

## Press Release

### FOR IMMEDIATE RELEASE

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### **EHP Researchers Use New Approach to Study Relationship Between Fracking and Exposure, Find Wind Direction May Be a Primary Indicator of Respiratory Issues**

McMURRAY, PA, September 10, 2019 – A team of researchers from the Southwest Pennsylvania Environmental Health Project (EHP), headed by Environmental Public Health Scientist David R. Brown, ScD., has used a new approach to study the relationship between exposure to shale gas development and respiratory symptoms. The results of the study were published on August 27, 2019, in the *Journal of Environmental Science and Health, Part A*.

As outlined in the article, titled “Assessing exposure to unconventional natural gas development: using an air pollution dispersal screening model to predict new-onset respiratory symptoms,” the researchers used data from the Pennsylvania Department of Environmental Protection (DEP) to determine the location of shale gas wells, processing plants, and compressor stations relative to the homes of 87 southwestern Pennsylvania residents who participated in the study.

The researchers then mapped each resident’s home in relationship to all shale gas facilities within two kilometers (approximately 1.25 miles), indicating which were located to the north, south, east, and west of the home.

As Dr. Brown explained, “The orientation of the wells, processing plants, and compressor stations relative to the home is important because of the impact of weather patterns, especially wind, on the distribution of emissions from these facilities.” The researchers also estimated the volume of emissions from each facility that reached the home, taking into account the direction of each facility relative to the home.

The researchers found that the higher the number of wells and other facilities located to the west of the home, the greater the likelihood of respiratory symptoms. As Dr. Brown notes, “Airborne pollutants move along weather systems, and in this locale, the prevailing wind pattern is from southwest to northeast.”

“Other researchers have found a relationship between wells located near homes and a variety of health measures such as asthma, headache, and fatigue,” said Dr. Lydia H. Greiner, a psychiatric nurse practitioner and a co-author of the study. “None of these studies have considered the direction of the wells relative to the homes. Furthermore, only one other study has considered the impact of structures other than wells, such as processing plants and compressor stations.”

This study considered both the direction of wells and the emissions contribution of processing plants and compressor stations, and it related them to respiratory symptoms. Further studies are needed to fully understand the importance of wind and weather patterns in the exposure to shale gas development.

## **About Southwest Pennsylvania Environmental Health Project**

*The [Environmental Health Project](#) (EHP) is a nonprofit public health organization that defends public health in the face of oil and gas development. We provide frontline communities with timely monitoring, interpretation and guidance. We engage diverse stakeholders: health professionals, researchers, community organizers, public servants, and others. We do so because knowledge protects health.*