The first goal of the current investigation was to examine the rates of pregnancy smoking and adverse newborn outcomes over a two year period in Northeast Tennessee, and to compare these rates with national and state averages. The second goal was to examine the effect of pregnancy smoking on birth outcomes in the region.

METHODS

- Data from all births in Washington County over a 2 year period (2006-2007) were extracted from hospital delivery records.
- Newborn outcomes of interest included birth weight, birth length, gestational age at delivery, Apgar scores, and newborn nursery assignment.
- Self-report of smoking status (smoker or non-smoker) at delivery was recoded.
- Demographic information was also collected.

RESULTS

- During the study period there were 4577 births at the two Washington County delivery hospitals.
- The rates of smoking during pregnancy increased from 2006 to 2007, from 23.8% to 25.3%.
- Rates of smoking during pregnancy were significantly higher among women who delivered at Johnson City Medical Center, compared with women who delivered at Johnson City Specialty Hospital.

CONCLUSIONS

- Rates of smoking and poor birth outcomes are significantly higher in Northeast Tennessee compared with the rest of the state and the rest of the country.
- Babies born to women in this region who smoke are at substantially increased risk of poor birth outcomes.
- Improving birth outcomes in rural areas of the South will require substantial efforts to address and reduce pregnancy smoking.

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