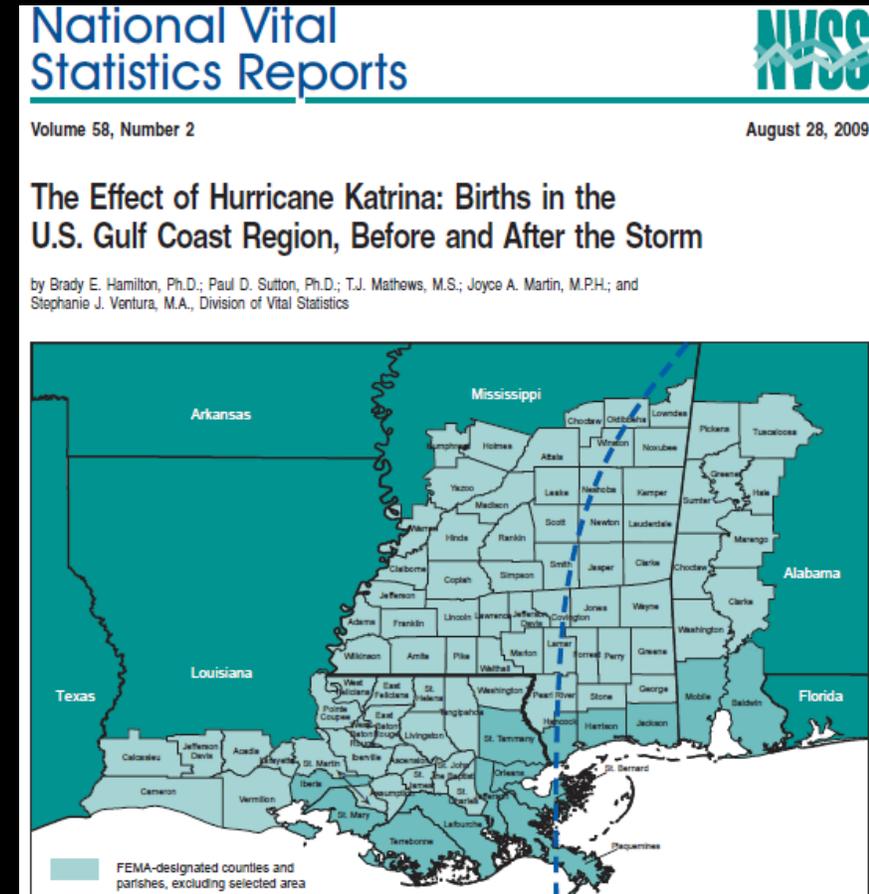


Urban-Rural Patterns of Birth Characteristics

Amy M. Branum, PhD, Division of Vital Statistics

Background

- Birth data and characteristics are routinely reported by state as part of NCHS reports
- Less examination at the county level or of urban/rural differences
 - One nice example:



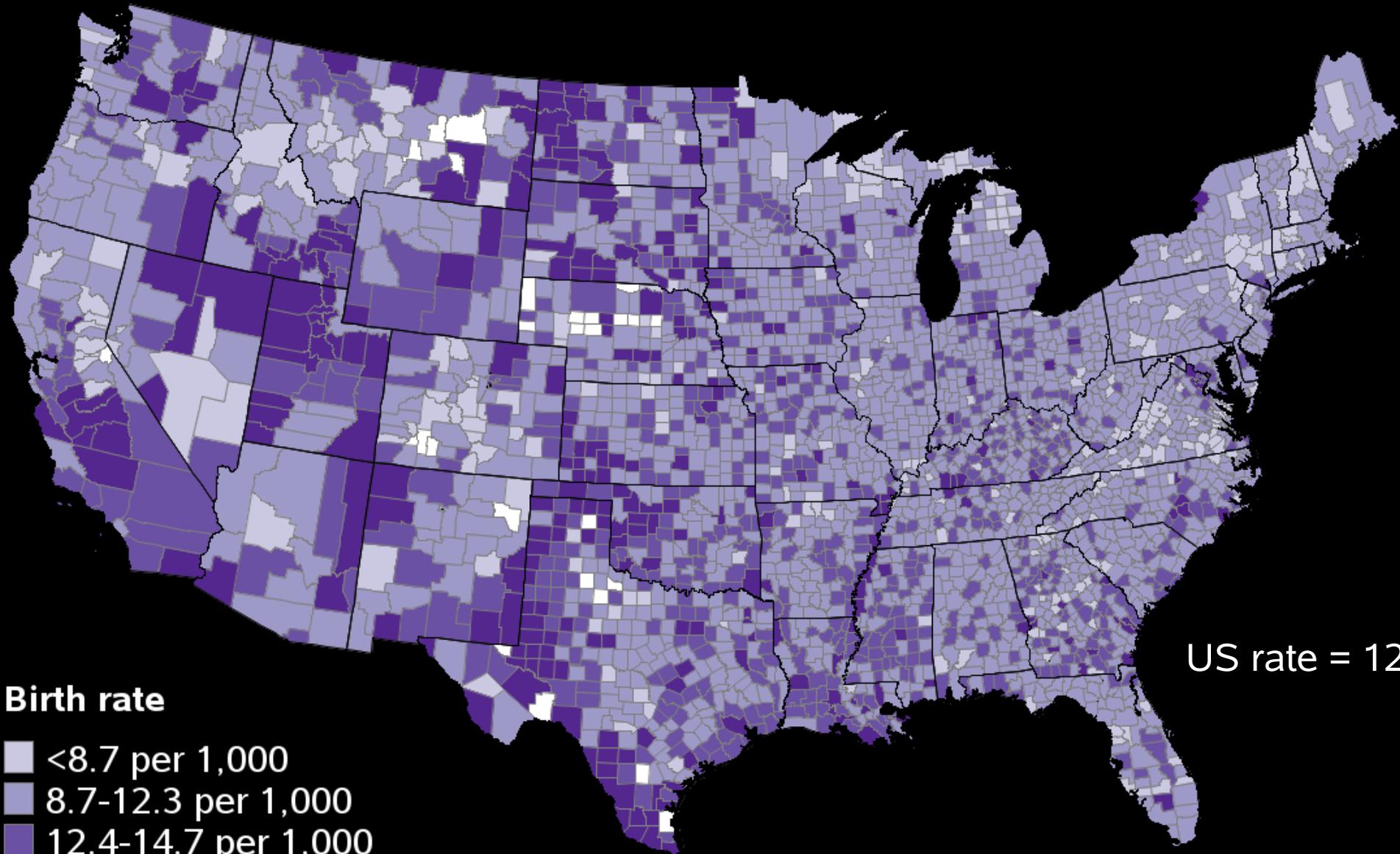
Background

- Effective display of information at the county level can be difficult
- Some outcomes are difficult to assess at the county level due to small numbers
- With nearly 4 million births per year, national birth data give a good opportunity to examine urban/rural patterns in occurrence and outcomes

Objective and methods

- To examine birth rates, preterm births and cesarean delivery rates by urban/rural area
- Analyzed natality data from 2013 using the 2013 NCHS Urban-Rural Classification Scheme
 - Overall birth rates (births per 1,000 population)
 - Preterm birth rates (births <37 weeks per 100 births)
 - Gestational age based on last menstrual period
 - Cesarean delivery rates (cesarean deliveries per 100 births)
- Counties with <10 events were excluded from mapping and treated as “zeros”
 - Purpose is to show general description so special smoothing techniques or adjustment not used

2013 Birth rates by county

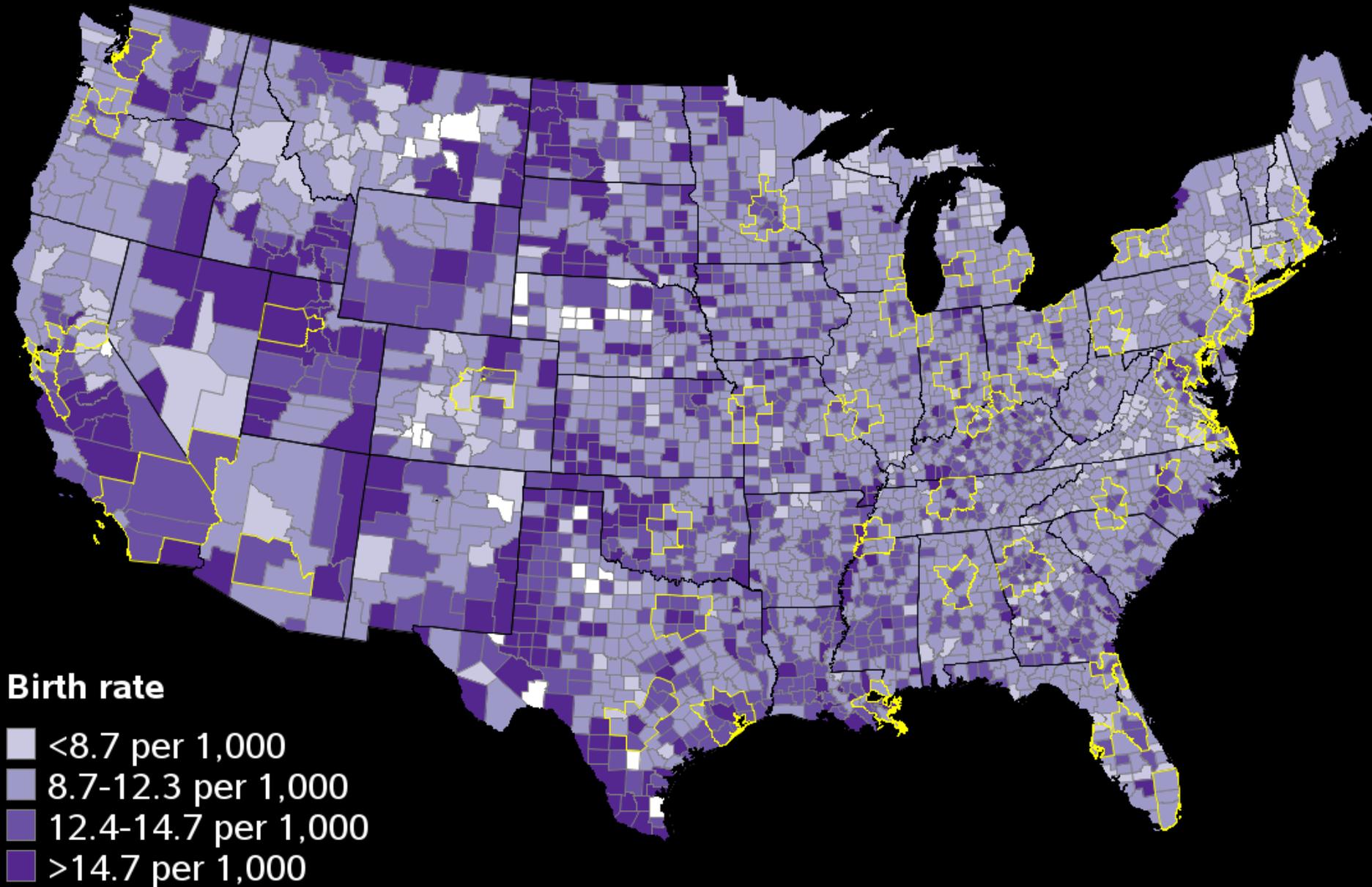


US rate = 12.4 per 1,000

Birth rate

- <8.7 per 1,000
- 8.7-12.3 per 1,000
- 12.4-14.7 per 1,000
- >14.7 per 1,000

2013 Birth rates by county and large central & fringe metro area

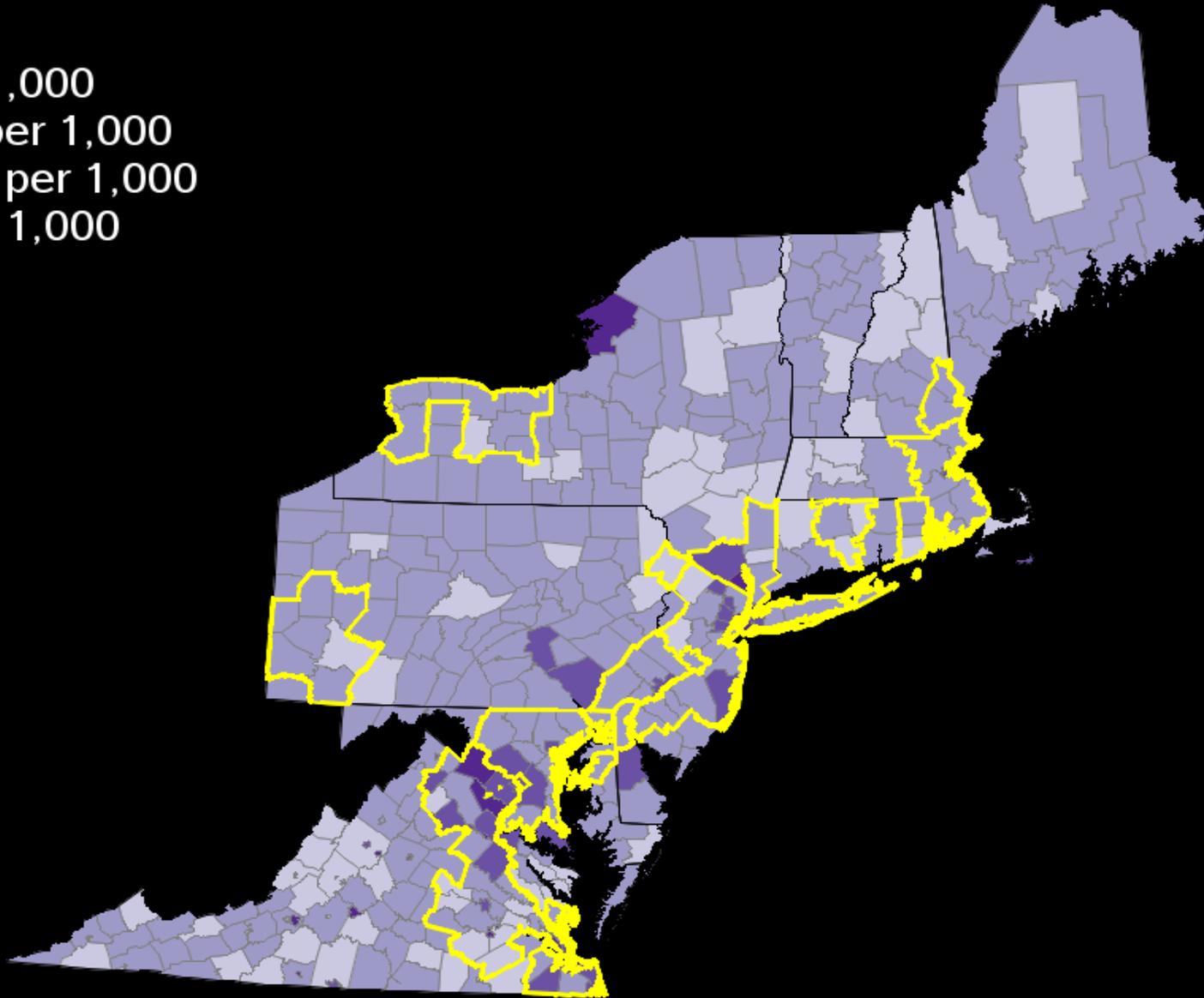


2013 Birth rates by county and large metro areas

Mid-Atlantic and northeast states

Birth rate

- <8.7 per 1,000
- 8.7-12.3 per 1,000
- 12.4-14.7 per 1,000
- >14.7 per 1,000



Where do births occur?

5.5%

Non-core

8.2%

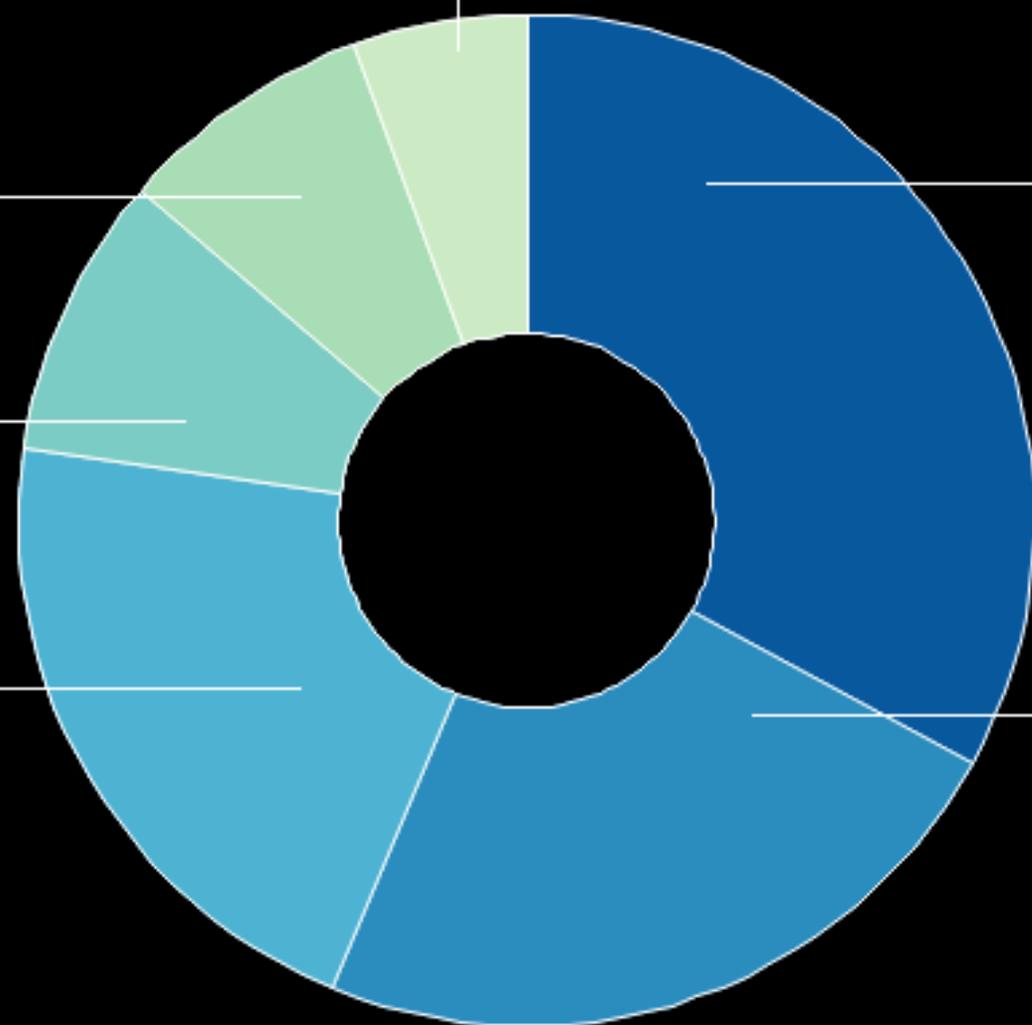
Micropolitan

9.0%

Small metro

21.1%

Medium metro



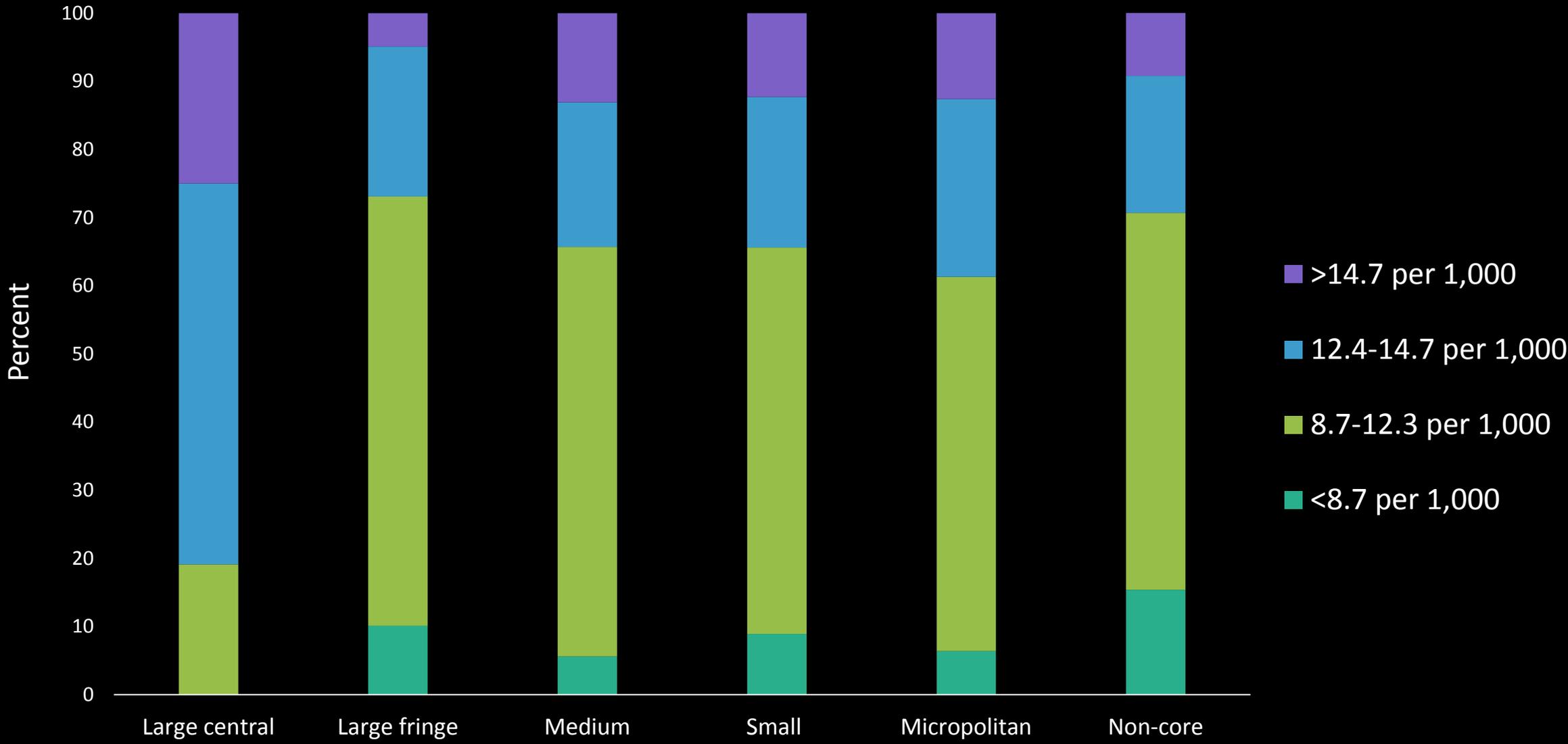
33.0%

Large central metro

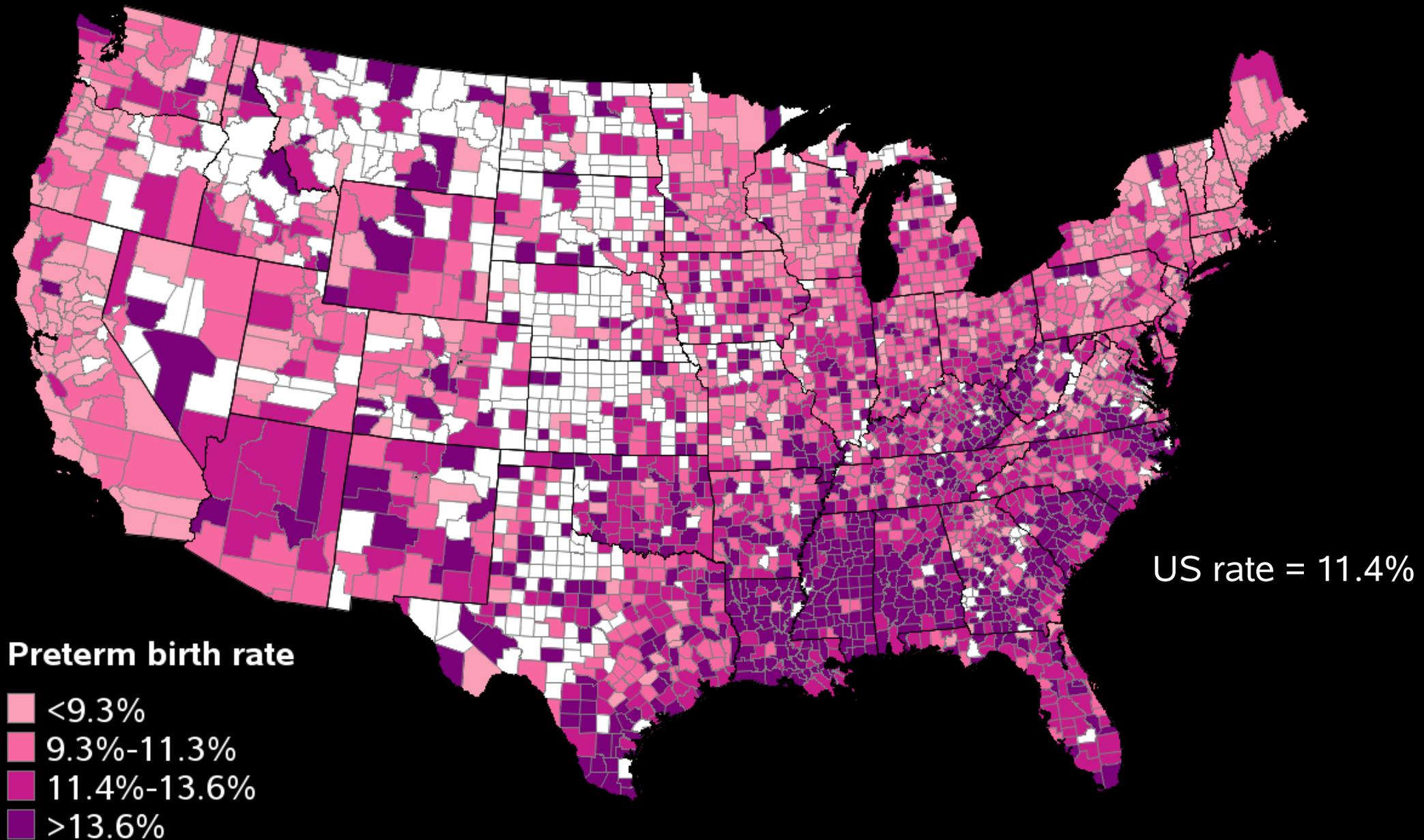
23.2%

Large central fringe

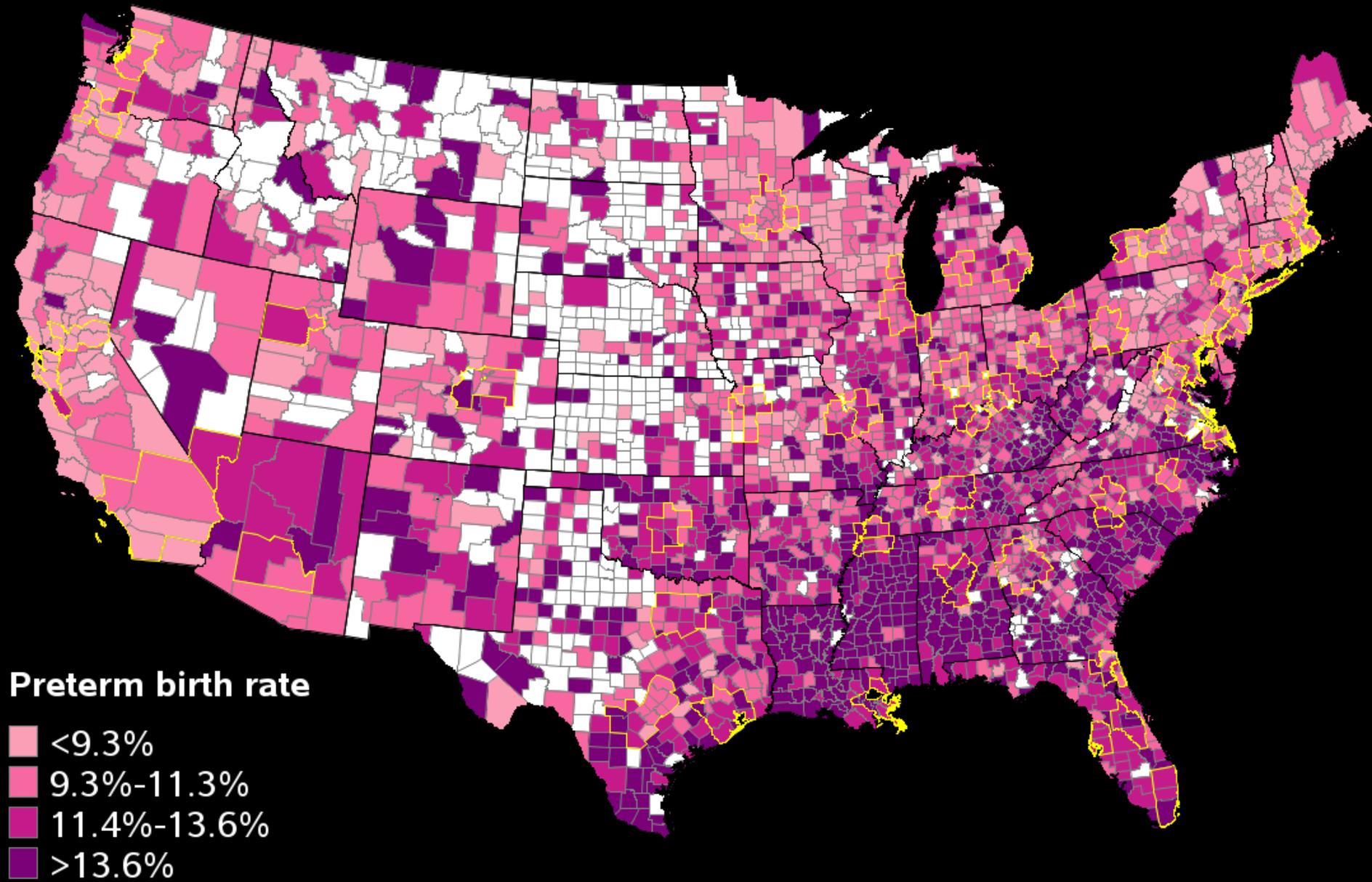
Distribution of birth rates by area



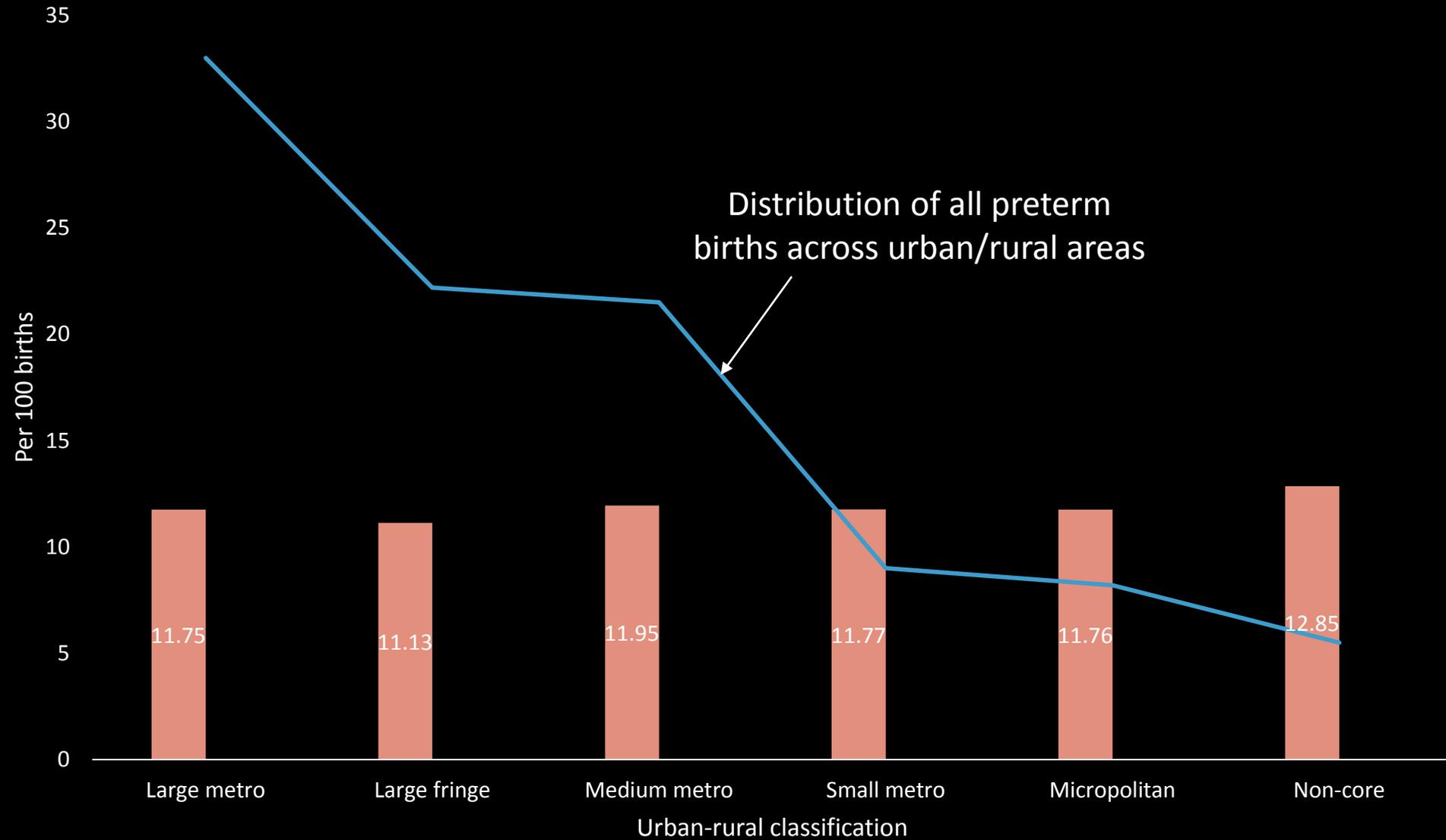
2013 Preterm birth rates by county



2013 Birth rates by county and large central & fringe metro area

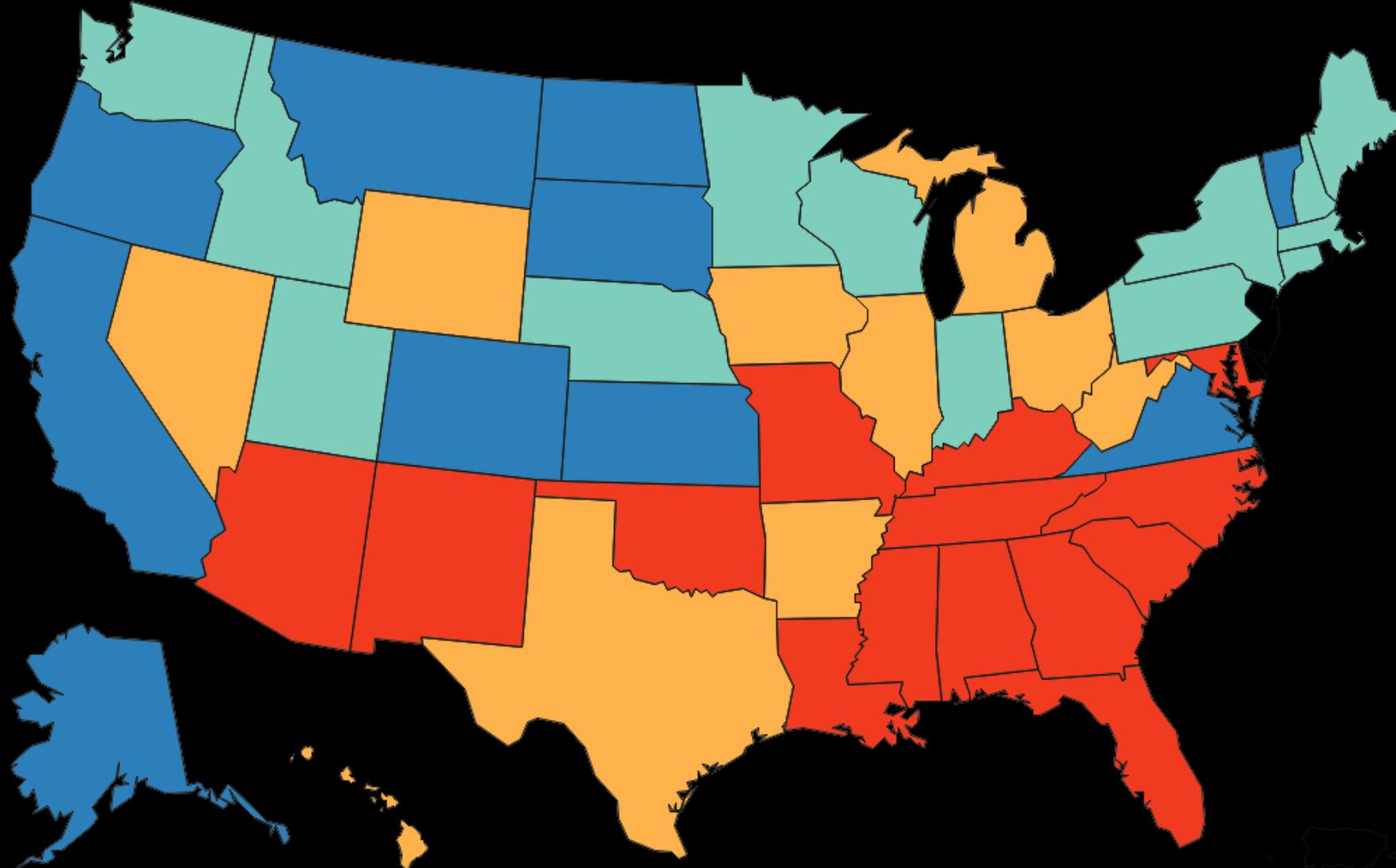


Does preterm differ across urban/rural areas?

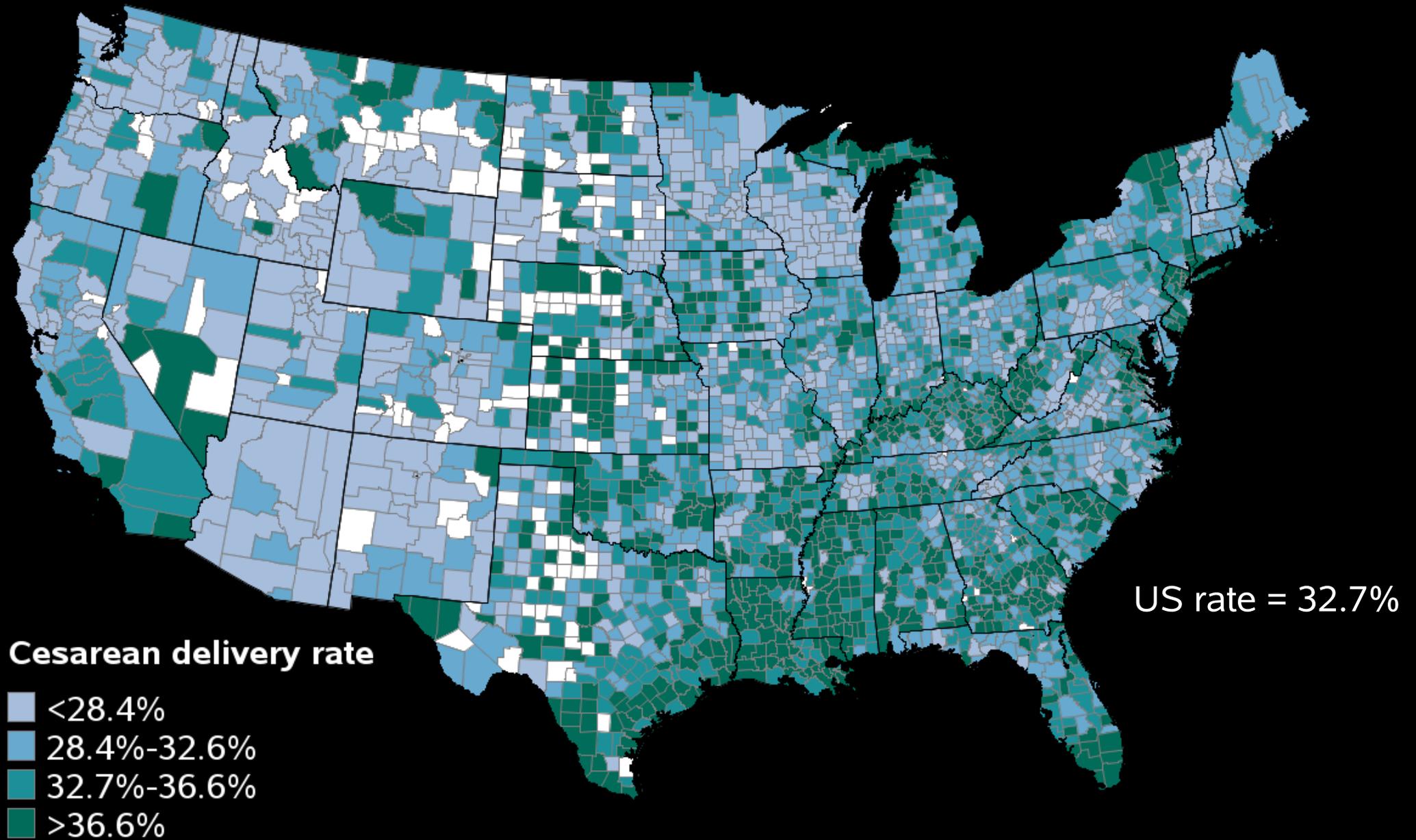


Preterm birth and urban-rural differences by state

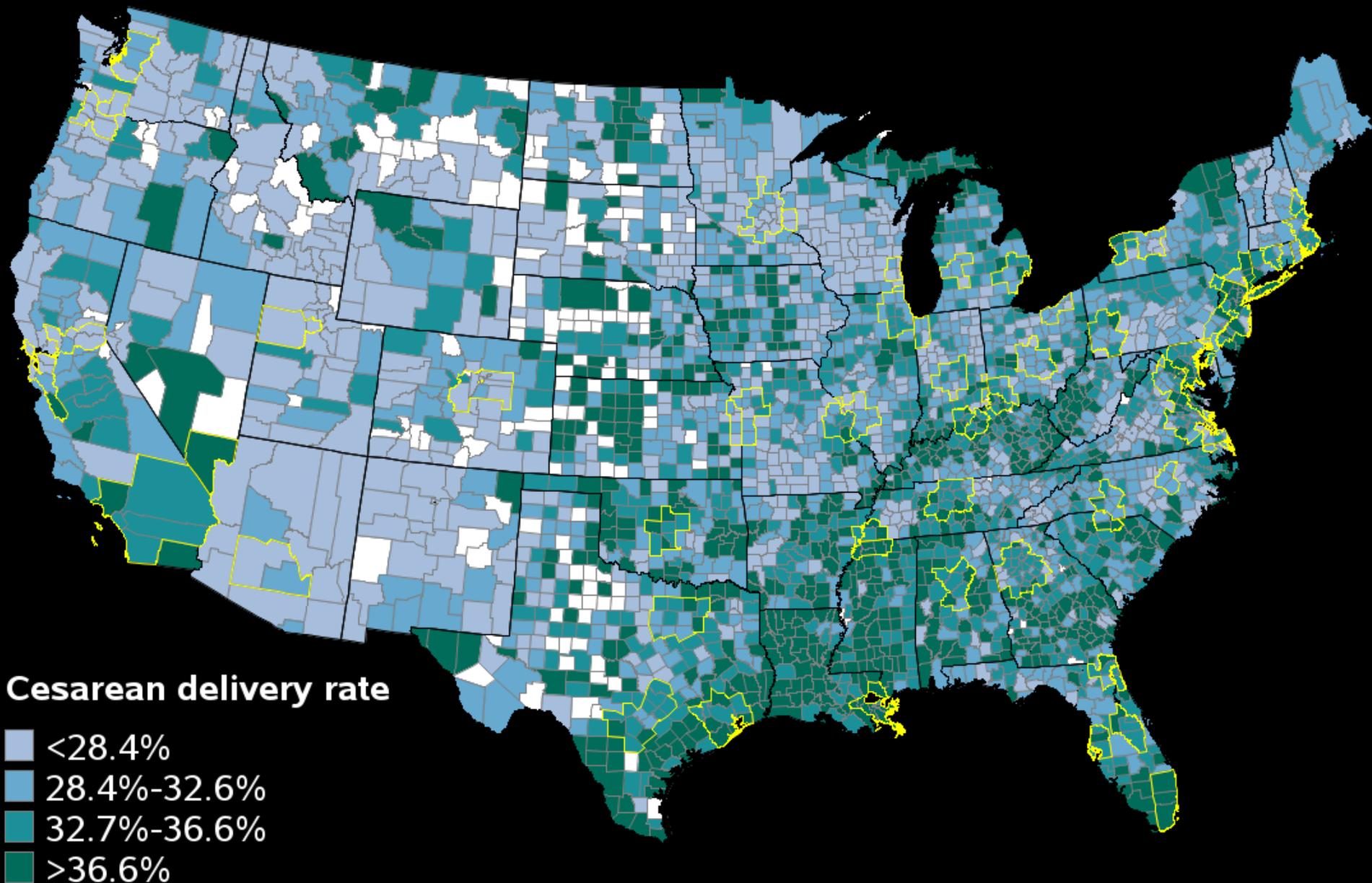
- 2013
- Lower PTB and fewer urban/rural differences
 - Lower PTB and greater urban/rural differences
 - Higher PTB and fewer urban/rural differences
 - Higher PTB and greater urban/rural differences



2013 Cesarean delivery rates by county



2013 Cesarean delivery rates by county and large central & fringe metro area

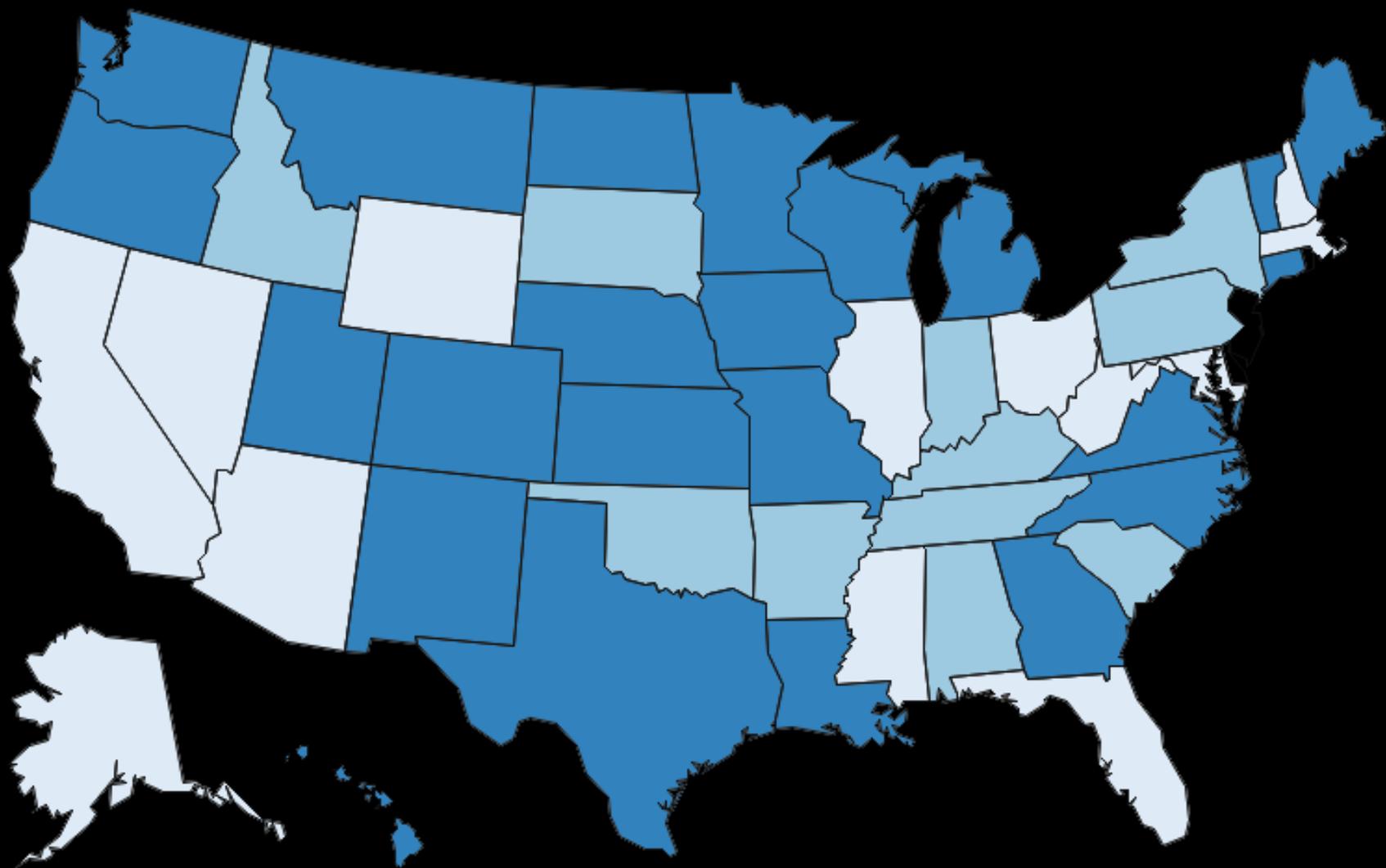


%

Urban/rural difference in cesarean delivery by state

2013

- Lower rural rate
- Similar rate
- Higher rural rate



Summary

- Births are widely distributed across urban and rural areas
 - Generally lower birth rates in the northeastern part of the US in 2013
- Largest urban areas had greater percentage of “high” birth rates whereas smallest rural areas had greater “low” birth rates
- Highest PTB rates in non-core rural areas
 - But contribute the least to total PTB rate
- Wide variation in PTB rates and urban/rural differences across states
- Cesarean rates are similar across overall urban/rural categories but some state variation in differences
- Adjustment for demographic factors will help shed light on these patterns

Acknowledgements, etc.

- Related presentations
 - In the next session: “Teen and Young Adult Health Disparities: More than just Sex and Pregnancy” [SS-13]
- Many thanks!
 - Joyce Martin (NCHS/DVS)
 - Brady Hamilton (NCHS/DVS)
 - Lauren Rossen (NCHS/OAE)
- Graphics generation
 - Robert Allison’s amazing SAS graph examples website!
<http://robslink.com/SAS/Home.htm>

Interested in the data??

- Public-use natality data (no geography) and documentation available at:
 - http://www.cdc.gov/nchs/data_access/Vitalstatsonline.htm
- For geography:
 - VitalStats – allows you to build tables at the state/county level
 - CDC Wonder
 - NAPHSIS proposal process – allows access to special geographic files
- More information
 - Amy Branum: ZVL5@cdc.gov
 - Joyce Martin: JCM9@cdc.gov