

# ASSOCIATION BETWEEN PLACE OF BIRTH AND ASTHMA PREVALENCE ACROSS MULTIPLE RACE/ETHNICITIES IN THE UNITED STATES

**Shahed Iqbal**, *Air Pollution and Respiratory Health Branch, Centers for Disease Control and Prevention, USA*

**Emeka Oraka**, *ORISE Fellow, Air Pollution and Respiratory Health Branch, Centers for Disease Control and Prevention, USA*

**W. Dana Flanders**, *Division of Environmental Hazards and Health Effects, Centers for Disease Control and Prevention, USA AND Emory University, GA, USA*

**Background and Aims:** Asthma is a complex disease involving multiple genetic and environmental factors. The United States (US) has one of the highest prevalences of current asthma (8.2%) in the world; the US also has a large immigrant population representing diverse racial and ethnic groups. Migration studies can shed light on the role of environmental factors for asthma development and exacerbation. The objective of this study was to examine the association of birth-place with self-reported current asthma prevalence across multiple racial/ethnic subgroups in the US.

**Methods:** We analyzed nationally representative data from the 2001–2009 National Health Interview Survey on adults (• 18 years) with self-reported current asthma. Using SUDAAN, model-adjusted marginal estimates from multivariate logistic regression were used to compare the current asthma prevalence among US-born and foreign-born respondents.

**Results:** During 2001–2009, 7.1% (unweighted N=18,363) of adults had current asthma of whom 7.8% were foreign-born. After adjusting for confounders (e.g., age, sex, poverty level, health insurance, having a regular place of care) and averaging over the interactions, US-born adults had higher ( $p<0.05$ ) current asthma prevalence (7.6%) as compared to foreign-born adults (4.7%). This difference was consistent across all race/ethnicities including Puerto Rican, Asian Indian, Filipino, Other Asian but was significant ( $p<0.05$ ) among: whites (7.7% vs. 4.7%), blacks (7.5% vs. 4.8%), Other Hispanics (6.7% vs. 3.2%), Chinese (8.1% vs. 3.0%), and Other/Multiple Race (17.1% vs. 8.3%). Also, among foreign-born adults, current asthma prevalence was higher ( $p<0.001$ ) among those who resided in the US for • 10 years (4.0%) compared to those residing for <10years (2.7%).

**Conclusions:** Greater exposure to environmental factors, acculturation, differences in healthcare access and diagnostic practices might contribute to the higher asthma prevalence among US-born adults and foreign-born adults who have resided in the US • 10 years. Continued identification and understanding of these factors can help design effective public health interventions among immigrant populations.