P03.0220. Accessing Heat Effects among Migrant and Seasonal Farmworkers: A Multi-State Study

Kai Zhang

Kai Zhang[1], Xiao Yu[2], Sharon P. Cooper[1]

1. Epidemiology, Human Genetics and Environmental Sciences, The University of Texas Health Science Center at Houston , Houston, TX, United States.
2. Biostatistics, The University of Texas Health Science Center at Houston, Houston, TX, United States.

Abstract: Background: Although migrant and seasonal farmworkers are highly vulnerable to ambient heat because of their working conditions, heat effects in this population have been rarely studied. Objectives: We estimated effects of heat on mean daily counts of clinic visits among migrant and seasonal farmworkers by taking advantage of a unique longitudinal medical records database in the USA. Methods: We compiled a daily weather and clinic visit data set based on data from five health centers located in in five states (California, Colorado, Michigan, New York and Washington) for the summer of 2011-2014. A total of 303, 121 patients were included in our analysis, including 87, 687 migrant farmworkers and 215,965 seasonal farmworkers. We used Poisson regression to estimate the associations between heat and daily all-cause clinic visits among migrant or seasonal farmworkers or other clinic patients. We defined heat effects as the percentage difference in average daily counts of clinic visits, comparing 90-50th percentiles of daily mean apparent temperature, a composite index accounting for both temperature and humidity. We conducted a sensitivity analysis to evaluate the impact of adjustment for ozone levels and different heat definitions. Results: Although we did not observe statistically significant associations between heat and clinic visits among migrant and seasonal farmworkers across five centers, point estimates of heat effects are positive up to 6.5% for migrant farmworkers in two centers (Colorado and Michigan) and positive up to 16.3% for seasonal farmworkers in three centers (Colorado, Michigan and Washington). Conclusions: Our study appears to be the first to link heat effects with clinic data among migrant and seasonal farmworkers. This research suggests possible meaningful impact of heat on migrant farmworkers and provides justifications for further studies.

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ABSTRACT BOOK

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