Relationship between preterm, low birth weight births and their related factors based on Nebraska PRAMS data from 2000 to 2010

Joint Public Health Data Center

Low birth weight (LBW) infants account for 7.6% of all live-born infants. In the United States, 65% of all infant deaths occur among low birth weight infants. This project was designed to identify important factors significantly affecting low birth weight/preterm birth, and further to test the relationship between low birth weight/preterm birth and maternal health behaviors in a subsequent pregnancy. Nebraska Pregnancy Risk Assessment Monitoring System (PRAMS) data and birth certificate data from 2000 to 2010 were used in this project. A linked dataset was created using PRAMS respondents with more than one participating pregnancy during the study period. The pregnancy outcomes of low birth weight birth and preterm birth were closely related to maternal race, health behaviors, historical pregnancy outcomes, and comorbidities. Maternal smoking and inadequate prenatal care during pregnancy were associated with a significant increase in the probability of both low birth weight and preterm birth. Adequate prenatal care was significantly associated with family income, maternal education level, maternal BMI, marital status, health insurance, and maternal weight gain during pregnancy. Previous LBW birth and previous preterm birth did not appear to be sufficient motivation for women to improve cigarette and alcohol-related behaviors in their subsequent pregnancy. Previous LBW birth, but not preterm birth, was associated with improved prenatal care in the subsequent pregnancy.