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Prevalence and Trends of Asthma in United States (US) Adults, 2005-2016: A National Health and Nutrition Examination Survey (NHANES) Study

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Presenter Information

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Title: Prevalence and Trends of Asthma in United States (US) Adults, 2005–2016: A National Health and Nutrition Examination Survey (NHANES) Study

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Background/Objectives: Asthma is a debilitating chronic airway disease for which there is no cure. As of 2017 it was estimated that approximately 19.2 million adults or 7.7% of the total US adult population were diagnosed with this condition. This study aims to estimate the prevalence of asthma among US adults, investigate potential risk factors, and identify health disparities.

Methods: This study included 32,798 participants who were ≥ 20 years old, informed by a doctor they had asthma and had the disease at the time of the survey. Weighted percent prevalence and trend analyses were estimated utilizing NHANES cross-sectional data from 2005 to 2016. A predictive model was developed to identify potential risk factors using multivariate survey logistic regression. Analyses were performed with SAS v9.4.

Results: The overall unadjusted prevalence of asthma was 8.3%. Statistically significant increases in the prevalence of asthma from 2005-2016 were found for: females (9.8% to 12.0%); those of age 20 – 39 years (7.4% to 9.7%) and ≥ 60 years (7.4% to 9.8%); Mexican Americans (3.7% to 4.6%); Non-Hispanic Whites (8.5% to 9.9%); those of middle socio-economic status (7.8% to 9.2%) and adults with a BMI < 25 (6.3% to 8.3%).

Conclusions: From 2005-2016 the overall unadjusted prevalence of asthma increased significantly from 8.1% to 9.1%. The probability of having asthma was increased for those who were female, of low SES, obese, had COPD, had a close relative with asthma, and were depressed. Early detection, improving treatments, and increasing public health interventions can effectively decrease the prevalence of asthma.