

**POSTER SESSION 2 ABSTRACTS**  
12<sup>th</sup> Annual HMO Research Network Conference  
May 1-3, 2006 Boston, MA

**Racial and Ethnic Disparities in Access, Treatment, and Outcomes**  
**PS2-1**

**Low Birth Weight in Diverse Cohorts: A Risk Factor for Asthma at Age 17 Years**

CC Johnson<sup>1</sup>, CLM Joseph<sup>1</sup>, EL Peterson<sup>1</sup>, DR Ownby<sup>2</sup>, N Breslau<sup>3</sup>

<sup>1</sup>Henry Ford Health System; <sup>2</sup>Medical College of Georgia; <sup>3</sup>Michigan State University

**Background:** Low birth weight has been shown to be a risk factor for asthma. We hypothesized that low birth weight would be more related to transient than persistent physician diagnosed asthma, and this might vary by race and gender.

**Methods:** Representative samples of low birth weight (<2500 grams) and normal birth weight African American and European American children from health systems in Detroit and a nearby middle-class suburb were followed longitudinally and assessed, by subject (n=646) and parent interview, at age 17 years (in 2001-2003) for history of physician diagnosed asthma. Subjects were classified into those with transient asthma (diagnosis at 3 years of age or younger without symptoms or asthma medications in the previous 12 months) and persistent asthma (diagnosis at any age and with symptoms or asthma medications in the previous 12 months).

**Results:** Adjusting for potential confounders, the odds ratio (OR) and 95% confidence interval (CI) for low birth weight and transient asthma was 1.61, 0.51-5.08, p=0.42. For low birth weight and persistent asthma, the OR=1.79, CI 1.15-2.81, p=0.01. This latter association was more evident in African Americans (OR=2.13, CI 1.06-4.29, p=0.03) than European Americans (OR=1.54, CI 0.87-2.74, p=0.14) and in boys (OR=2.48, CI 1.25-4.92, p=0.009) compared to girls (OR=1.37, CI 0.77-2.44, p=0.29).

**Conclusions:** Low birth weight is a risk factor for persistent asthma in late adolescence, and this association is stronger in African Americans and boys.