Flu Vaccine May Reduce Risk of Acute Asthma Episodes

BY ROXANNA GUILFORD-BLAKE

ATLANTA — Individuals with persistent asthma who received the seasonal influenza vaccination appeared to have fewer episodes of acute asthma than did those who were not vaccinated, according to Shubhayu Saha, Ph.D., of the Centers for Disease Control and Prevention’s National Center for Environmental Health.

The findings corroborate current guidelines that recommend the vaccine for patients with persistent asthma, Dr. Saha said in a poster presentation at the conference, which was sponsored by the Centers for Disease Control and Prevention.

A retrospective cohort of children and adults who met the HEDIS (Healthcare Effectiveness Data and Information Set) definition of persistent asthma was drawn from the MarketScan Commercial Claims and Encounters database. Those with chronic obstructive pulmonary disease, cystic fibrosis, and emphysema were excluded from the study. Of 138,933 individuals in the cohort, 22% received the flu vaccine in the 2006-2007 flu season (August 2006 to March 2007).

Bivariate comparisons indicated that acute asthma episodes during the flu season, which was characterized by unusually high levels of respiratory illness, were more frequent in the group that did not receive the vaccine (4.9%) than in those who did (4.0%). However, those in the treatment group also were younger, had higher Charlson comorbidity scores, used more controller medications, and had more acute asthma episodes in the past.

To control for potential confounders where asthma patients with poorer prognoses also were more likely to get the flu vaccine, the investigators used two methods (instrumental variables and propensity score matching) to obtain unbiased estimates of the effect of the vaccine on acute asthma episodes. Each approach yielded similar and statistically significant results that were contrary to those of the bivariate comparisons.

Controlling for age, sex, region, health plan, comorbidity, and past asthma exacerbation, the two methods yielded odds ratios of 0.7 for the vaccinated group having acute asthma episodes.

The odds ratios “show the significant protective effect of the influenza vaccination in reducing acute asthma episodes among individuals with persistent asthma in a population with employer-based health insurance,” Dr. Saha said.