

**CALLS FOR RESEARCH ON  
UNCONVENTIONAL GAS DEVELOPMENT AND ITS HEALTH EFFECTS**

**AUGUST 2014**

The following list indicates that many national groups -- from government, academia, and industry -- have recently called for more research into the health effects of hydraulic fracturing.

Calls from Government:

1) Trevor M. Penning, Patrick N. Breyse, Kathleen Gray, Marilyn Howarth, and Beizhan Yan Environmental Health Research Recommendations from the Inter-Environmental Health Sciences Core Center Working Group on Unconventional Natural Gas Drilling Operations July 2014 <http://ehp.niehs.nih.gov/1408207/>

This is a working group of the National Institutes of Health. "Conclusions: Exposure and health outcomes research related to [Unconventional Natural Gas Development Operations] is urgently needed and community engagement is essential in the design of such studies."

2) The Health Effects Institute (HEI) June 2014 workshop: an independent research body focused on air pollution and funded in equal measures by the US Environmental Protection Agency and the motor vehicle industry.

HEI's intent is to "work toward development of a strategic scientific research plan to better understand potential impacts of unconventional oil and gas development". The stated reason for this effort is that "questions remain about potential impacts of unconventional oil and gas development on people and the environment. While oil and gas development is well underway in the Appalachian region, it represents only a fraction of what is expected in coming years.

Calls from Academia:

1) Seth B. Shonkoff, Jake Hays, & Madelon L. Finkel Environmental Public Health Dimensions of Shale and Tight Gas Development *Environmental Health Perspectives* <http://dx.doi.org/10.1289/ehp.1307866> 16 April 2014

"Conclusion: Despite a growing body of evidence, a number of data gaps persist. Most importantly, there is a need for more epidemiological studies to assess associations between risk factors, such as air and water pollution and health outcomes among populations living in close proximity to shale gas operations."

2) Adgate, J. L., Goldstein, B. D., & McKenzie, L. M. Potential public health hazards, exposures and health effects from unconventional natural gas development. *Environmental Science & Technology*. 24 February 2014 <http://pubs.acs.org/doi/abs/10.1021/es404621d>

"Overall, the current literature suggests that research needs to address these uncertainties before we can reasonably quantify the likelihood of occurrence or magnitude of adverse health effects associated with UNG production in workers and communities."

3) Jerome Paulson, MD Medical Director for National & Global Affairs; Director of the Mid-Atlantic Center for Children's Health & the Environment; Child Health Advocacy Institute *Children's National Health System* and

Professor of Pediatrics and of Environmental & Occupational Health *George Washington University* – public letter to Christopher Abruzzo, Secretary, Pennsylvania Department of Environmental Protection 30 June 2014

“As a physician with significant expertise in environmental health, I want to point out that there is no information in the medical or public health literature to indicate that [Unconventional Gas Exploitation] can be implemented with a minimum of risk to human health. “

#### Calls from Industry:

1) American Petroleum Institute: Request for proposals – due August 29, 2014

“This Request for Proposals (RFP) solicits research proposals designed to quantitatively assess community exposure from operations related to unconventional resource development (URD), ... evaluate whether a causal relationship exists between community exposure to URD operations (including well construction, hydraulic fracturing and well production) and selected health outcomes. ... We anticipate that this work will lead to publications in peer-reviewed journals...”

2) Alan J. Krupnick, Raymond J. Kopp, Kristin Hayes, and Skyler Roeshot The Natural Gas Revolution: Critical Questions for a Sustainable Energy Future March 2014

This report published by Resources for the Future (RFF) identifies 24 critical questions that need to be addressed because: “It is time to take stock of what is known, what is uncertain, and what is unknown about the economic and environmental consequences of the natural gas revolution.”

Critical Question # 22 is: “The public is concerned about potential health effects from shale gas development, yet there are few studies that adequately demonstrate the impacts. How has public health (both mental and physical) been affected by shale gas development? What potential future impacts exist? And how could such impacts be reduced through policy?”

The report states that “... conflicting studies, unavailable data, an evolving regulatory landscape, and public concern could hamper the potential for economic benefits and environmental improvements from natural gas” and states that “experts at RFF aim to undertake research in as many areas as possible, working with other researchers and knowledgeable stakeholders who are also seeking to reliably resolve many of these ‘known unknowns’.”

Submitted by The Maryland Environmental Health Network  
As part of public comments on the public health study of the Marcellus Shale