

Briefing explores associations between air pollution and health outcomes

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Lance Waller, PhD, chair of Biostatistics and Bioinformatics at Emory's Rollins School of Public Health, will present preliminary work that explores relationships between high-levels of air pollution exposure and health effects at a press briefing hosted by the American Association for the Advancement of Science on February 17.

During the briefing, Waller will summarize his joint work with the Southeastern Center for Air Pollution Epidemiology (SCAPE), funded by the [Environmental Protection Agency](#). SCAPE tests [air pollution levels](#) in various areas of Metro Atlanta and their health effects, based on data from associated emergency room visits, in order to determine relationships to exposure. Waller's research will assess the general findings of SCAPE to identify spatial uncertainties in exposures.

"SCAPE has identified geographically-referenced air pollution levels and [health outcomes](#)," explains Waller. "Our work will analyze these data to determine whether the effects seen city-wide mirror those observed in local neighborhoods."

The team will also identify communities with higher risk levels and examine potential roles of behavioral connections such as prolonged outdoor activity and socio-economic status.

Satellite data –data collected by measuring light—will be collected to determine air pollution levels in areas where ground monitors—data collected by filters— are not located. Assessments made on the

associations between monitored levels and satellite levels will help observe relationships over a broader region.

A second part of the research looks at pollution levels and the association specifically with respiratory diseases, as certain communities show stronger associations with these outcomes. Waller hopes that his research will lead to improved understanding of the causes of these outcomes.

"Each component of our research is essential because it generates potential solutions," says Waller. "If we can identify areas that are healthier, we may be able to identify why they are healthier and use these solutions as models to implement in other communities."

Provided by Emory University

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