Urban-Rural Patterns of Birth Characteristics

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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
Where do births occur?

- 33.0% Large central metro
- 23.2% Large central fringe
- 21.1% Medium metro
- 9.0% Small metro
- 8.2% Micropolitan
- 5.5% Non-core
Does preterm differ across urban/rural areas?

Distribution of all preterm births across urban/rural areas

<table>
<thead>
<tr>
<th>Urban-rural classification</th>
<th>Per 100 births</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large metro</td>
<td>11.75</td>
</tr>
<tr>
<td>Large fringe</td>
<td>11.13</td>
</tr>
<tr>
<td>Medium metro</td>
<td>11.95</td>
</tr>
<tr>
<td>Small metro</td>
<td>11.77</td>
</tr>
<tr>
<td>Micropolitan</td>
<td>11.76</td>
</tr>
<tr>
<td>Non-core</td>
<td>12.85</td>
</tr>
</tbody>
</table>
2013 Cesarean delivery rates by county

US rate = 32.7%

Cesarean delivery rate

- <28.4%
- 28.4%-32.6%
- 32.7%-36.6%
- >36.6%
2013 Cesarean delivery rates by county and large central & fringe metro area

Cesarean delivery rate
- <28.4%
- 28.4%-32.6%
- 32.7%-36.6%
- >36.6%
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
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