Children's Health in Rural Communities: Results from the North Carolina BRFSS and CHAMP Surveys

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BACKGROUND
People who live in rural areas often experience higher rates of poverty and worse access to healthcare. State-level research is needed to investigate the differences in health and healthcare access among children living in rural versus urban areas. The BRFSS and CHAMP surveys are a valuable resource to classify households by locality in order to examine differences in health characteristics between state-level urban and rural communities.

STUDY OBJECTIVE
The purpose of this study is to examine health care access and health status of children living in rural and urban communities in North Carolina.

METHODS
Data included cross-sectional surveys collected in 2007, 2008, and 2009 through the North Carolina BRFSS and CHAMP surveys. The Behavioral Risk Factor Surveillance System (BRFSS) is an annual telephone survey that assesses health characteristics of children (birth-17 years). The Child Health Assessment and Monitoring Program (CHAMP) is an annual telephone survey that assesses health characteristics of children (birth-17 years) and enrolls eligible children into the CHAMP survey. The Behavioral Risk Factor Surveillance System (BRFSS) and Child Health Assessment and Monitoring Program (CHAMP) surveys are a valuable resource to classify households by locality in order to examine differences in health and health care access among children living in rural and urban communities.

Demographic Characteristics (Table 2)
- CHAMP households in rural and small rural areas were more likely to have lower income (FPL < 200%) and lower education compared to urban families.
- Children from small rural areas were more likely to be raised in ‘fap’/‘poor’ health compared to their urban counterparts, even after controlling for FPL (aOR 1.56 [95% CI 1.31-1.88]).
- Children in rural communities, rates of enrolment in government-funded health care were significantly greater among children in small rural (aOR 1.84 [95% CI 1.40-2.35]) and large rural areas (aOR 1.48 [95% CI 1.12-1.94]), even after controlling for FPL.
- Children from large rural communities were less likely to have had a check-up within the past year compared to urban children, even after controlling for FPL (aOR 1.40 [95% CI 1.14-1.72]).

RESULTS
- Significant differences in health and health related behaviors among state-level rural and urban communities are found.
- The BRFSS and CHAMP surveys are useful tools to examine adult and children’s health and health related behaviors among state-level rural and urban communities.

CONCLUSIONS
- Although high rates of poverty are found among rural families, investigation into other issues of health interaction between rural and urban children is warranted.