Access To Obstetric Care In Rural Northeast Tennessee: Association With Birth Outcomes

Background A nationwide downward trend in the number of rural obstetric providers has created considerable barriers to prenatal care for pregnant women residing in underserved areas. This limited access to prenatal and delivery services, compounded by socioeconomic, environmental and cultural factors, has the potential to limit health information pregnant women receive, complicate pregnancy and delivery, and adversely affect birth outcomes. This study sought to illuminate differences in birth outcomes between two Northeast Tennessee counties with disparate access to obstetric care.

Methods Birth records from the two delivery hospitals in Washington County, TN were used to compare birth outcomes of patients who resided in Johnson County (identified by the state of Tennessee as a medically underserved area, with no obstetric providers or delivery services) and Washington County (a recognized urban area with multiple obstetric practices and delivery hospitals). T-tests and chi-square analyses were used to compare the women from the two counties on the birth outcomes of interest, including newborn birth weight, birth length, gestational age, and incidence of low birth weight and preterm birth. Results During the two year study period (2006-2007), complete delivery records were available for 2220 women from Washington County, and 114 women from Johnson County. Compared to those from Washington County, babies born to women from Johnson County had significantly lower birth weights, decreased birth lengths and shorter gestational durations. In addition, Johnson County babies were twice as likely to be low birth weight and more than four times as likely to be extremely preterm. There was no significant difference in smoking status between the two counties. Discussion Consistent with current literature, these results suggest that ready access to prenatal care may play an important role in birth outcomes in Southern Appalachia. Low birth weight and preterm delivery are high priority public health concerns and are associated with increased risk of infant mortality and long-term health impairments. Efforts to ameliorate these problems in rural areas of the South should address issues related to local availability of obstetric and delivery services.

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