0534-S/P

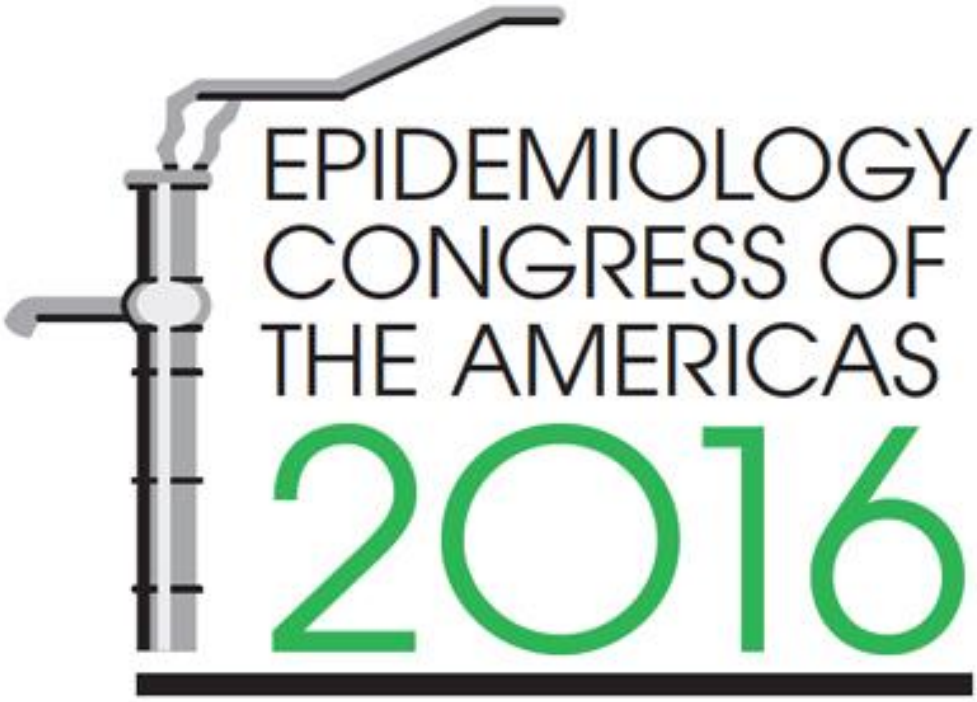
PREVALENCE OF HURRICANE-SPECIFIC EXPOSURES AND PREDICTORS OF GLOBAL STRESS DUE TO SUPERSTORM SANDY IN A NEW YORK CITY PREGNANCY COHORT Katrina Kezios*, Christina DiSanza, Ezra Susser, Catherine Monk, Ronald Wapner, Pam Factor-Litvak (Mailman School of Public Health, Columbia University)

Natural disasters may be a significant source of prenatal maternal stress (PNMS). Increased levels of PNMS may negatively impact the developing fetus. We investigated the prevalence of hurricane-specific exposures and the predictors of high self-reported global stress due to Superstorm Sandy in a New York City pregnancy cohort of nulliparous women in recruitment at the time of the storm. Our study sample is derived from the Columbia University Medical Center site of the NuMom2Be consortium. As part of NuMom2Be, women were assessed during pregnancy for perceived stress, depression, anxiety, social support, and resilience. Following Sandy we interviewed participants about their exposure to Sandy-specific stressors and asked them to self-report their level of global stress the first and second week after the storm. 336 women provided complete information about their experiences during Sandy (68% within 1 year of exposure). 118 (35%) women were exposed to Sandy during pregnancy and ≥70% completed psychological assessments pre-Sandy. Modified Poisson regression with robust standard error variance was used to examine the unadjusted association between demographics, baseline psychological assessments, and exposure to Sandy-stressors, and high global stress following Sandy. High global stress in the first week after Sandy was associated with high hurricane exposure, race and education, and elevated pre-disaster psychiatric symptoms. Women with higher levels of perceived stress and those who exhibited depressive symptomatology or trait anxiety had an increased risk of self-reporting high global stress, while increased social support – particularly that of a 'special person'– reduced this risk. Pre-existing mental health symptomology influences appraisal of a disaster like Superstorm Sandy. These results may help inform interventions for pregnant women at risk for stressful natural disasters.

0535

EPIDEMIOLOGIC BIASES IN ASTHMA STUDIES OF THE 9/11 WORLD TRADE CENTER ATTACK: DISASTER EPIDEMIOLOGY NEEDED Anne M. Jurek*, Steven Mongin, David Kriebel, Manuel Cifuentes, Sherry Baron, Hyun Kim (University of Minnesota)

Purpose: The unplanned and unexpected nature of man-made disasters creates challenges for epidemiologists. Methodological challenges from the World Trade Center (WTC) attack on September 11, 2001, include lack of well-designed and timely epidemiologic studies and systems to perform long-term surveillance. As in all epidemiologic studies, these challenges may bias study results. Relatively little is known, however, about the effects of biases in WTC disaster studies. **Methods:** We reviewed 29 articles examining WTC disaster and asthma in responders and civilians and included 12 articles that calculated ratio effect measures. We identified biases mentioned in each article and their potential impact on study results. **Results:** Reporting (N=9, 75%) and self-selection (N=7, 58%) biases were the main study limitations cited. Two articles mentioned that the target population might have been screened more frequently per WTC disaster exposure. Four papers stated the inability to verify self-reported conditions and four mentioned data limitations. Qualitative evaluation of bias was preferred over quantitative methods. Three articles stated exposure misclassification would underestimate study results, while outcome misclassification was unlikely to explain findings for three papers. No reviewed article conducted a quantitative bias analysis. **Conclusions:** We have identified biases present in epidemiologic studies of WTC disaster exposure and asthma. We will use quantitative bias analysis to evaluate the impact selection and misclassification biases have on reported ratio effect measures and provide recommendations for designing disaster studies.



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