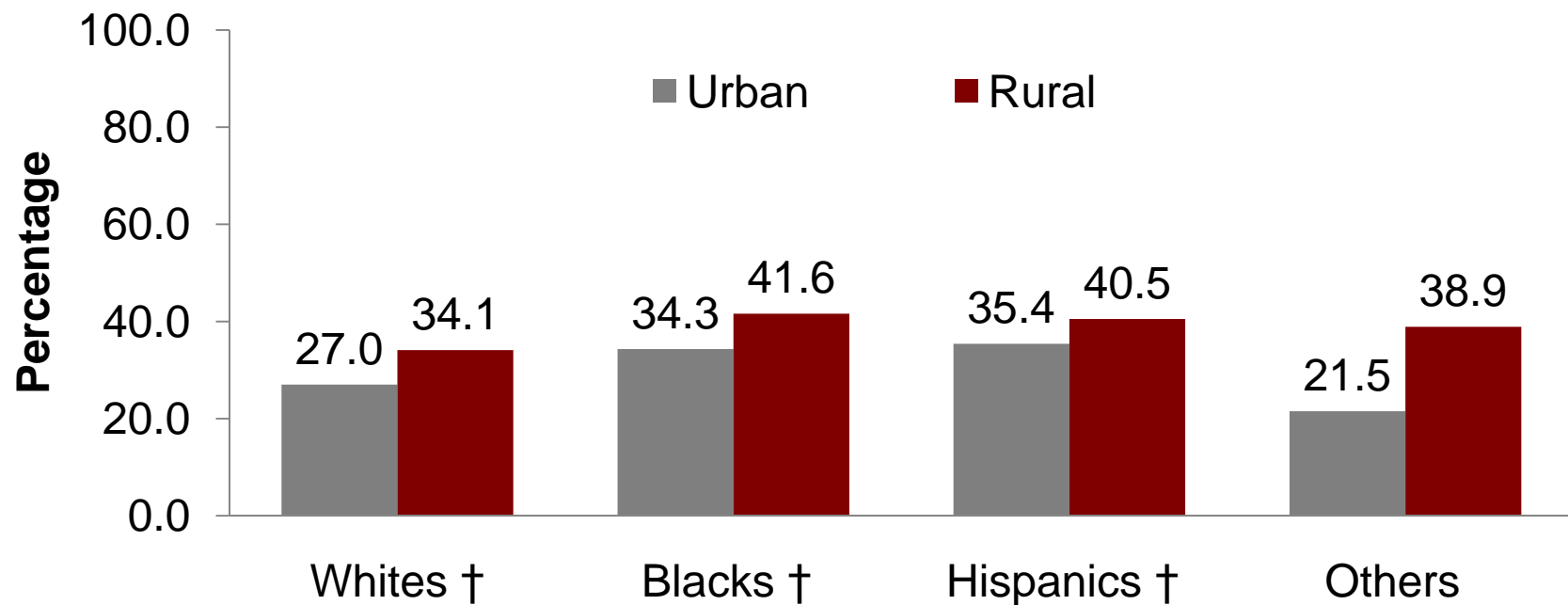
# Rural adults: heavier

- Weight status among adults, by residence, 2008 BRFSS



# Minority populations are at risk

- Adults who are obese, by race & residence, 2008



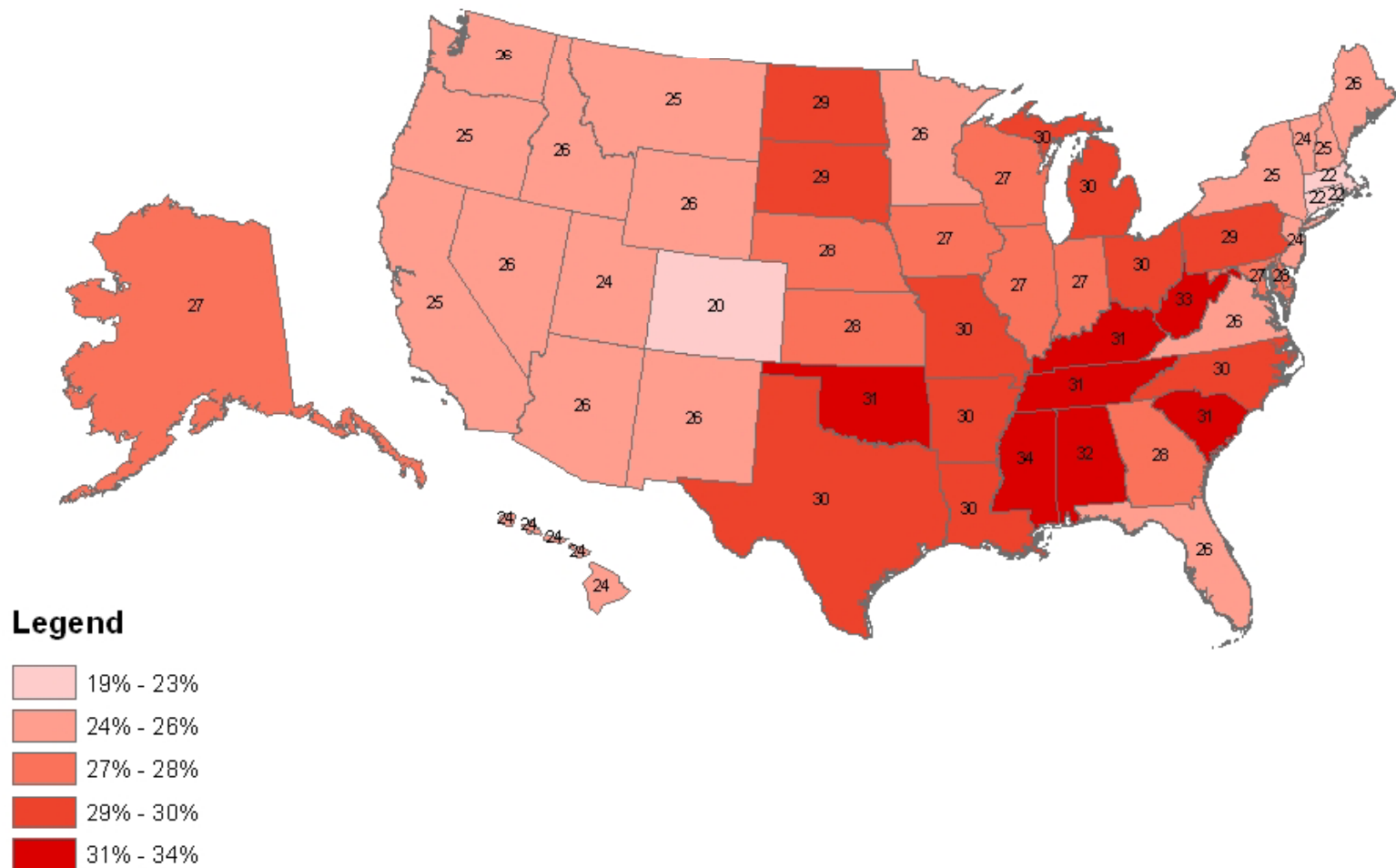
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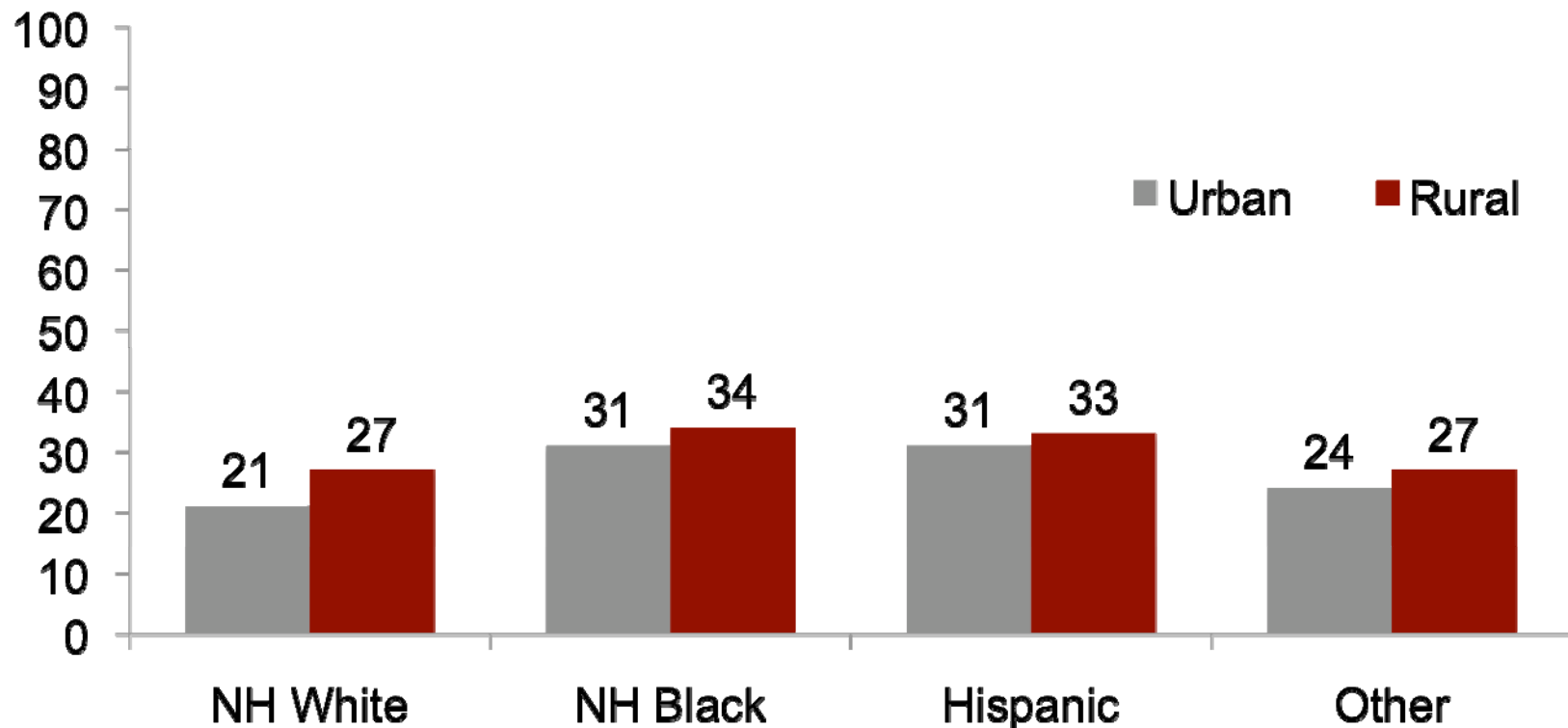
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## Obesity Among Adults in the United States, 2008



# Rural adults: less active

- Adults reporting no physical activity outside work, by race & residence, 2008



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# What is “obese” in children?

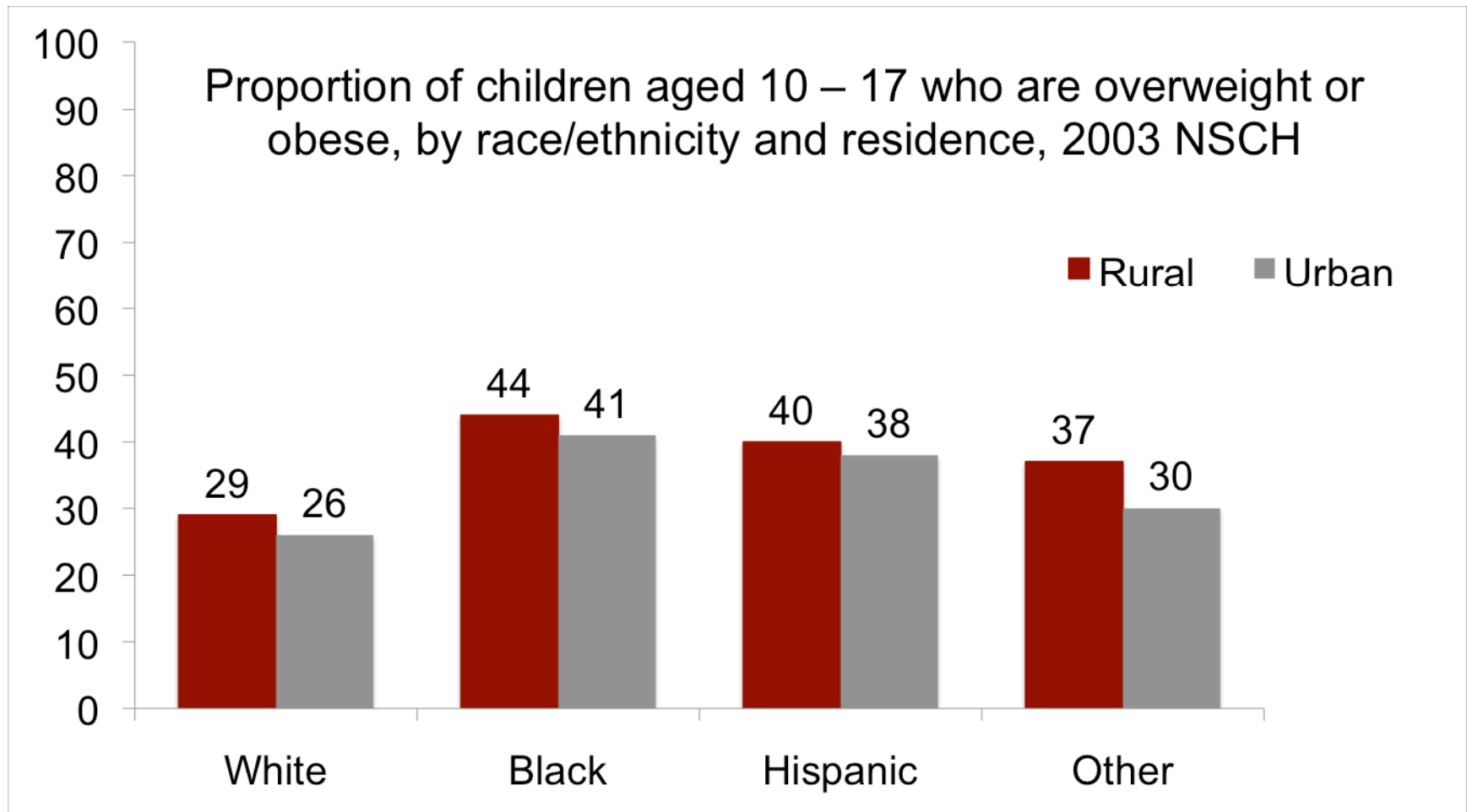
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- At risk for **obesity**: At or above the 95 percentile for BMI for age and sex
- At risk for **overweight**: At or above the 85 percentile for BMI for age and sex
- What used to be unusual (top percentiles) is becoming more common





# Rural kids are heavier, too



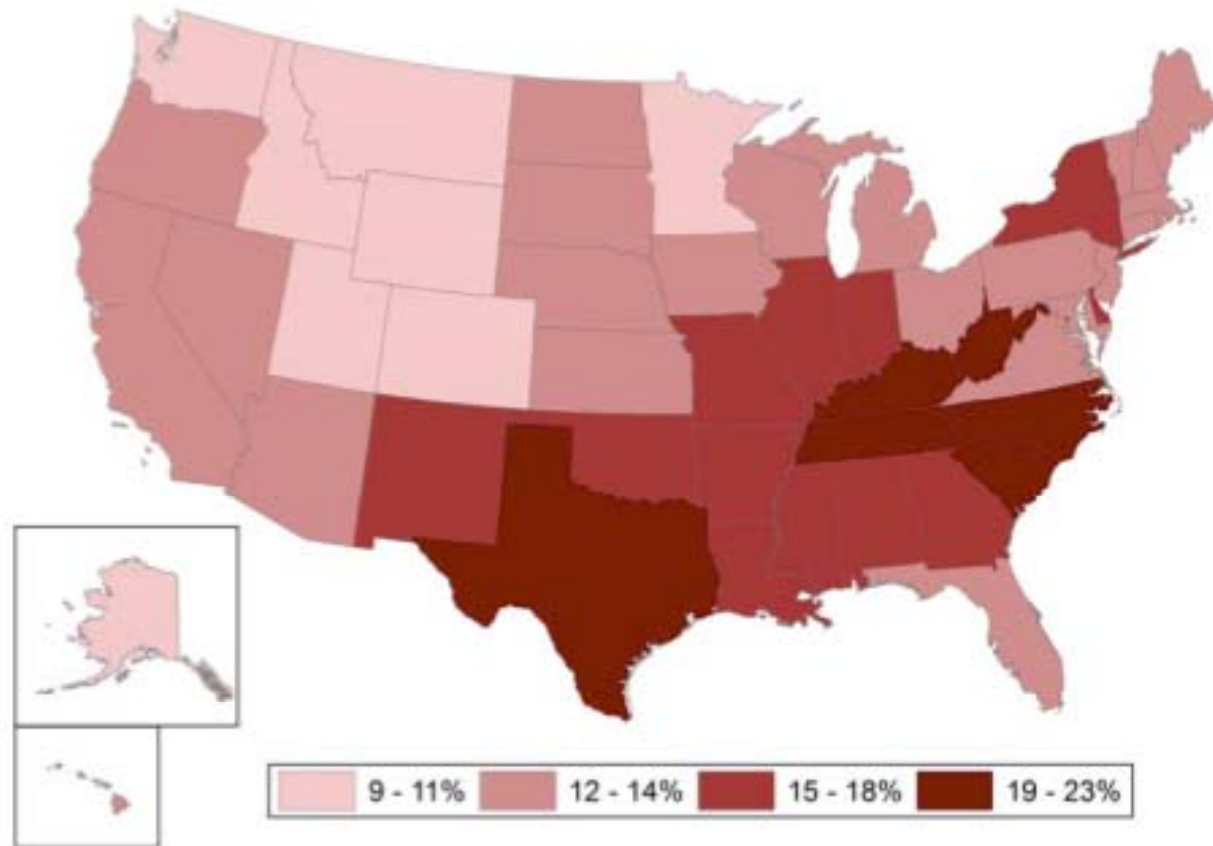
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# Obese adolescents, by state, 2003



Proportion of children age 10 – 17 with a BMI at or above the 95<sup>th</sup> percentile for reference population. Data from 2003 National Survey of Children's Health.

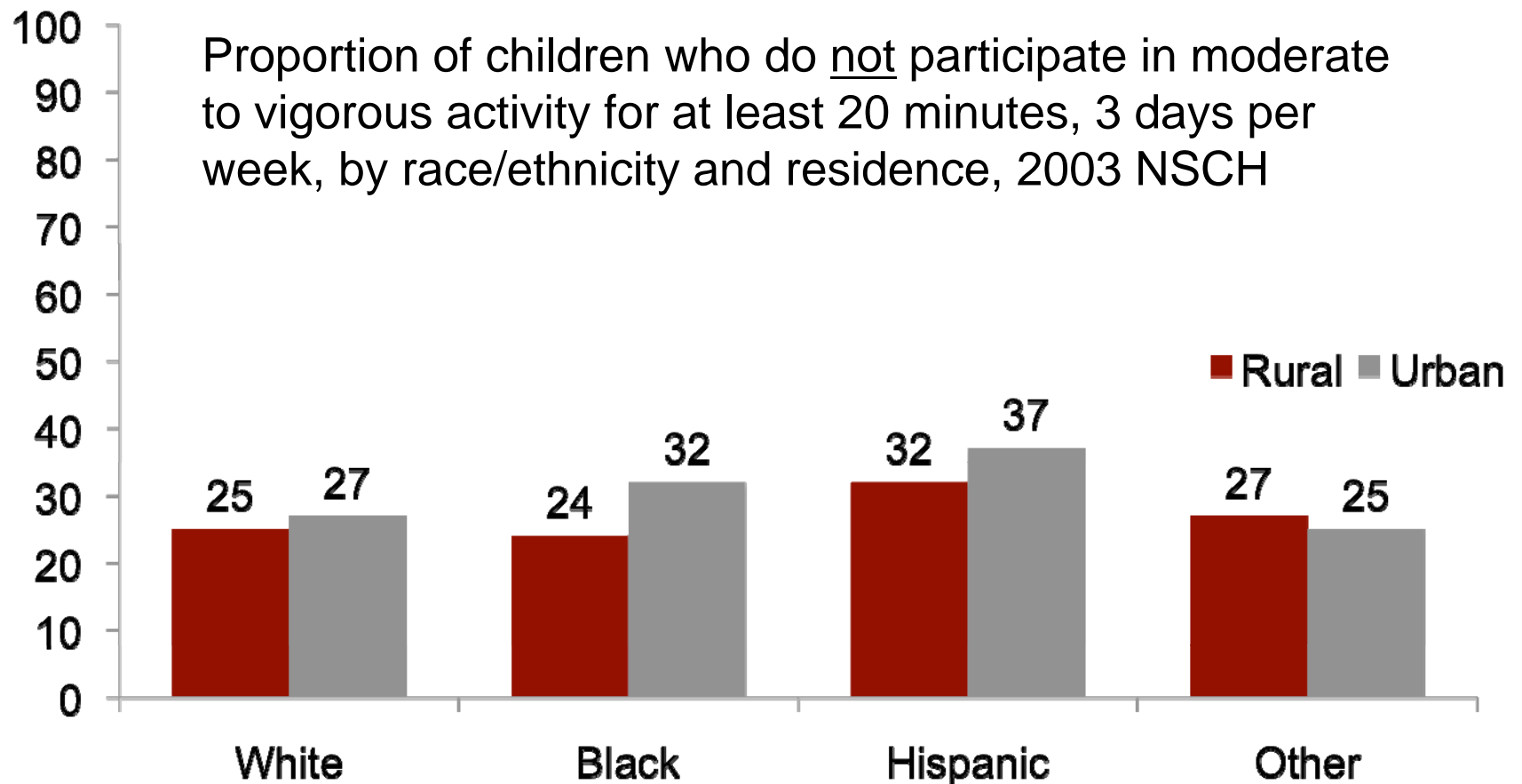


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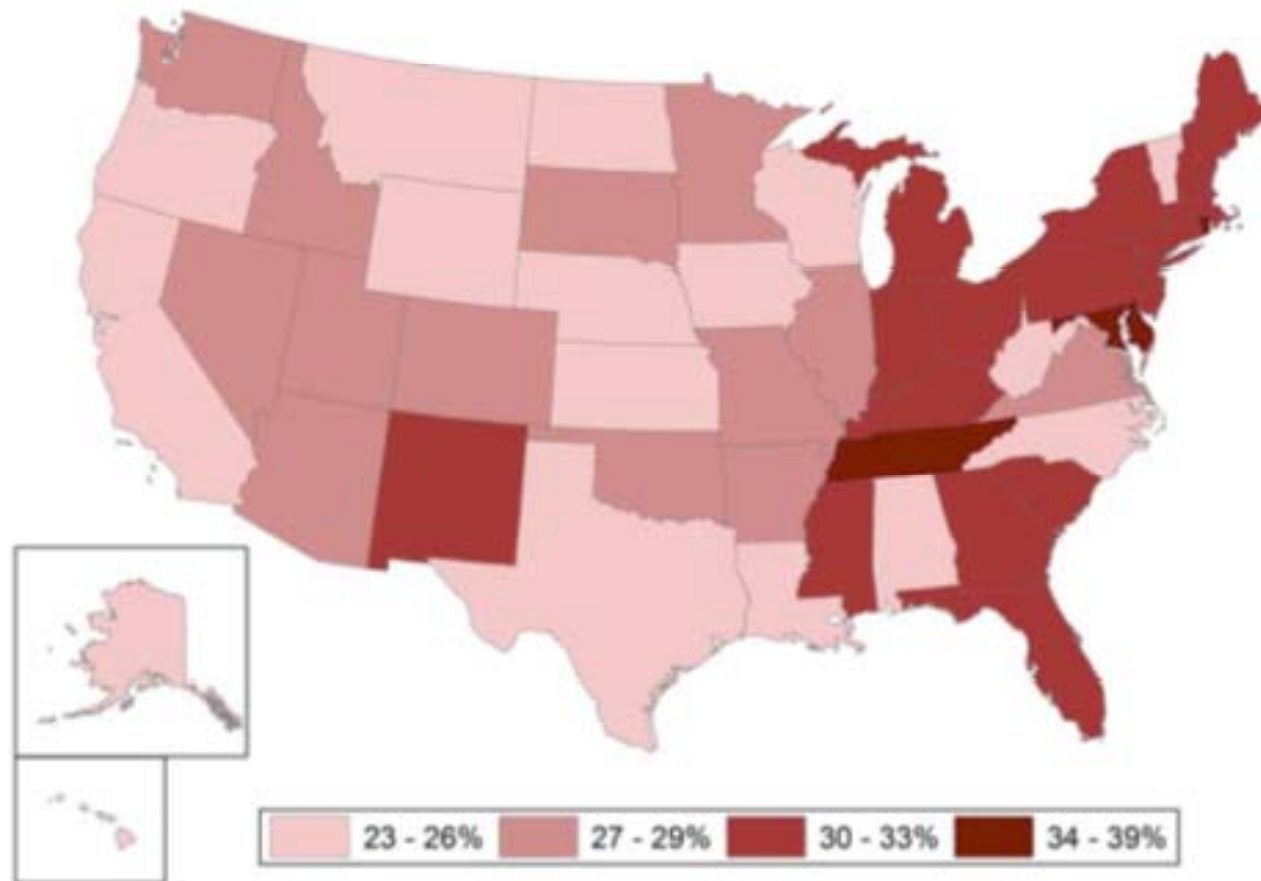


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# Rural kids likely to be less sedentary



# Inactive adolescents, by state, 2003



Proportion of children age 10 – 17 who fail to get 20 minutes of vigorous exercise or more at least three times per week. Data from 2003 National Survey of Children's Health.



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# Paradox

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- Rural children less likely to be physically inactive
- Rural children more likely to be overweight, obese
- New study: measured height and weight



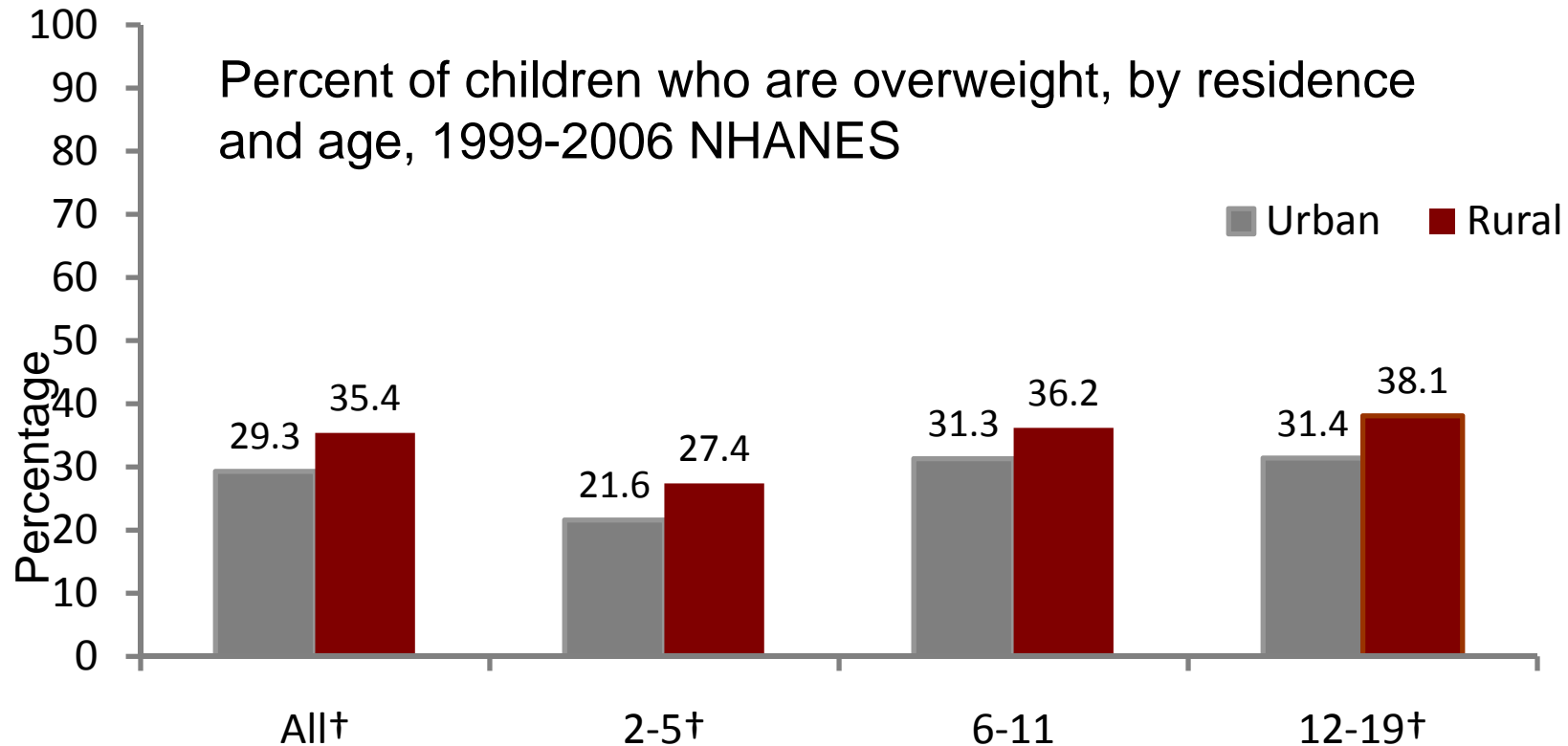
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# Measured: rural kids still heavier



Data Source: 1999-2006 NHANES

Age (in years)

†P-value<0.05



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# When we looked at kids

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- Among children ages 2 – 11:
  - ◆ Rural children were consistently more likely to be obese
  - ◆ Energy intake (calories) also affected weight
- Among adolescents (12 – 18):
  - ◆ Rural residence wasn't a risk factor after you controlled for behaviors that lead to obesity:
    - ☞ Screen time
    - ☞ Diet



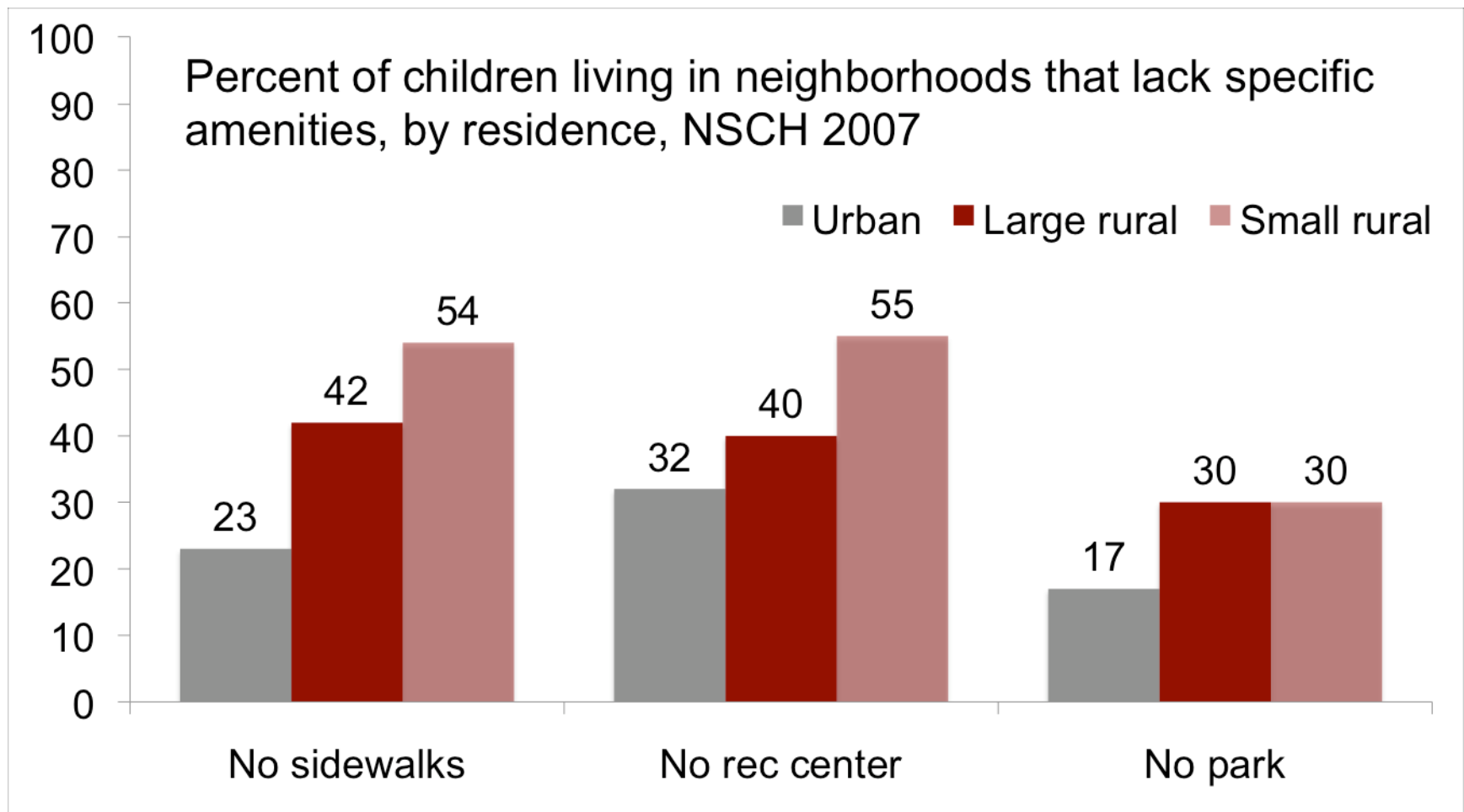
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# Physical activity barriers





# Diet barriers

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- Fewer stores, higher prices
- Longer commuting times
- Among kids:
  - ◆ Quality of school foods
  - ◆ Soft drinks and revenue



# Points of change

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- Improving energy balance among both children and adults
  - ◆ More activity
  - ◆ *Better* nutrition



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# Policy and Programs

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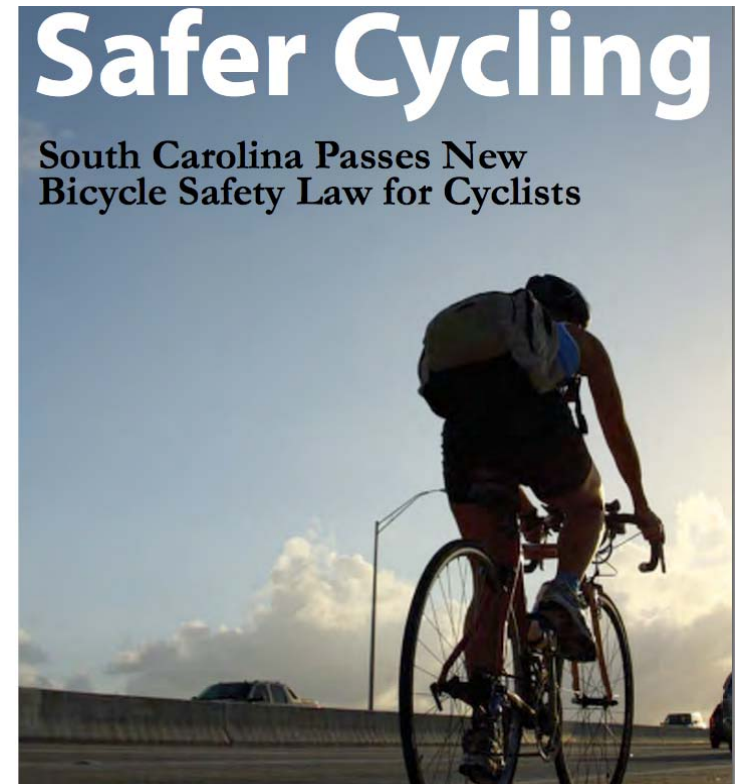
- Policy
  - ◆ Reduce barriers
- Interventions
  - ◆ Focused
  - ◆ Rural
  - ◆ **All solutions are local**



# One policy change

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- “Buzzing” not previously illegal
- 2008 SC law requires
  - ◆ “safe operating distance”
- Motorist may not:
  - ◆ “harass, taunt, or maliciously throw an object”



## Safer Cycling

South Carolina Passes New  
Bicycle Safety Law for Cyclists



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# One small program: rural SC

Community	Project	Award
Wedgefield	<u>Walking track</u> & fence repairs	\$13,500
Rembert-Rafting Creek	<u>Walking track</u> , softball field & amenities	\$16,805
V.I.M. Park	<u>Walking track</u> & park revitalization	\$16,805
Willow Drive- YMCA area	Soccer field, basketball court, landscaping	\$12,054
Cherryvale	<u>Walking track</u> & amenities	\$3,200
Salterstown	<u>Walking track</u> , half basketball court & amenities	\$15,000
Dalzell	<u>Walking track</u> & amenities	\$15,000



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# We can fix this

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- Slowly
- One solution at a time
- One rural community at a time



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# Research Colleagues:

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# Questions / Comments

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